

HALFWAY THERE: DID WE LEARN ANYTHING? - YOUTH PERCEPTION OF SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT GOALS

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Abstract

Purpose – Since 2015, the Sustainable Development Goals (SDGs) have represented a unique framework that aims to achieve balance between economic, environmental and social development. In the overall population, young people are playing an important role in a responsible and sustainable future. The year 2023 represents a year halfway through achieving the 17 SDGs, but awareness of this topic among the young population is still low. The main purpose of this research paper is to find out what young people know about sustainability and the SDGs. The main focus of this paper is on young people from Bosnia and Herzegovina and Croatia, aged between 15 and 30 years.

Methodology – An online questionnaire was distributed in these two countries and for analysing the data, descriptive statistics and SPSS were used.

Findings – According to findings, young people from Bosnia and Herzegovina and Croatia are showing an intermediate level of knowledge. Differences between attitudes and sustainable practices among young people from these two countries are also being detected. Preferable sources of information regarding SDGs are also different, but it is concerning that 1 in 4 respondents from both sample groups are not aware of this topic.

Contribution – Until now, there have been frequent studies related to SD and SDGs and young people, but on the territory of these two countries, such studies are not known. This research represents a foundation for future research into the knowledge, attitudes and practices of young people from this part of Europe.

Keywords: sustainable development goals, youth, sustainability, Croatia, Bosnia and Herzegovina.

INTRODUCTION

The Millennium Development Goals (MDGs), adopted in September 2000, present a unique framework that addresses widespread global problems such as poverty, hunger, public health, environmental concerns, education and gender inequality (Odras 2015; United Nations 2015a). Significant progress has been made as a result of the MDGs, however some goals were not accomplished (United Nations 2015a). Fifteen years later, the idea we have presumably been left with is that the activities and efforts regarding sustainability should continue in the future (United Nations 2015a; Sachs 2012). Sustainable Development Goals (SDGs) were created on the MDG foundations (Sustainable Development Solutions Network 2015). Through 17 goals and 169 targets, the world seeks to achieve a sustainable future and gain balance between the social, economic and environmental aspects of existence (United Nation 2015b).

Bosnia and Herzegovina and Croatia are two of the countries that are finding ways to integrate the SDGs into their national progress. There are several documents that are making the implementation of the SDGs easier for Bosnia and Herzegovina, such as *Voluntary Review - Implementation of Agenda 2030 and the Sustainable Development Goals in Bosnia and Herzegovina* (2019) or *The SDGs Framework in Bosnia and Herzegovina* (UNDP in BiH 2020). *The SDGs Framework in Bosnia and Herzegovina* publication covers youth in several segments. Croatia took more serious steps towards achieving SDGs in 2019 by publishing the *Voluntary National Review of the UN 2030 Agenda for Sustainable Development Implementation*, and in February 2021, the *National Development Strategy* was adopted with four strategic priority clusters: Sustainable economy and society, Strengthening resilience to crises, Green and digital transition and Balanced regional development (Hrvatsko društvo za Ujedinjene narode 2018; Voluntary National Review of the UN 2030 Agenda for Sustainable Development Implementation, 2019; Hrvatski sabor 2021). The newest addition to the Croatian SD framework is the *Strategy for Sustainable Tourism Development until 2030* adopted at the end of 2022 (Hrvatski sabor 2022).

The key to implementing the Sustainable Development Goals is equal participation by everyone (Voluntary Review – Implementation of Agenda 2030 and the Sustainable Development Goals in Bosnia and Herzegovina, 2019). One of the most widespread definitions of sustainable development emphasizes the importance of sustainability for the lives of future generations (Brundtland 1987). Further, it is important to include future generations in accomplishing Agenda 2030. Until now, there has been a noticeable amount of literature that addresses the connection between young people and SD or SDGs. Unfortunately, until now, the literature review overlooked the examination of this topic on the population of Bosnia and Herzegovina and Croatia. To address this gap, the aim of this paper is to further investigate SD/SDGs and the practices, knowledge and attitudes of young people from the two mentioned countries. A literature review will provide an overview of previous research on young people and SD/SDGs. Further, the main goals and structure of the research conducted on the territory of the two countries will be presented, followed by results and discussion.

1. LITERATURE REVIEW

Sustainable Development Goals are the topic of many research papers connected to young people or higher education students (e.g. Amesheva et al. 2019; Ismail et al. 2022; Leiva-Brondo et al. 2022; Loginova et al. 2022; Zamora-Polo et al. 2019; Nguyen et al. 2022). However, there are more research papers that cover topics such as SD and youth (eg. Al-Nuaimi and Al-Ghamdi 2022; Borojević et al. 2014) without a particular direct link to SDGs. The authors of this paper included sources that address not only the relationship between youth and SDGs but also sources that discuss the connection between youth and sustainability. This will help to better understand connections between young people and important topics such as sustainability, SD and SDGs. Youth is a term that can be understood differently in different parts of the world. A number of public regulations in Croatia and Bosnia and Herzegovina define young people as individuals between the ages of 15 and 30 (Hrvatski sabor 2007; Narodna skupština Republike Srpske 2011; Vlada Federacije Bosne i Hercegovine 2010; Skupština Brčko

Distrikta BiH 2017). Young people from different countries may differently understand the importance of sustainability and the SDGs for several reasons. The degree of understanding of the importance of sustainability may vary depending on the year of education of the student or the student age (Žalėnienė and Pereira 2021, according to Lertprachya et al. 2017). Knowledge of the SDGs may vary from research to research. Some authors state that the young population has good knowledge when it comes to SDGs (Al-Naqbi and Alshannag 2018), while others report poor knowledge among young people (Omisore Akinlolu et al., 2017; Zamora-Polo et al. 2019). Even with a poor level of knowledge regarding the SDGs, attitudes can be positive (Omisore Akinlolu et al. 2017). Spanish students are, at the same time, not well aware of the SDGs, but they have positive attitudes towards them and realise the importance of SDGs for their lives and future careers (Leiva-Brondo et al. 2022). Still, when discussing the level of knowledge, it is important to consider the date of the conducted research (since research conducted in the first years of applying SDGs may result in less knowledge of SDGs), the part of the world where the research was undertaken (considering accessibility to the internet and formal and informal education) and a population sample (gender, age, education level, etc.).

Education is seen as a crucial mechanism for sustainability and reaching the Sustainable Development Goals (United Nations 2015a; Omisore Akinlolu et al. 2017; UNESCO 2018; Odell et al. 2020; Chen et al. 2021). Special importance is given through the political framework of Agenda 2030 and SDG number 4 – Quality education (Moriarty 2017).

The idea of symbiosis between education and SD originated in 1990 and the idea of education for sustainable development first occurred within the Agenda 21 in Chapter 36 – "Promoting Education, Public Awareness and Training". Further, ESD became more concrete in 2002, when Resolution 57/254 was adopted by the United Nations General Assembly (Wals 2012). Following the UN Decade on ESD (2005–2014), the Global Action Programme on ESD (2015–2019) was adopted with the aim of encouraging concrete ESD activities (UNESCO 2014). Currently, the active framework is Education for Sustainable Development: Towards achieving the SDGs (ESD for 2030) for the period from 2020 until 2030. Recognising the expansion of ESD, this framework considers the past efforts of GAP on ESD, but at the same time, ESD for 2030 is working on the achievements of the SDGs (UNESCO 2020b).

A bibliometric review that researched the WOS database from 2005 until 2014 showed an expansion of publications with the keywords "sustainability" and "education for sustainable development" during this time frame (Veiga Ávila et al. 2018). Countries with the biggest number of publications were again the USA, UK, China, Australia and Canada, but at the same time, it is notable that in the top 10 languages of publications, Croatian was ranked 9th with 12 publications out of a total of 5,924 publications (Veiga Ávila et al. 2018).

Higher education is also seen as an important part of achieving a more sustainable tomorrow (Ariffin and Ng 2020; Leiva-Brondo et al. 2022). Hallinger and Chatpinyakoo (2019) created a bibliometric review of research on HEI for SD for the period between 1998 and 2018. The dynamic of published research showed that out of

1,459 documents, around 64% were published from 2012 until 2018. Even though publications were detected in 100 different countries, it is established that 84% came from developed countries (the United States of America, the United Kingdom, Canada and Australia) and the other 16% came from developing societies (China, Malaysia and South Africa as the top three). Zamora-Polo and Sánchez-Martín (2019) developed a conceptual framework that will help to include SDGs in teaching at the university level, including five dimensions: students, student competencies, teachers, teaching methods and alliances. According to Mohammadi et al. (2023), effective improvement in applying sustainability at university can be reached through: “university culture, university leadership, sustainability education, sustainability knowledge, attitudes towards sustainability and commitment to sustainability”.

2. METHODOLOGY

2.1. Sample profile

For future SD, it is necessary to understand the level of young people’s knowledge of the SDGs as key directions for addressing the Agenda 2030. The focus of this research is on young people aged between 15 and 30 from Bosnia and Herzegovina and Croatia. Besides the fact that university students are seen as agents of change (Ekka et al. 2022) and many previous studies only selected university students as a targeted sample, this research sample was expanded to include youth that chose not to continue their education. Therefore, it will be possible to get a better picture of general public knowledge.

For analysing the sample profile, descriptive statistics were used. After selection, 254 responses in total were suitable for further analysis, 92 from Bosnia and Herzegovina and 162 from Croatia. When it comes to gender, females were the majority in both sample groups. The average age of participants from Bosnia and Herzegovina (23.5 years old) was higher compared to participants from Croatia (20.5). In both sample groups, there were more unemployed respondents. Around 22.8% of respondents from Bosnia and Herzegovina were unemployed but looking for a job and the rest of the unemployed were not actively included in the labour market. In Croatia, the percentage of those unemployed and not searching for a job was much higher (65.4%). This can be explained by education status and age, since students mostly depend on external funding while they are included in the process of education and for underage respondents, it is more difficult to find an adequate job. More than half of respondents from Bosnia and Herzegovina were still included in some level of education (65.1%), whereas 85.25% of respondents from Croatia were still included in education. A higher percentage of high school students was detected in the Croatian sample (38.9%), although in both sample groups undergraduate students were dominant.

2.2. Study instrument

An online survey was conducted over a four-week period in March 2023 and the data was collected with the Google Forms tool. The questionnaire was distributed through several social media platforms and different youth organisations also received an email invitation to participate in this survey. Inspiration for this survey was found in several previously conducted studies (Zamora-Polo et al. 2019; Chen et al. 2021; Balakrishnan et al. 2020; Leiva-Brondo et al. 2022; Nguyen et al. 2022; Yuan et al. 2021). There were three sections to the questionnaire. The aim of the first section was to collect data about the socio-demographic characteristics of a sample, such as age, gender, level of education and employment status. The second section of the questionnaire examined whether young people had an opportunity to hear about sustainability and SDGs, learn about SD during their formal education and from their own source of information. The final and most important section was divided into three additional parts. In this section, respondents had the opportunity to share their knowledge, attitudes and practises about the SDGs. To detect the level of knowledge, the respondents had to evaluate 10 claims as true or false. For valuing attitudes and practises, a 5-degree Likert scale was used. Understanding the attitudes of respondents was provided with 17 statements that were in accordance with each goal.

Table 1: Statements in accordance with SDGs

SDG1	One of the most vulnerable groups of society that are most exposed to the risk of poverty and social exclusion are children and young people.	SDG10	A key policy instrument for reducing inequality and promoting equal opportunities is investment in education and skills.
SDG2	Social responsibility of the food sector is important for reducing hunger in the world.	SDG11	Urban-rural partnership contributes to sustainable spatial development.
SDG3	Health care is available to every citizen.	SDG12	Circular economy is a priority of responsible production and consumption.
SDG4	Every individual has the opportunity to get involved in the education process	SDG13	Each individual should take different actions to combat climate change.
SDG5	Women and men have the same opportunities for advancement and training.	SDG14	Plastic packaging is a danger to the survival of the living world in the world's seas.
SDG6	In the world, diseases caused by lack of clean water are still the cause of death.	SDG15	It is necessary to take all possible measures and preserve plant and animal species that are threatened with extinction.
SDG7	Renewable energy sources positively influence the use of natural resources in a sustainable manner.	SDG16	Strengthening legal security contributes to a peaceful and inclusive society.
SDG8	Measures to encourage employment are more important than subsidies for investment	SDG17	Cooperation between countries is key to a sustainable future.
SDG9	The establishment of a system for advanced technologies and artificial intelligence and the digitization of the economy and society encourage balanced development.		

Source: Authors

Practice was the last section of the questionnaire. In this section, respondents had the opportunity to evaluate to what degree their daily activities contributed to each SDG.

3. RESULTS AND DISCUSSION

For presenting data that refers to sources of information and previous connections with the terms sustainable and sustainability, descriptive statistics were used. A similar percentage of both sample groups (88%) had previously heard about the term 'sustainable'. When it comes to "sustainable development", a smaller percentage of those who were familiar with this term were detected in the sample from Bosnia and Herzegovina (82.61%) and the same pattern was seen in the Croatian sample (84.57%). The importance of the inclusion of SD and SDGs in education, especially higher education, was previously emphasized. The majority of both sample groups (BH: 71.74%; CRO: 56.79%) did not have an opportunity to address SD topics during formal education. Overall, responses from the Croatian sample reported higher frequencies when it came to the connection between SD and formal education. According to findings, 1 in 4 respondents (26.5%) from Croatia were learning about SD as part of the lesson, topic or unit, which is more when compared to respondents from Bosnia and Herzegovina (19.57%). On the one hand, previous studies showed that Croatian students did not get enough information about SD through the education system, but students still perceive education as a key to achieving SD (Mladenović 2022). On the other hand, the main source of information about SDGs was formal education for respondents from Croatia. This finding is in accordance with previous studies, where formal education and lessons were the primary sources of information on SD (Yuan et al. 2021; Ismail et al. 2022; Leiva-Brondo et al. 2022).

Table 2: Source of information

Bosnia and Herzegovina		Croatia	
Informal education	26.09%	Formal education	26.54%
Did not inform about SDG	23.91%	Did not inform about SDG	25.31%
Web sites	16.30%	Web sites	17.28%
Formal education	15.22%	Social media	10.49%
Social media	11.96%	TV	9.88%
TV	4.35%	Informal education	6.17%
Web sites about SD	1.09%	Print media	1.85%
Radio	1.09%	Radio	1.23%
Printed media	0.00%	Web sites about SD	1.23%

Source: Authors

Analysing samples from Bosnia and Herzegovina showed that the most dominant source of information about SDGs was informal education (26.09%). Informal education was not in the top three sources of information when it came to SD or SDGs, with the exception of Omisore Akinlolu et al. (2017) research, where the third most preferred source of information were conferences and lectures, which can partly be classified under

informal education. The percentage of those who were not informed about the SDGs was extremely high (BH=23.92%; CRO=25.31%) and should not be ignored. Therefore, it is important to put more effort into the promotion of the SDGs through those channels of communication that young people most often prefer today. Further, the most preferred sources of information from previous research are presented in Table 3.

Table 3: Previous sources of information

Authors	Sample size	Sample profile	Most common source of information when it comes to SD or SDGs
Mladenovic, 2022	142 respondents	Croatian higher education students	1.The media 2. Social networks 3.Education system
Ismail et al. 2022	223 respondents	Young Malaysians aged 15-30, university students	1. Education system 2. Mass media 3. Social media (YouTube, Twitter, Instagram - respectfully)
Leiva-Brondo et al. 2022	321 respondents	Spain university students	1. Lectures 2. Social media 3. Web news
Yuan et al. 2021	328 respondents	Chinese high school students	1. Formal education 2.Traditional media (including press radio and/or television) 3.Email and or Social Networks
Ariffin & NG, 2019	402 respondents	Malaysian higher education students	1. Website 2. Social media 3. Print media
Omisore Akinlolu., et al. 2017	450 respondents	Nigerian higher education students, academic and nonacademic staff	1. Radio/TV 2. Internet 3. Conferences/lectures

Source: Authors

Further data was analysed using SPSS IBM 23.00 version.

In order to understand the level of knowledge of young people about SD and SDGs, 10 items were related to this topic (Table 4). To examine differences between samples, Pearson's chi-square test was used. Pearson's chi-square test indicated that there were significant differences in six out of the total 10 items in this section of the questionnaire. Differences between responses were not noticed in items that referred to the environmental dimension of SDGs ($p=0.545$), the name and meaning of SDGs ($p=0.510$), the number of SDGs ($p=0.870$) and the importance of MDGs ($p=0.519$). In regards to aspects of SD (K2, K3 and K4), respondents from Bosnia and Herzegovina showed excellent knowledge due to more than 90% of correct answers being detected. Respondents from Croatia showed the highest level of knowledge when it came to understanding the basic definition of SD (K1: 90.7%) and some aspects of the SDGs (K2: 90.1% and K4: 82.7%). The highest frequency of incorrect answers in both sample groups was detected in regards to "technical aspects" of SDGs. Mostly, respondents were unable to detect the correct number of SDGs (BH=44.6% and CRO=48.8% of incorrect answers) or the time frame of implementation of SDGs: (BH=38%; CRO=64.8%).

Table 4: Level of knowledge

	Bosnia and Herzegovina				Croatia				χ^2 -test
	Correct answer		Incorrect answer		Correct answer		Incorrect answer		
	n	%	n	%	n	%	n	%	
K1: One of the most famous definitions about sustainable development is: SD is meeting the needs of the present generation, without jeopardizing the ability of future generations to meet their needs.	75	81.5	17	18.5	147	90,7	15	9.3	$\chi^2=4.529$; $p=0.033$
K2: SD means only economic development, without taking into account the environmental consequences.	85	92.4	7	7.6	146	90.1	16	9.9	$\chi^2=0.366$; $p=0.545$
K3: SD includes only the preservation of the environment.	87	94.6	5	5.4	127	78.4	35	21.6	$\chi^2=11.564$; $p=0.001$
K4: SD is exclusively related to the development of human communities, regardless of the consequences for the environment.	86	93.5	6	6.5	134	82.7	28	17.3	$\chi^2=5.862$; $p=0.015$
K5: SDGs is an abbreviation from the English language, and its translation means Sustainable Development Goals.	70	76.1	22	23.9	129	79.6	33	20.4	$\chi^2=0.434$; $p=0.510$
K6: The SDGs are presented by the United Nations.	76	82.6	16	17.4	122	75.3	40	24.7	$\chi^2=1.819$; $p=0.177$
K7: The SDGs are a continuation of the Millennium Development Goals.	60	65.2	32	34.8	104	64.2	58	35.8	$\chi^2=0.027$; $p=0.870$
K8: There are a total of 17 SDGs.	51	55.4	41	44.6	83	51.2	79	48.8	$\chi^2=0.415$; $p=0.519$
K9: The SDGs refer to the period of time from 2015 to 2035.	57	62	35	38	57	35.2	105	64.8	$\chi^2=17.000$; $p=0.000$

Source: Authors

Overall, it can be concluded that young people from Bosnia and Herzegovina and Croatia possess an intermediate level of knowledge when it comes to SD and SDGs. Leiva-Brondo et al. (2022) reached a similar conclusion. On the other hand, the level of knowledge is higher than the one detected in a Nigerian sample (Omisore Akinlolu et al. 2017). Respondents were more familiar with the definition, aspects and dimensions of SD where the answer accuracy was greater than 90%. These findings were similar to those of Ismail et al. (2022), who stated that students possess certain knowledge about SDGs. Respondents were less familiar with technical aspects of SDGs such as timelines, national governance systems and MDGs, but they were most familiar with inclusivity aspects of SDGs (Ismail et al. 2022). Vietnamese students possessed a better level of knowledge than the present sample groups and similarly to the present samples, the time frame of implementation was one of the issues when it came to knowledge (Nguyen et al. 2022).

Malaysian youth in Penang possessed a good level of understanding of SD and they were supporting construction of a better framework that would address SD (Ariffin and Ng 2020). Conducting research in a Chinese senior high school, Yuan et al. (2021) concluded that students had limited levels of understanding of the SDGs. A Chi-square

test was used to determine if there were significant differences between the levels of knowledge of these two sample groups. According to the Chi-square test, 5 out of 10 items showed a significant difference in the level of knowledge between the two sample groups (Table 4). Differences between responses were not noticed in items that refer environmental dimension of SDGs ($p=0.545$), name and meaning of SDGs ($p=0.510$), number of SDGs ($p=0.870$) and importance of MDGs ($p=0.519$). When it comes to aspects of SD (K2, K3 and K4), respondents from Bosnia and Herzegovina showed excellent knowledge since more than 90% of correct answers was detected. Respondents from Croatia showed biggest level of knowledge when it comes to understanding the basic definition of SD (K1=90.7%) and some aspects of SDGs (K2=90.1% and K4=82.7%). The highest frequency of incorrect answers in the both sample groups is detected when it comes to “technical aspects” of SDGs. Mostly, respondents were not able to detect correct number of SDGs: BH=44.6% and CRO=48.8% of incorrect answers and time frame of implementation of SDGs: BH=38% and CRO=64.8%.

Rising awareness and knowledge of SD is seen as a question of the survival of human civilisation (Krstinić Nižić et al. 2019). The SDGs have been in circulation for almost a decade and the knowledge that young people demonstrate is satisfactory but not ideal. Society's duty is to find ways to direct its capacities towards the constant improvement of young people's knowledge about the SD and SDGs.

Statements that refer to certain SDGs are shown in Table 1. The assumption of a normal distribution of variables was not achieved according to the Kolmogorov-Smirnov and Shapiro-Wilk tests. The Mann-U Whitney test does not require a normal distribution of variables, therefore this test was used for the comparison of two sample groups. Accounting for 17 items, the results of Mann-U Whitney test showed that significant differences in attitudes towards SDGs do not exist in 16 items ($p > 0.05$). For both sample groups, statements with the highest ranking are those representing SDG 15 (BH: mean = 4.4 SD = 0.96; CRO: mean = 4.25, SD = 1.05), SDG 17 (BH: mean = 4.32 SD = 0.90; CRO: mean = 4.17, SD = 0.96) and SDG 14 (BH: mean = 4.23 SD = 1.02; CRO: mean = 4.09 SD = 1.15) (Table 5).

SDG 15 was presented with the statement "It is necessary to take all possible measures and preserve plant and animal species that are threatened with extinction," and with the highest rank, it showed that young people have developed environmental concerns. This was also confirmed by the high ranking of the statement on SDG 14, which also took environmental aspects of SD into account. SDG 17 was addressing crucial cooperation between countries and the high ranking could probably be explained by current events at a global level, but it was also related to the circumstances in which these young people grew up. The statement "Health care is available to every citizen" has the lowest ranking over all 17 SDGs (BH: mean = 2.58 SD = 1.35 CRO: mean = 2.83 SD = 1.32). This showed that respondents were aware of the unavailability of health services for everyone. The low ranking that addresses SDG 4 shows that respondents are not aware that quality and inclusive education systems are still massive issues in some parts of the world.

Table 5: Attitudes toward SDGs

Country	Bosnia and Herzegovina			Croatia			Mann-U Whitney Test
	Mean	Std. Deviation	Mean Ranking	Mean	Std. Deviation	Mean ranking	
SDG1	3.38	1.08	120.99	3.55	1.10	131.19	U=6853.5 p=0.267
SDG2	4.00	0.98	126.59	3.97	1.12	128.02	U=7368.5 p=0.875
SDG3	2.58	1.35	117.88	2.83	1.32	132.97	U=6566.5 p=0.105
SDG4	3.11	1.28	118.94	3.36	1.34	132.36	U= 6664.5 p=0.150
SDG5	3.12	1.34	118.93	3.38	1.26	132.37	U=6663.5 p=0.149
SDG6	3.82	1.06	131.29	3.72	1.12	125.29	U=7094.5 p=0.508
SDG7	3.97	1.04	126.34	3.98	1.09	128.16	U=7345 p=0.840
SDG8	3.15	0.94	124.65	3.20	0.98	129.12	U=7190 p=0.615
SDG9	3.25	0.99	135.23	3.04	1.04	123.11	U=6741 p=0.182
SDG10	3.84	1.01	130.88	3.75	1.08	125.58	U=7141.5 p=0.564
SDG11	3.90	0.91	140.07	3.59	1.05	120.36	U=6296 p=0.031
SDG12	3.62	0.81	127.93	3.60	1.04	127.26	U=7412.5 p=0.940
SDG13	4.03	1.03	130.28	3.94	1.10	125.92	U=7196.5 p=0.631
SDG14	4.23	1.02	130.93	4.09	1.15	125.55	U=7136.5 p=0.539
SDG15	4.40	0.94	132.07	4.25	1.05	124.90	U=7031.5 p=0.391
SDG16	3.96	1.11	132.88	3.83	1.12	124.45	U=6957.5 p=0.356
SDG17	4.32	0.90	133.74	4.17	0.96	123.96	U=6878 p=0.266

Source: Authors

In the last section of the questionnaire, respondents were asked to rank how much their daily activities contribute to achieving a certain goal (Table 6). As for attitudes, the normal distribution of variables was violated, which was confirmed by the Kolmogorov-Smirnov and Shapiro-Wilk tests. The Mann-U Whitney test was used for the determination of differences between samples. In regards to contributions to SDGs, the results of the Mann-U Whitney test indicated that a statistical difference between responses existed for 3 SDGs - SDG 6, SDG 7 and SDG 11, since p was higher than 0.05. Three SDGs that respondents from Bosnia and Herzegovina valued as the ones to which they were contributing the most were: SDG 5 (mean = 3.77; SD = 1.15), SDG 15 (mean = 3.63; SD = 1.09) and SDG 10 (mean = 3.62; SD = 1.09), while SDG 9 was ranked the lowest with a mean of 2.89 (SD = 1.08). SDG 10 (mean = 3.68; SD = 1.09), SDG 15 (mean = 3.62; SD = 1.09) and SDG 12 (mean = 3.61; SD = 1.00) were three SDGs that Croatian respondents, in their opinion, supported the most through their daily activities.

Table 6: Sustainable practices

	Bosnia and Herzegovina			Croatia			Mann-U Whitney test
	Mean	Std. Deviation	Mean Ranking	Mean	Std. Deviation	Mean ranking	
SDG1 - No poverty	2,98	1,01	122,10	3,10	1,15	130,57	U=6955 p=0,350
SDG2 – Zero hunger	3,21	1,01	127,39	3,21	1,08	127,56	U=7441,5 p=0,984
SDG3 – Good health and well-being	3,39	0,96	122,95	3,47	1,01	130,08	U=7033,5 p=0,436
SDG4 – Quality education	3,58	1,08	132,48	3,47	1,06	124,67	U=6993,5 p=0,396
SDG5 – Gender equality	3,77	1,09	135,78	3,56	1,15	122,8	U=6690 p=0,160
SDG6 – Clean water and sanitation	3,21	1,12	113,30	3,59	1,17	135,56	U=6145,5 p=0,016
SDG7 – Affordable and clean energy	2,98	1,15	110,11	3,46	1,16	137,37	U=5852,5 p=0,003
SDG8 – decent work and economic growth	3,24	0,98	119,46	3,42	1,11	132,07	U=6712 p=0,167
SDG9 – Industry, innovation and infrastructure	2,89	1,08	116,54	3,17	1,05	133,73	U=6443,5 p=0,057
SDG10 – Reduced inequalities	3,62	1,08	125,42	3,68	1,09	128,68	U=7260,5 p=0,723
SDG11 – sustainable cities and communities	2,93	1,06	112,49	3,32	1,10	136,02	U=6071,5 p=0,010
SDG12- Responsible consumption and production	3,43	1,15	122,67	3,61	1,00	130,24	U=7008 p=0,410
SDG13 – Climate action	3,35	1,12	124,25	3,48	1,03	129,35	U=7153 p=0,577
SDG14 – Life below water	3,41	1,21	121,95	3,59	1,13	130,65	U=6941 p=0,346
SDG15 – Life on land	3,63	1,09	128,16	3,62	1,09	127,12	U=7391 p=0,910
SDG16 – Peace, justice and strong institutions	3,34	1,12	118,27	3,56	1,10	132,74	U=6602,5 p=0,114
SDG17 – Partnership for goals	3,33	1,14	120,20	3,51	1,14	131,65	U=6780,5 p=0,214

Source: Authors

The mean ranking showed that Croatian respondents gave higher scores to sustainable practises for 14 out of the 17 SDGs. This indicated that respondents from this country are expressing more sustainable practises than young people from Bosnia and Herzegovina. Preferring environmentally friendly practises among youth was detected in previous research (Nguyen et al. 2022; Vukadin et al. 2022). Observing the top three SDGs, young people from Bosnia and Herzegovina exhibited more sustainable

behaviours in line with the social aspects of the SDGs (Table 6). The observation can be explained by the social and political context in which young people from Bosnia and Herzegovina live on a daily basis. In regards to the Croatian sample, the top three SDGs referred to all three aspects of SD, so prioritising one aspect was not possible.

Out of around 57 thousand young people, 6 out of 10 of them believed in the possibility of accomplishing the SDGs (AIESEC 2020). Such results may not be encouraging, but they are a reason to continue encouraging actions that will enable young people to adopt more sustainable practices and patterns of behaviour.

CONCLUSION

The discussion about the SDGs and aspects of sustainable development is extremely complex and layered. Complexity and layering can be explained by the fact that the goal of the SDGs is to address all the problems of today's world and to share the responsibility for a better and more sustainable future among all the people and economies all over the globe. The responsibility for a better and more sustainable future also includes young people, who find ways to get involved in reaching the set goals. The contribution of young people to achieving the SDGs can already be seen. Young people are capable of influencing their surroundings, from parents to local and national governments, by creating networks, initiatives and applicable and sustainable beneficial programs and giving contributions to policies that support SDGs (Asian Development Bank & Plan International UK 2018). However, there is still a need to regularly show young people how they can contribute to a sustainable future. The fact that almost 1/4 of respondents are not informed about the SDGs is worrying, which perhaps implies that monitoring the progress of the community is not a priority for this part of the population. At the same time, the educational system in both countries, especially in Bosnia and Herzegovina, faces many challenges in order to make progress in incorporating SD and SDGs into educational curricula at all levels of education. Young people from Bosnia and Herzegovina and Croatia show that they have intermediate level of knowledge about SD and SDGs—more about SD than SDGs. This shows that the potential for sustainable progress exists and needs to be channelled well. Significant differences between Bosnian and Croatian young people when it comes to attitudes and practices have previously been detected. While Bosnian youth demonstrate a higher level of knowledge, Croatian youth are more sustainably open-minded and also practice behaviours that are more sustainable. There are several limitations to the presented paper. First of all, the sample size should be larger, and at the same time, since it is a comparison of two groups, researchers should strive to achieve an approximately equal number of respondents in both samples. When it comes to samples, the majority of female respondents can significantly affect the final results of the research. Although there were young people aged between 15 and 30, significant differences in the level of education may have influenced the responses of one sample group.

There are several recommendations for future research. More detailed analysis is necessary in each of the two sample groups and comparing the two samples based on certain socio-demographic characteristics (e.g., gender, age group, education level) in the reflection of other authors (e.g., Al-Naqbi and Alshannag 2018; Afroz and Ilham

2020; Leiva-Brondo et al. 2022). Also, the focus of future research could be exclusively on one segment of the questionnaire, e.g., exclusively on attitudes, knowledge or sources of information. In subsequent research, a larger number of countries could be included, which would contribute to a better understanding of the attitudes and perceptions of young people about the SDGs.

Due to the limitations of this research, it is important to mention the contributions made. The first and main contribution is reflected in addressing the previously introduced research gap. Previous research did not refer to young people from Bosnia and Herzegovina and Croatia and their perceptions, attitudes and knowledge about the SDGs. This research represents a foundation for future research into the knowledge, attitudes and practices of young people from this part of Europe. Second, existing literature rarely compares samples from two different nations when it comes to this topic and sample profile. Comparing sample profiles from countries with different political, economic and other backgrounds can implicate whether each of these backgrounds is important for attitudes, adoption of practices and knowledge in the field of SDGs. By conducting this research, respondents became more familiar with the basic concepts and meaning of SD and SDGs, therefore it can be expected that the public interest of respondents in SD and SDGs in Bosnia and Herzegovina and Croatia will increase. Understanding what young people know, think and do when it comes to sustainability can contribute to the SD of each of these countries.

REFERENCES

- AIIESEC (2020), YouthSpeak Global Report 2020., viewed 19 February 2023, https://issuu.com/aiiesecinternational/docs/youthspeak_survey__global_report_2020.
- Afroz, N. and Ilham, Z. (2020), "Assessment of knowledge, attitude and practice of University Students towards Sustainable Development Goals (SDGs)", *The Journal of Indonesia Sustainable Development Planning*, Vol. 1, No. 1, pp. 31-44. <https://doi.org/10.46456/jisdep.v1i1.12>
- Al-Naqbi, A. K. and Alshannag, Q. (2018), "The status of education for sustainable development and sustainability knowledge, attitudes and behaviors of UAE University students", *International Journal of Sustainability in Higher Education*. <https://doi.org/10.1108/IJSHE-06-2017-0091>
- Al-Nuaimi S. R. and Al-Ghamdi S. G. (2022), "Assessment of Knowledge, Attitude and Practice towards Sustainability Aspects among Higher Education Students in Qatar.", *Sustainability*, Vol. 14, No. 20, 13149. <https://doi.org/10.3390/su142013149>
- Amesheva, I., Clark, A. and Payne, J. (2019), "Financing for Youth Entrepreneurship in Sustainable Development", *Youth Solution Report 2018*, pp. 253-273. <https://doi.org/10.1002/9781119541851.ch14>
- Ariffin, F. N. and Ng, T. F. (2020), "Understanding and opinion on sustainable development among youths in higher educational institutions in Penang, Malaysia", *Social Indicators Research*, Vol. 147, pp. 421-437. <https://doi.org/10.1007/s11205-019-02165-1>
- Asian Development Bank & Plan International UK. (2018), *What is the evidence? Youth engagement and the Sustainable Development Goals*, viewed 25 April 2023, <https://www.adb.org/sites/default/files/publication/466811/youth-engagement-sdgs.pdf>
- Borojević, T., Petrović, N. B. and Vuk, D. (2014), "Youth and environmental education for sustainable development", *International Journal of Science and Research*, Vol. 3, No. 9, pp. 57-62.
- Brundtland, G. H. (1987), "Our common future—Call for action", *Environmental conservation*, Vol. 14, No. 4, pp. 291-294. <https://doi.org/10.1017/S0376892900016805>
- Balakrishnan, B., Tochinai, F. and Kanemitsu, H. (2020), "Perceptions and Attitudes towards Sustainable Development among Malaysian Undergraduates", *International Journal of Higher Education*, Vol. 9, No. 1, pp. 44-51. <https://doi.org/10.5430/ijhe.v9n1p44>
- Chen, M., Jeronen, E. and Wang, A. (2021), "Toward environmental sustainability, health and equity: how the psychological characteristics of college students are reflected in understanding sustainable

- development goals”, *International journal of environmental research and public health*, Vol. 18, No. 15, 8217. <https://doi.org/10.3390/ijerph18158217>
- Ekka, B., Joseph, G.A., Verma, P., Anandaram, H. and Aarif, M. (2022), “A Review Of The Contribution Of Youth To Sustainable Development And The Consequences Of This Contribution”, *Journal of Positive School Psychology*, Vol. 6, No. 6, pp. 3564-3574.
- Hallinger, P. and Chatpinyakoo, C. (2019), “A bibliometric review of research on higher education for sustainable development” 1998–2018”, *Sustainability*, Vol. 11, No. 8, 2401. <https://doi.org/10.3390/su11082401>
- Hrvatski sabor (2007), “Zakon o savjetima mladih”, *Narodne Novine* 23/2007, Članak 3, Stav 1. <https://narodne-novine.nn.hr/eli/sluzbeni/2007/23/869>
- Hrvatski sabor (2021), *Nacionalna razvojna strategija Republike Hrvatske do 2030. godine*, viewed 22 March 2023, https://narodne-novine.nn.hr/clanci/sluzbeni/2021_02_13_230.html
- Hrvatski sabor (2022), *Strategija razvoja održivog turizma do 2030. godine*, viewed 1 May 2023, https://narodne-novine.nn.hr/clanci/sluzbeni/full/2023_01_2_18.html
- Hrvatsko društvo za Ujedinjene narode (2018), *Globalni ciljevi održivog razvoja u EU i Hrvatskoj - Stanje i perspektive*, viewed 10 March 2023, <http://www.una-croatia.org/wp-content/uploads/2018/12/GLOBALNI-CILJEVI-ODR%C5%BDIVOG-RAZVOJA-U-HRVATSKOJ-FINALNO.pdf>
- Ismail, T. N. T., Yusof, M. I. M., Ab Rahman, F. A. and Harsono, D. (2022), “Youth and their Knowledge on the Sustainable Development Goals (SDGs)”, *Environment-Behaviour Proceedings Journal*, Vol. 7, No.19, pp. 329-335. <https://doi.org/10.21834/ebpj.v7i19.3240>
- Leiva-Brondo, M., Lajara-Camilleri, N., Vidal-Meló, A., Atarés, A. and Lull, C. (2022), “Spanish university students’ awareness and perception of sustainable development goals and sustainability literacy”, *Sustainability*, Vol. 14, No. 8, 4552. <https://doi.org/10.3390/su14084552>
- Lertpratchya, A. P., Besley, J. C., Zwickle, A., Takahashi, B. and Whitley, C. T. (2017), “Assessing the role of college as a sustainability communication channel”, *International Journal of Sustainability in Higher Education*, Vol. 18 No. 7, pp. 1060-1075. <https://doi.org/10.1108/IJSHE-09-2016-0172>
- Loginova, A., Lomov, D. and Machnev, K. (2022), “Youth Non-Profit and For-Profit Solutions toward Achieving Sustainable Development Goals in Russia: Practices, Challenges and Trends”, *Environmental Sciences Proceedings*, Vol. 15, No. 1, 58. <https://doi.org/10.3390/envirosci2022015058>
- Odell, V., Molthan-Hill, P., Martin, S. and Sterling, S. (2020), “Transformative education to address all sustainable development goals”, Leal Filho, W., Azul, A. M., Brandli, L., Özuyar, P. G., Wall, T. (eds), *Quality Education*, Encyclopedia of the UN Sustainable Development Goals. Springer, Cham, pp. 905-916. https://doi.org/10.1007/978-3-319-95870-5_106
- Odrz (2015), *Novi globalni ciljevi održivog razvoja do 2030.*, viewed 21 February 2023, <https://www.odraz.hr/publikacije/publikacija/novi-globalni-ciljevi-odrzivog-razvoja-do-2030/>.
- Omisore Akinlolu, G., Babarinde Grace, M., Bakare Damilola, P. and Asekun-Olarinmoye Esther, O. (2017), “Awareness and knowledge of the sustainable development goals in a University Community in Southwestern Nigeria”, *Ethiopian journal of health sciences*, Vol. 27, No. 6, pp. 669-676. <http://dx.doi.org/10.4314/ejhs.v27i6.1>
- Mladenović, J. (2022), “Education for change: higher education in Croatia for sustainable development”, *Faculty of Tourism and Hospitality Management in Opatija. Biennial International Congress. Tourism & Hospitality Industry*, pp. 195-208. DOI:10.20867/thi.26.4
- Mohammadi, Y., Monavvarifard, F., Salehi, L., Movahedi, R., Karimi, S. and Liobikienė, G. (2023), “Explaining the Sustainability of Universities through the Contribution of Students’ Pro-Environmental Behavior and the Management System”, *Sustainability*, Vol. 15, No. 2, 1562. <https://doi.org/10.3390/su15021562>
- Moriarty, K. (2017), *Achieving SDG4 through a human rights based approach to education*, viewed 10 March 2023, <https://openknowledge.worldbank.org/bitstream/handle/10986/28869/121118-WP-PUBLIC-WDR18-BP-Achieving-SDG4-MORIARTY.pdf>.
- Narodna skupština Republike Srpske (2011), “Zakon o omladinskom organizovanju“, Službeni glasnik Republike Srpske 98/04, 119/08 & 1/12, viewed 1 March 2023, <https://www.mladibl.com/wp-content/uploads/2019/10/Zakon-o-omladinskom-organizovanju-Republike-Srpske.pdf>
- Nguyen, T. L., Huynh, M. K., Ho, N. N., Le, T. G. B. and Doan, N. D. H. (2022), “An Assessment of How University Students Approach to Sustainable Development Goals: An Empirical Study from Vietnam.”, *The Journal of Asian Finance, Economics and Business*, Vol. 9, No. 4, pp. 333-343. doi:10.13106/jafeb.2022.vol9.no4.0333
- Krstinić Nizić, M. K., Trinajstić, M. and Šverko Grdić, Z. (2019), “Towards sustainable cities in Croatia”, *The Sustainable City XIII*, Vol. 238, pp. 443-454. doi:10.2495/SC190391
- Sachs, J. D. (2012), “From millennium development goals to sustainable development goals.” *The lancet*, Vol. 379, No. 9832, pp. 2206-2211. [https://doi.org/10.1016/S0140-6736\(12\)60685-0](https://doi.org/10.1016/S0140-6736(12)60685-0)

- Skupština Brčko Distrikta BiH (2017), "Zakon o mladima Brčko distrikta Bosne i Hercegovine", Službeni glasnik Brčko distrikta BiH, 2/10, viewed 27 March 2023, <https://skupstinabd.ba/3-zakon/ba/Zakon%20o%20mladima%20Brc--ko%20distrikta%20BiH/001%2018-17%20Zakon%20o%20mladima%20Brc--ko%20distrikta%20BiH%20B.pdf>
- Sustainable Development Solutions Network, (2015), *Getting Started with the Sustainable Development Goals*, viewed 10 February 2023, <https://sustainabledevelopment.un.org/content/documents/2217Getting%20started.pdf>.
- UNDP in BiH (2020), *The SDGs Framework in Bosnia and Herzegovina*, viewed 10 February 2023, <https://www.undp.org/bosnia-herzegovina/publications/sdgs-framework-bosnia-and-herzegovina>.
- UNESCO (2014), *UNESCO Roadmap for Implementing the Global Action Programme on Education for Sustainable Development*, viewed 10 February 2023, <https://unesdoc.unesco.org/ark:/48223/pf0000230514->
- UNESCO (2017), *Unpacking Sustainable Development Goal 4 Education 2030 – Guide*. Available at: <https://docs.campaignforeducation.org/post2015/SDG4.pdf>
- UNESCO (2018), *Issues and trends in education for sustainable development*, viewed 16 March 2023, <https://unesdoc.unesco.org/ark:/48223/pf0000261445>
- UNESCO (2020a), *Education for Sustainable Development: Partners in Action; Global Action Programme (GAP) Key Partners Report (2015-2019)*, viewed 10 March 2023, <https://unesdoc.unesco.org/ark:/48223/pf0000374270>
- UNESCO (2020b), *Education for Sustainable Development: A roadmap*, viewed 10 March 2023, <https://unesdoc.unesco.org/ark:/48223/pf0000374802?posInSet=1&queryId=72517439-b58a-4cec-8c5c-4be27ee05946>
- United Nations (2015a), *The Millennium Development Goals Report 2015*, viewed at 20 February 2023, [https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%202015\).pdf](https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%202015).pdf)
- United Nations (2015b), *General Assembly Resolution A/RES/70/1. Transforming Our World, the 2030 Agenda for Sustainable Development*, 20 February 2023, <https://sdgs.un.org/sites/default/files/publications/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>
- Veiga Ávila, L., Rossato Facco, A. L., Bento, M. H. D. S., Arigony, M. M., Obregon, S. L. and Trevisan, M. (2018), "Sustainability and education for sustainability: An analysis of publications from the last decade", *Environmental Quality Management*, Vol. 27, No. 3, pp. 107-118. <https://doi.org/10.1002/tqem.21537>
- Vlada Federacije Bosne i Hercegovine (2010), *Zakon o mladima Federacije Bosne i Hercegovine*, Službene novine Federacije BiH, 36/10, viewed 27 March 2022, <https://mon.ks.gov.ba/sites/mon.ks.gov.ba/files/2021-04/Zakon-o-mladima-fbih-36-10.pdf>.
- Vukadin, M., Račićević, N., Marković, M. and Soldić Frleta, D. (2022), "How do young people travel? Evidence from Croatia and Serbia", *Faculty of Tourism and Hospitality Management in Opatija. Biennial International Congress. Tourism & Hospitality Industry*, University of Rijeka, Faculty of Tourism & Hospitality Management, pp. 321-340. DOI:10.20867/thi.26.1
- Wals, A. E. (2012), *Shaping the education of tomorrow: 2012 full-length report on the UN decade of education for sustainable development*, UNESCO, viewed 10 March 2023, <https://unesdoc.unesco.org/ark:/48223/pf0000216472>.
- Yuan, X., Yu, L. and Wu, H. (2021), "Awareness of sustainable development goals among students from a Chinese senior high school", *Education Sciences*, Vol. 11, No. 9, 458. <https://doi.org/10.3390/educsci11090458>
- Zamora-Polo, F. and Sánchez-Martín, J. (2019), "Teaching for a better world. Sustainability and sustainable development goals in the construction of a change-maker university", *Sustainability*, Vol. 11, No. 15, 4224. doi:10.3390/su11154224
- Zamora-Polo, F., Sánchez-Martín, J., Corrales-Serrano, M. and Espejo-Antúnez, L. (2019), "What do university students know about sustainable development goals? A realistic approach to the reception of this UN program amongst the youth population", *Sustainability*, Vol. 11, No. 13, 3533. <https://doi.org/10.3390/su11133533>
- Žalėnienė, I. and Pereira, P. (2021), "Higher education for sustainability: A global perspective.", *Geography and Sustainability*, Vol.2, No. 2, pp. 99-106. <https://doi.org/10.1016/j.geosus.2021.05.001>

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