
Environmentally and Socially Sustainable Behavior of Generation Z in the Context of Tourist Trips

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Abstract:

Purpose: The aim of the research was to identify the scope and intensity of pro-environmental behavior during tourist trips of Generation Z representatives.

Methodology: The source literature in the field of responsible behavior was analyzed, especially in the area of tourist activity and sustainable tourism. The main part of the article is a quantitative and qualitative analysis of the survey results. The research includes identifying environmentally and socially responsible behaviors of Generation Z representatives (sample: 458 people). A comparison was made of the frequency of environmentally and socially responsible behavior in everyday surroundings and during tourist trips. For this purpose, the Pearson correlation index and the Mann-Whitney U test were used.

Findings: Research shows that there is a significant difference between declarations and actual behavior. There was also an asymmetry in respondents' behavior at home and during tourist trips. It has been shown that women rate their environmentally and socially responsible behavior higher than men. The main reasons for the deficit of responsible behavior were, in the respondents' opinion, indifference and lack of role models.

Practical implications: Research has shown that there is a need to clearly communicate to young consumers pro-ecological solutions that have been introduced in specific facilities or tourist reception areas.

Originality: The article is an important voice in the scientific discussion on environmentally and socially responsible behavior during tourist trips. In the context of unfavorable climate changes, the scientific discussion on this topic is extremely topical.

Keywords: Generation Z, responsible behavior, tourist trips, environment.

JEL codes: Z32, Z33, Z38, Q56, D12, D16.

Paper type: Research article.

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1. Introduction

Environmentally and socially sustainable behavior is currently the subject of public debate and many scientific studies. This is implied, among others, by the sustainable development goals announced by the UN in 2015 with a perspective until 2030.

Promoting the principles of sustainable development in Poland is also included in the document prepared by the Ministry of the Environment in 2019 entitled "State Ecological Policy 2030" (PEP, 2030). Among the goals mentioned, attention is paid to, among others, ensuring sustainable consumption and production patterns and taking actions to minimize unfavorable climate changes.

The topic of climate change has recently been discussed not only in scientific studies and analyzes of various organizations, such as the New Climate Institute, but was also discussed during the Climate Summit in Sharm El Sheikh (in 2022) and the G7 Summit (Hiroshima, May 19-21, 2023). Intensive work is being carried out at the European Union level, including regulatory work e.g., the Green Deal (Strategy 2019-2024), which aims to reduce greenhouse gas emissions in the EU by at least 55% by 2030 compared to the 1990 level (Poland emissions, 2020).

Environmental activities undertaken are assessed by Germanwatch and the New Climate Institute based on the Climate Change Performance Index (CCPI). The assessment covered 59 countries, including European Union countries, which together are responsible for over 90% of global greenhouse gas emissions.

In addition to gas emissions, the CCPI Index takes into account: energy consumption, the use of renewable energy and the climate policy of a given country. The use of this index "increases transparency in international climate policy and enables comparison of climate protection efforts and progress of individual countries" in this regard (ccpi.org).

In 2022, the highest value of the indicator was recorded in Denmark (CCPI= 79.61), and the lowest in the Islamic Republic of Iran (CCPI=18.77). Poland was ranked 54 in the cited ranking (CCPI = 37.94) and it should be emphasized that compared to 2021, it recorded a drop of 6 positions and this is the lowest position among EU countries. Such activities should be accompanied by bottom-up initiatives supported

by legal and political solutions. That is why it is so important to build ecological awareness and shape socially and environmentally responsible attitudes by promoting responsible consumption.

Pro-ecological behavior can be analyzed from the perspective of rational choice theory. Its creators, Buchanan and Tullock (Ptak, 2018), assumed that the rationality of an individual's decision-making can be understood as the willingness to act in order to maximize the utility function. In terms of pro-environmental behavior, there are also those that are more consistent with impulsive or inertial behavior.

Due to the complexity of the resource, which is the natural environment, and the often deferred effects of human impact on this resource, decisions are most often consistent with the theory of rational choice. Pro-ecological behavior, including students (i.e., Generation Z), that goes beyond the theory of rational choice was indicated by, among others, Kaiser *et al.* (1999). Their research shows that environmental behavior is influenced by: environmental values and environmental knowledge. These authors emphasized that rational choice theories do not sufficiently explain behavior that is at least partially ethical, such as ecological attitudes.

It might seem that in the era of universal access to the media and high popularity of pro-environmental issues due to, among others, "Youth Climate Strike", Greta Thunberg, etc. there is an excess of information about the proper use of nature. However, scientific studies emphasize that the demand for knowledge about human interactions with nature at the level of individual people and populations is still growing (Gaston *et al.*, 2018).

The view is presented in the literature that cosmopolitan individuals, as more open to world problems, are interested in nature conservation issues and seek information about them (Ito, 2020). It is cosmopolitan attitudes that are often presented by Generation Z. To distinguish them, the following classification was adopted (Lyons *et al.*, 2015):

- Silent Generation (builders of modern Europe)— born between 1922 and 1944,
- Baby Boomers— born between 1945 and 1964,
- Generation X—born between 1965 and 1980,
- Generation Y (*millennials*)— born between 1981 and 1994,
- Generation Z—born after 1995. Also called Generation C from the words "connect, communicate, change".

The selection of Generation Z representatives for the study was dictated by many reasons. This is the first generation that grows up with a sense of environmental threats and has the opportunity to actively counteract them. Secondly, this is a generation for which open borders and learning English are a natural part of life,

which makes acquiring knowledge and behavioral patterns from other cultural circles natural for them. Thirdly, this is the most active group in terms of tourism (Niemczy *et al.*, 2019, p. 29). Fourthly, this is also the Internet generation and uses social media to a very large extent.

Young people are the recipients and creators of groups and profiles on climate change and responsible consumption. This is also a group to which popular science publications on the impact of consumption on the environment are increasingly dedicated (Klein, 2020; Klein and Steffoff, 2022).

In the tourism economy, natural values constitute a specific resource, which leads to numerous manifestations of ecological dysfunctions of tourism. Therefore, sustainable tourism projects are being implemented more and more often. Research initiatives and scientific studies are undertaken, also at the scientific level, dealing with the relations between the tourism economy and the natural environment.

The subject of a broad analysis is sustainable or ecological tourism, and numerous researchers characterize its essence and development conditions in detail (including Godlewska, 2016; Kowalczyk, 2010; Adamski and Ciapała, 2016; Majdak, 2020; Pociovalisteanu and Niculescu, 2010; Bąk and Kurtz, 2021; Adamopoulos and Thalassinos, 2020; Thalassinos *et al.*, 2023). The issue of responsible behavior of tourism participants is also discussed. The presented research results fall into this trend.

The aim of the research was to identify the scope and intensity of pro-environmental behavior during tourist trips of Generation Z representatives. The following research questions were also adopted:

1. How do respondents assess their pro-ecological behavior in everyday surroundings and during tourist trips?
2. What is the frequency of responsible behavior in everyday surroundings and during a tourist trip?
3. To what extent are environmentally responsible behaviors during tourist trips correlated with behaviors in everyday surroundings and socio-demographic variables of respondents?
4. What are the limits on responsible behavior during tourist trips?

The presented research results are carried out as part of the research project Nds/545437/2022/2022 "Environmentally and socially sustainable behavior of generation Z stimulated by mobile applications".

2. Material and Methods

The analysis of secondary data included scientific publications, Internet sources, including social media. This stage allowed for organizing and supplementing

knowledge about the research issues and possible research methods. The empirical research used the diagnostic survey method, including the online survey technique.

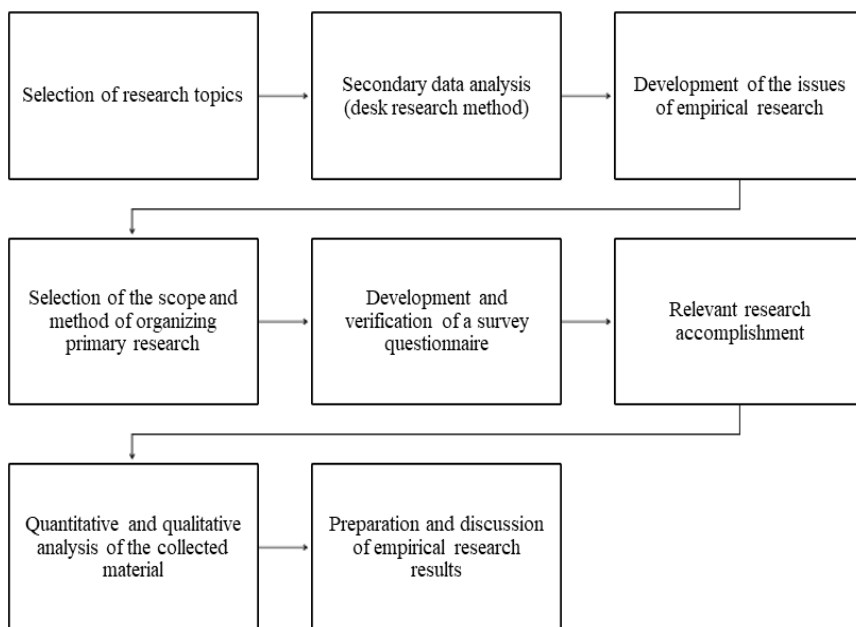
The questionnaire consisted of 11 substantive questions and respondent's particulars. The following questions were used: filtering single- and multiple-choice, as well as questions on a 5- and 4-point scale. The research was carried out in the period from March to October 2023.

A convenient selection of respondents was used (Etikan, 2016), and the snowball method was applied to distribute the questionnaire (Jabłońska and Sobieraj, 2013). The link to the survey was distributed mainly via social media with a request to complete and share with friends. 462 respondents took part in the study.

In accordance with the adopted issues, respondents declared tourist activity. This condition was verified using a filter question. Only 4 people declared a complete lack of such activity. Therefore, a sample of 458 respondents was included in the analysis. The collected material was subjected to quantitative and qualitative analysis.

The study used, among others, the Pearson correlation index and the Mann-Whitney U test. The research process is presented in Figure 1.

Figure 1. Stages of research implementation



Source: Own research.

3. Results and Discussion

3.1 Characteristics of Respondents

The sample was dominated by women (65.5%), which is typical for survey research (Mulder and de Bruijne, 2019). Due to the selection of respondents (Generation Z), most of them declared secondary education (69%), 26.6% higher education, and the remaining, primary and basic vocational (trade) education.

It is also related to the professional status of the respondents, 50.9% indicated that they were studying, 41.0% - studying and working at the same time, and the rest were working. The largest group of respondents lived in cities with over 500,000 inhabitants (44.8%). Almost every fourth respondent lived in the countryside (25.8%), and the rest indicated cities with fewer than 500,000 inhabitants.

From the point of view of the research issues, the form of residence of the respondents was important. The majority indicated that they lived in a block of flats (48.5%) or in a single-family house (38.6%), and only 12.2% lived in a student dormitory. The majority lived with their parents (58.7%), 27.1% on their own, and the rest selected the "other" option. The amount of money that respondents obtained monthly was most often up to EUR 344⁴ (43.4%), then from EUR 344 to EUR 689 (33.8%) and above EUR 689 (22.7%).

3.2 Respondents' Behavior in Everyday Surroundings

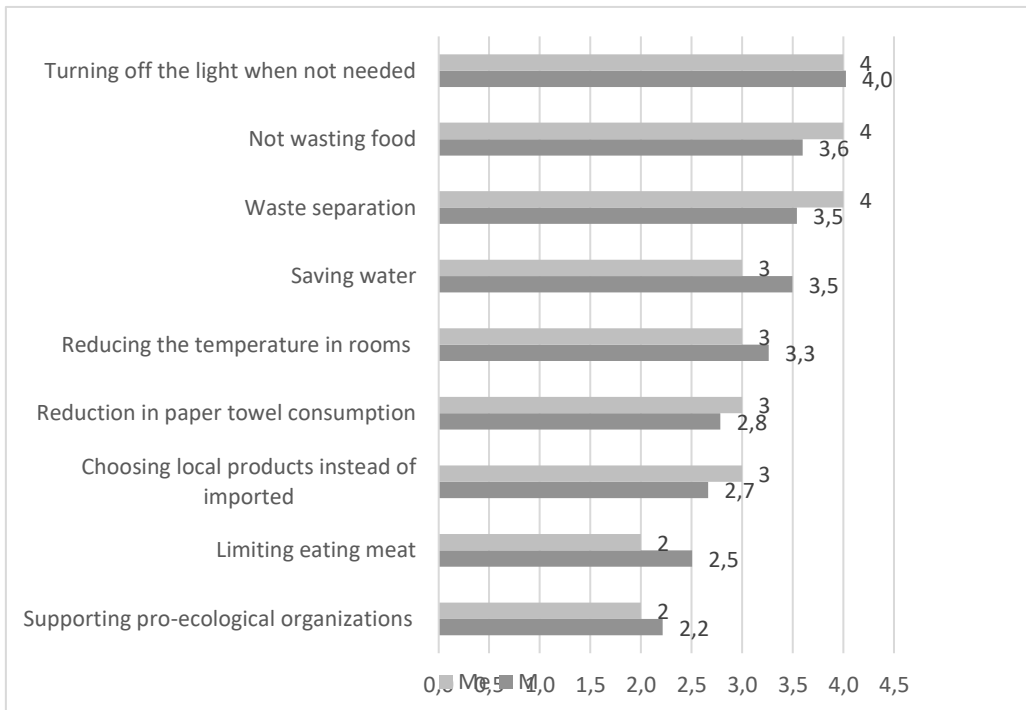
The first stage of the research was to verify the level of respondents' environmentally and socially responsible behavior. The results are shown in Figure 2. Respondents rated their behavior in terms of reducing indoor lighting the highest (Figure 2). They assessed activities in the field of reducing food waste, saving water, segregating waste and lowering the temperature in rooms at an average level.

These behaviors are significantly stimulated by economic factors (costs of electricity, heating) and legal factors (waste segregation). The relatively high position of water saving behavior was also confirmed in other studies Balińska et al. (2021). This type of pro-ecological practices according to Tapia-Fonllem *et al.* (2013) show significant connections with frugal, altruistic and fair behaviors.

Respondents rated their behavior in supporting pro-ecological organizations and reducing meat consumption the lowest, although according to research by the Heinrich Böll Foundation and the Institute for Eco-Development Foundation, 44% of Poles aged 15 to 29 declared a reduction in meat consumption, and another 8% a vegetarian or vegan diet (Atlas mięsa, 2022). The frequency of practicing selected behaviors by respondents was also verified (Table 1).

⁴Exchange rate on 30 November 2023.

Figure 2. Assessment of respondents' socially and environmentally responsible behavior (on a scale of 1 - 5, where 5 is the highest), M-mean, Me-median



Source: Own research.

Table 1. Declared frequency of selected responsible behaviors (in %)

Specification	Frequency:			
	never	sometimes	often	very often
Resignation from paper press in favor of electronic editions	7.2	17.2	22.7	52.8
Choosing public transport	4.1	24.0	24.2	47.6
Using tap water filters	17.2	20.1	21.6	41.0
Buying recycled products or products in recycled packaging	9.8	57.4	27.7	5.0
Travelling by bike	31.9	46.9	16.6	4.6

Source: Own research.

Almost every 14th respondent indicated that they never give up buying paper press in favor of electronic editions, and more than half indicated that they very often give up paper editions. Public transport and the use of tap water filters, which reduces the number of plastic bottles thrown away, were also quite popular among respondents. Purchasing recycled products or products in recycled packaging was an activity practiced by most respondents "sometimes". Respondents used bicycle transport relatively rarely.

3.3 Tourist Activity of Respondents

All respondents were active in tourism, although the frequency of these trips varied. 7.6% of respondents declared trips once every few years, 28.8% once a year, 45.4% declared trips 2 to 3 times a year and 18.2% 4 times a year or more often. Several people indicated that they did not travel within the country, but traveled abroad, and almost every fifth respondent declared that they did not travel abroad. The respondents' preferred tourist destinations are shown in Table 2.

Table 2. Tourist destinations preferred by respondents (in %)

	domestic	foreign
Seaside	53.5	55.9
Mountains	45.6	17.0
Lakes	33.2	7.4
Cities	57.2	54.6
Countryside	19.9	3.3
I do not travel in this direction	5.0	17.9

Note: *Respondents could select more than one answer.

Source: Own research.

The most popular in the case of domestic trips were trips to the seaside and cities, which may be related to the growing fashion for *city breaks*. Another typical tourist destination, the mountains, was mentioned in the third place.

Almost every fifth respondent mentioned the countryside, but none of them indicated it as their only destination. It was listed together with trips to the mountains, the seaside or lakes. Almost 8 out of 10 respondents went abroad as tourists, choosing seaside areas and cities, just like in their own country.

The most popular means of transport among respondents was a car (43.4%). The next places were: train (26.4%), plane (22.9%). Respondents used coaches/buses the least (4.6%). The preferred forms of accommodation were definitely typical facilities (hotel, motel, guesthouse), which were indicated by 56.8% of respondents. 21.2% chose an apartment for rent, and the rest chose hostels (6.1%). A few people indicated a camping site (0.9%) and others (2.6%).

3.4 Environmentally and Socially Responsible Behavior During Tourist Trips

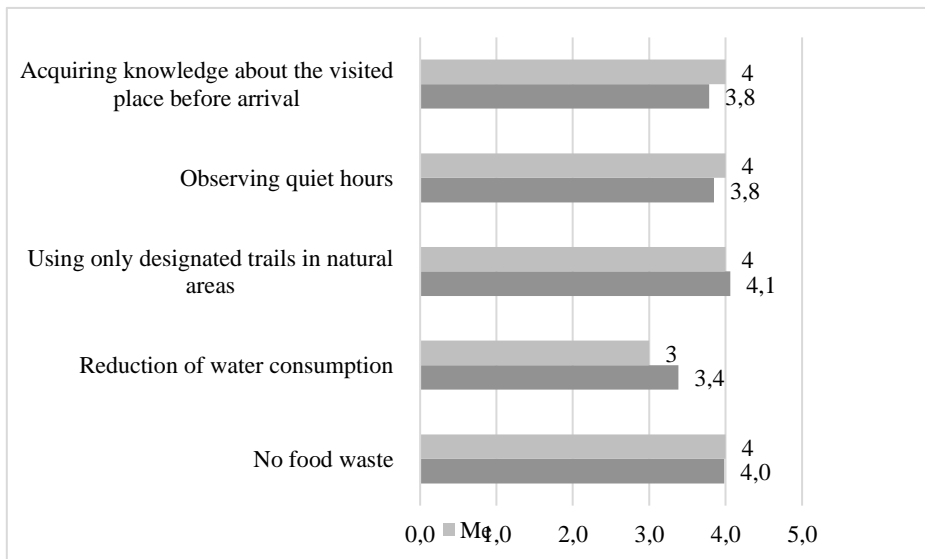
The main subject of research interests was environmentally and socially responsible behavior during tourist trips (Figure 3).

Respondents gave the highest rating to using only designated trails. Quite high they rated acquiring knowledge about the places visited. Likewise, research by Majdak et al. (2021) shows that for the sustainable development of tourism, it is important for tourists to have knowledge about the tourist reception area, its products and customs.

Respondents rated their behavior in terms of reducing water consumption during personal hygiene procedures (using a short shower instead of long baths) the lowest. Verification with the Mann-Whitney U test showed that there was a statistically significant difference between women and men in most of the analyzed behaviors.

Women rated their own behaviors higher than men in terms of: reducing water consumption (average rank of women 192.14; average rank of men 158.26; $p=0.0021$), responsible use of designated trails only (average rank of women 193.31; average rank of men 153.86; $p=0.0003$), observing quiet hours (average rank of women 192.82; average rank of men 154.48; $p=0.0004$), acquiring knowledge about the visited place before arrival (average rank of women 193.61; average rank of men 156.57; $p=0.0007$). There was no statistically significant difference between women and men only in the area of behavior related to not wasting food. The remaining socio-demographic variables did not differentiate the assessments of the analyzed behavior.

Figure 3. Assessment of one's own activities during a tourist trip (on a scale of 1-5, where 5 is the highest)



Source: Own research, M-mean, Me-median.

These results are confirmed by the studies of Balińska *et al.* (2021), Brécard *et al.* (2009) and Saboya de Aragão *et al.* (2021). The results of research by other authors confirm that women more often than men present ecologically responsible attitudes (Xiao *et al.*, 2010). Smerichevskiy *et al.* (2018) also emphasize that women are more active consumers of ecological goods and services, thus taking care of the health of their families.

Likewise, the studies of Antonetti and Maklan (2014), Brough *et al.* (2016), Jaski *et al.* (2022) show that socially and environmentally responsible behavior is more often noticed in women than men. In turn, Swim *et al.* (2018) emphasize that this is due to the higher social sensitivity of women than men.

Similar conclusions were formulated by Houser *et al.* (2022) by analyzing factors influencing adaptation policy. The research of Kahsay *et al.* (2021) shows that women's participation in the formal decision-making process is necessary to achieve ecological goals.

The frequency of selected responsible behaviors during tourist trips was also verified (Table 3).

Table 3. Declared frequency of selected behaviors during tourist trips (in%)

Specification	Frequency			
	never	sometimes	often	very often
Compliance with the regulations of protected areas and tourist facilities in visited places	2.4	11.5	28.4	57.6
Choosing local restaurants instead of well-known food chains	2.4	35.7	37.9	23.9
Selection of food from local producers	6.9	49.0	34.4	9.8
Choosing means of transport that emit less CO ₂	21.7	47.0	24.4	6.9
Use of disposable packaging	4.2	54.3	33.3	8.2
Using ecological cosmetics, especially when using water reservoirs	24.8	47.0	20.8	7.3
Selection of accommodation where pro-ecological solutions are used	28.6	51.2	16.6	3.5
Leaving garbage behind on the beach, in the forest, etc.	87.1	4.7	4.4	3.8

Source: Own research.

Respondents indicated compliance with regulations in protected places and tourist facilities as "very often" behavior. This behavior fits into the concept of a "conscious" tourist, which was described by, among others, Priveli (2023). Every fourth respondent indicated that they very often choose local restaurants instead of well-known "chain" restaurants, which was confirmed by the research of Majdak *et al.* (2021). It is worth emphasizing that almost 9 out of 10 respondents never leave garbage behind on the beach or in the forest.

Using the Pearson correlation coefficient, the relationship between water saving behaviors in everyday surroundings and during tourist trips was verified, and

similarly in terms of not wasting food. In the first case, this indicator was 0.432, and in the second 0.387, which shows a weak relationship.

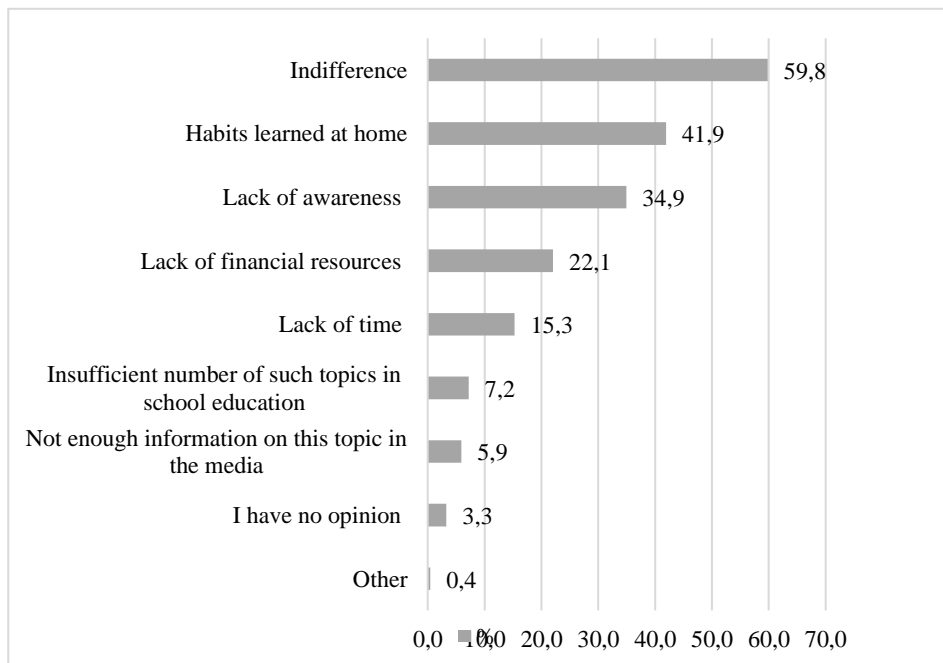
However, there was no relationship between the intensity of tourist trips and the assessment and frequency of individual responsible behaviors during tourist trips.

Another manifestation of responsible behavior is the use of various forms of sharing. The most popular among respondents were applications allowing the purchase of groceries and ready-made meals at a bargain price (applications: TooGoodToDo and Foodsi), indicated by 41.4% of respondents. Every third respondent (35%) used short-term rentals via Airbnb, and every fourth (24.5%) used carsharing.

Sharing transport using the BlaBlaCar application was also quite popular among respondents (23.6%). It should be emphasized that a significant number of respondents (34.6%) did not use any of the above-mentioned solutions.

Research by Balińska and Staśkiewicz (2021) shows that the popularity of *sharing* solutions is largely influenced by linking them with mobile applications that allow for quick obtaining information, often with personalized settings. The research also verified the reasons for not following the rules of responsible travel (Figure 4).

Figure 4. Reasons for not following the rules of responsible travel



Note: *Respondents could indicate maximum 2 answers.

Source: Own research.

According to most respondents, the lack of responsible behavior is caused by indifference. The next places were habits learned at home and lack of awareness of threats. The financial aspect was important only in the opinion of every fifth respondent. Answers related to formal and informal education received the least number of responses.

According to research (Jaska *et al.*, 2022; Lutzke *et al.*, 2019), young generations are increasingly using the unlimited resources of information provided by new media.

4. Conclusions

The conducted research shows that representatives of Generation Z assess their environmentally and socially responsible behavior at a good and average level. In everyday surroundings, they rated the highest their behavior related to the consumption of electricity and not wasting food and water, and during a tourist trip, using designated tourist trails and not wasting food. The Pearson correlation coefficient showed a low correlation between saving water and food at home and during a tourist trip.

In turn, reducing water consumption during a tourist trip was rated lower by respondents than the same behavior at home. The most common behavior in the place of residence was the resignation from purchasing printed press in favor of electronic editions and the use of public transport. During tourist trips, this included following the regulations of protected places and using local restaurants instead of "chain" restaurants in tourist locations.

The variable that differentiated the assessment and frequency of environmentally and socially responsible behavior during tourist trips was gender. Women rated some of the analyzed behaviors significantly higher than men. According to respondents, the main barriers limiting appropriate behavior are indifference, lack of patterns learned at home and lack of ecological awareness.

The presented research results do not exhaust the analyzed issue. They are not free from limitations, including:

1. Lack of representativeness of the sample.
2. The research included only representatives of Generation Z, without reference to other generations.
3. Survey research was used, which, playing an important role in social research, nevertheless does not allow for capturing all research problems.

The authors treat these limitations as a challenge for further research and a basis for formulating the following recommendations:

1. It would be valuable in cognitive and practical terms to compare the environmentally and socially responsible behaviors of representatives of generations X, Y and Z.
2. Scientific research on responsible behavior should be a priority in public research at the local, regional and global levels.
3. There is a need for further extended and in-depth analyzes of an interdisciplinary nature.

The article is an original contribution to the very current scientific discussion on environmentally and socially responsible behavior during tourist trips. It contributes to a broad scientific discussion, while pointing out new research problems worth addressing.

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