ANNALS OF THE POLISH ASSOCIATION OF AGRICULTURAL AND AGRIBUSINESS ECONOMISTS

received: 15.11.2020
acceptance: 17.12.2020
published: 22.12.2020
JEL codes: Q50, Q53, Q56

Annals PAAAE • 2020 • Vol. XXII • No. (4)

DOI: 10.5604/01.3001.0014.5934

AGATA BALIŃSKA, PIOTR GABRYJOŃCZYK, JAN ZAWADKA

Warsaw University of Life Sciences – SGGW, Poland

PRO-ECOLOGICAL BEHAVIOR OF STUDENTS OF THE WULS-SGGW FACULTY OF ECONOMICS

Key words: pro-ecological behavior, students, gender, environmental awareness, nature

ABSTRACT. The aim of the study was to identify pro-ecological behaviors undertaken by students of the Faculty of Economics of WULS-SGGW and the problems accompanying such activities, as well as to assess the behavior of family and friends and the approach of decision-makers to environmental issues. The survey technique was used in the research. The sample consisted of 119 respondents from all degrees, forms and fields of study at the Faculty. Only half of the respondents considered themselves pro-ecological consumers. Students also assessed their families more favorably than their friends in this respect. However, a much larger percentage of the sample participants declared that they regularly undertook specific activities in this area, the most popular of which were reusing plastic bags during shopping and the use of public transport. The least often, students decided to buy organic food and industrial ecological products. There were some significant differences in the declarations of men and women. Students of the Faculty of Economics of WULS-SGGW in their behavior and frequency did not differ significantly from their Polish peers. The main barrier to their pro-ecological behavior was the high cost of ecological goods.

INTRODUCTION

Climate change, affecting all of us, and the increasingly visible problems of the natural environment, caused by past and present human activities, have led to the creation of the Anthropocene concept (understood as the geological epoch where man exerts a decisive influence on the ecosystem) [Crutzen, Stoermer 2000], which has permanently entered the language of global politics [Lövbrand et al. 2020]. No wonder then that ecology's broadly understood issue is prevalent in public space and present in scientific publications. One of the areas that researchers focus on is human pro-ecological attitudes and behavior. These studies, sometimes also of experimental character, may concern various areas and the general population [e.g.: Schlegelmilch et al. 1996, Zelezny et al. 2000, Kortenkamp, Moore 2001, CBOS 2011, Kłos 2015, Patrzałek 2016, 2017, MKŚ 2018] or selected age groups, with researchers particularly keen on focusing on secondary [e.g.:Atav et al. 2014, Ntanos et al. 2018, Runhaar et al. 2019] and university students. The latter approach seems to be particularly justified depending on how young people are educated

and brought up, they will adopt attitudes and make decisions in the future [Molina et al. 2013]. It seems that the initiatives of young people currently visible in the public space, such as the activity of the School Strike for Climate (MSK) inspired by the actions of Greta Thunberg, should testify to the high and universal concern of this generation for the welfare of the planet, and thus the behaviors that are as close as possible with expressed postulates. It is worth noting that the expectations of MSK are only limited to claims (*we request, call, demand, expect*), also in terms of access to knowledge and its presentation [MSK 2020]. This is obviously understandable in the context of negligible decision-making and the administrative capacity of young people, so it is worth checking whether and how students behave in the field of generally available, specific activities important for the natural environment. Such studies are quite numerous and usually concern students of various fields and degrees. In Poland, such studies have been published so far by, among others, Krzysztof Szulborski [Szulborski 2001], who presented the topic from a mainly sociological perspective, Agnieszka Kwiatek and Maja Skiba [Kwiatek, Skiba 2017], who broadly described the essence of environmental awareness and focused on the group of young people aged 19-23, Anna Bednarek-Gejo et al. [Bednarek-Gejo et al. 2012], who devoted their study to students of one of the universities in Łódź, Ariadna Ciążela [Ciążela 2019], who managed to study a large sample of students of various faculties and universities throughout Poland (including WULS) and the team of Anna Garczewska, which covered, by far, the largest group of students (2624 people) of 18, mainly non-public, universities from the country [Garczewska 2017]. Foreign literature is richer. In it, t is possible to find studies based on much larger samples using experimental, comparative, and statistical methods, also with regard to education and shaping pro-ecological behavior. These studies concern, among others, students of the USA [Emanuel, Adams 2011], Hungary [Szerényi et al. 2009, Szerényi et al. 2011], Romania [Crumpei et al. 2014, Boca, Saraçlı 2019], Turkey [Budak et al. 2005, Südaş, Özeltürkay 2014], but also more exotic countries such as Thailand [Janmaimool, Khajohnmanee 2019], Indonesia [Widiaswati, Sawitri 2018], Malaysia [Tan, Lau 2009] or China [Fu et al. 2018], where the authors not only focused on students but the perspective of the entire university, including lecturers and administrative staff. Some studies are transnational, examples of which are works of María Azucena Vicente-Molina et al. [Molina et al. 2013], comparing students from developed and developing countries (the USA, Spain, Mexico, Brazil) or Ecem Tezel et al. [Tezel et al. 2018], about European, Turkish and Middle Eastern students studying in Istanbul.

The purpose of this study was to identify pro-ecological behaviors undertaken by students of the Faculty of Economics of WULS-SGGW. Due to the extensive thematic scope, the detailed research problems were adopted: what pro-ecological behaviors are undertaken most often and least frequently by respondents?; how are the behaviors of family and friends assessed and the approach of decision-makers to environmental issues?; what problems do respondents encounter when undertaking pro-ecological behavior?

MATERIAL AND METHODS

Primary and secondary sources were used in the research. The latter include literature, scientific articles and reports on ecology, environmental protection, environmental education and the promotion of pro-environmental attitudes and research on the pro-ecological behavior of various groups of consumers.

The method of collecting primary data was a diagnostic survey. The questionnaire was prepared on the webankieta.pl platform and the link to it was sent to students of the Faculty of Economics (formerly Economic Sciences) of WULS-SGGW. The study was conducted in 2019. The questionnaire included various types of closed-ended, open-ended, and scale-based questions. The research was based on the purposive sampling - the link to the questionnaire was posted on the Faculty's Facebook, so each student had access to it and could take part in the survey. The sample included representatives of all fields of study (economics, finance and accounting, logistics, tourism and recreation as well as management), forms (full-time and part-time) and levels (bachelor's, master's) of studies offered by the Faculty of Economics. However, due to their different participation and overall number (119 correctly completed questionnaires were obtained out of a total of approx. 3 thousand students, therefore the sampling error was 9% for a confidence level of 95%) this cannot be considered fully representative.

RESEARCH RESULTS

Women predominated in the research sample (72.0%). The most frequently indicated places of origin were rural areas and large cities with over 100,000 inhabitants – in both cases, almost every 3rd respondent came from such a settlement unit. At the time of the study, almost 90% of the respondents lived in Warsaw (68.1%) or its vicinity (up to 30 km).

When asked to make a self-assessment in the context of own pro-ecological behavior, the students divided into two groups of almost the same size (49.5% and 50.5%), with the slightly smaller one including those who defined themselves as pro-ecological consumers. Much greater diversification was obtained when assessing the behavior of other groups and the approach of decision-makers to environmental issues – due to the greater number of women in the sample and to show differences between the genders, the data from the entire sample was also presented for female and male students (Table 1).

In the context of pro-ecological behavior, the respondents clearly assessed their immediate family better than their friends – more than half of the respondents confirmed that their close relatives behave in a desired way. At the same time, only one in five stated such a fact about other people they know. This differentiation can also clearly be seen from the opposite perspective: the respondents more easily indicated a lack of such behavior among their friends (every 3rd answer) than in their family (every 5th). Undoubtedly, this can be explained, on the one hand, by the natural reluctance to present their loved ones in an unfavorable light and, on the other hand, by low awareness of this type of behavior among people with whom you do not create a household daily. The latter assumption becomes even more valid after becoming acquainted with the types of pro-ecological behaviors undertaken among the respondents and their frequency, which are presented

Table 1. Compliance of respondents with statements concerning pro-ecological behavior

Description		Percentage of indications in the category [%]				
		yes	rather yes	no opinion/ hard to tell	rather no	no
My closest family behaves pro-ecologically	total	14.29	36.13	26.89	17.65	5.04
	female	15.12	33.72	29.07	17.44	4.65
	male	12.12	42.42	21.21	18.18	6.06
Most of my friends behave pro-ecologically	total	0.84	21.01	42.86	30.25	5.04
	female	1.16	20.93	43.02	29.07	5.81
	male	0.00	21.21	42.42	33.33	3.03
Pro-ecological behavior is important for state authorities	total	12.61	21.85	32.77	26.89	5.88
	female	12.79	18.60	32.56	31.40	4.65
	male	12.12	30.30	33.33	15.15	9.09
Pro-ecological behavior is important for local authorities	total	9.24	27.73	39.50	22.69	0.84
	female	9.30	30.23	37.21	23.26	0.00
	male	9.09	21.21	45.45	21.21	3.03

blue color marks the highest results within each response category in the "total" group
Source: own research

later in the study – these are usually activities of everyday life. Additional confirmation of this observation may be the highest percentage of responses in the "I have no opinion/hard to tell" category when asked about friends' pro-ecological behavior (over 40%). For this reason, the above-mentioned paradox could have arisen. If the situation in each family was as good as was presented, it should also be reflected in the observation of the behavior of friends (other families). Interestingly, in the sample, there were no significant differences between the responses of men and women in this case – the only more noticeable element was a slightly more balanced assessment of their relatives in the case of women, men were more categorical in their positive statements.

In the case assessing the decision-makers' approach to pro-ecological issues, the results were quite similar, indicating a slightly more significant appreciation of local authorities. Such a dependence was also noticed concerning all Poles and their attitude towards local authorities in this area after 2000 [Kłos 2015]. It is visible especially in negative statements – the low importance of pro-ecological behavior for local authorities was emphasized by every 4th respondent and by state authorities by every 3rd one. Perhaps this results from greater publicity for actions and solutions at a national or even global level. Also, in these responses, some differences were observed between genders: men showed greater confidence in central authorities and women in local ones.

Respondents who declared themselves pro-ecological consumers were asked to indicate their behaviors of this type. The most frequently undertaken activities were waste segregation (23.5%) and broadly understood reduction of plastic consumption (disposable plastic bags, straws, product packaging – 15.3%). Other behaviors accounted for less than 10% of all indications. However, the most frequently repeated ones include the use

of reusable bags and saving water (8.2% each), travelling by bicycle or public transport (7.6%), and saving energy (6, 5%). It can be noted that the most frequent answers concerned topics most strongly present in public discourse: waste segregation (due to newly imposed legal and organizational solutions) and the problem of visible accumulation of plastic and its harmfulness to the environment. A completely different frequency distribution of pro-ecological behavior was obtained in the all respondents' group (Table 2).

Table 2. Pro-ecological behavior undertaken by respondents and their frequency

Description		Percentage of indications in the category [%]				
		always	often	sometimes	rarely	never
I save water	total	15.97	43.70	28.57	9.24	2.52
	female	19.77	39.53	29.07	9.30	2.33
	male	6.06	54.55	27.27	9.09	3.03
I save electricity	total	7.56	40.34	32.77	15.97	3.36
	female	8.14	38.37	33.72	17.44	2.33
	male	6.06	45.45	30.30	12.12	6.06
I sort waste according to the rules	total	26.89	31.09	21.85	16.81	3.36
	female	27.91	27.91	25.58	16.28	2.33
	male	24.24	39.39	12.12	18.18	6.06
I choose public transport	total	28.57	47.06	12.61	8.40	3.36
	female	31.40	48.84	12.79	5.81	1.16
	male	21.21	42.42	12.12	15.15	9.09
I choose emission-free transport (bike, electric vehicles, etc.)	total	2.52	32.77	32.77	26.05	5.88
	female	1.16	31.40	33.72	29.07	4.65
	male	6.06	36.36	30.30	18.18	9.09
I resign from plastic bags while shopping	total	17.65	43.70	22.69	11.76	4.20
	female	22.09	43.02	20.93	12.79	1.16
	male	6.06	45.45	27.27	9.09	12.12
I use the same plastic bags many times while shopping	total	35.29	36.97	15.97	8.40	3.36
	female	44.19	38.37	10.47	5.81	1.16
	male	12.12	33.33	30.30	15.15	9.09
I choose products in returnable or easily degradable packaging	total	3.36	22.69	36.13	28.57	9.24
	female	3.49	26.74	36.05	27.91	5.81
	male	3.03	12.12	36.36	30.30	18.18
I buy organic food products	total	1.68	21.01	30.25	31.93	15.13
	female	2.33	20.93	32.56	29.07	15.12
	male	0.00	21.21	24.24	39.39	15.15
I buy industrial ecological products (energy-saving products, made during recycling, etc.)	total	0.84	18.49	39.50	32.77	8.40
	female	1.16	19.77	44.19	27.91	6.98
	male	0.00	15.15	27.27	45.45	12.12

* blue color marks the highest results within each response category in the "total" group
Source: own research

The obtained results mean that students who do not consider themselves pro-ecological consumers undertake, perhaps unknowingly, certain actions beneficial for the natural environment – similar observations were also made in China [Fu et al. 2018]. The most common declared behavior was the repeated use of plastic bags during shopping or their reduction, which is consistent with the results of other authors [Bednarek-Gejo et al. 2012] and the use of public transport. A very significant difference is visible here compared to students from the USA, where public transport is rarely chosen [Molina et al. 2013], and only 16-20% (depending on the state) declared the use of more energy-efficient means of transport [Emanuel, Adams 2011]. In turn, the activities related to the active search and selection of organic products available on the market, both food and industrial, turned out to be the least frequently undertaken by students of WULS-SGGW – with this type of behavior, the highest percentages of responses "sometimes" and "rarely" (industrial products, a total of over 70%) and "never" (food products, slightly over 15%) were observed. That again clearly distinguishes the respondents from their American peers because there such goods were used by 32-51% of the students [Emanuel, Adams 2011]. When analyzing all national results, it can also be noticed that, unfortunately, the percentage of desired behaviors of respondents (saving water, energy, waste segregation, selection of ecological packaging) is generally slightly lower than in the case of nationwide surveys [MKŚ 2018], also concerning youth [Kwiatek, Skiba 2017]. The conducted own research shows that students often undertook actions that were either partially imposed on them by top-down regulations (waste segregation obligation) or those that result in measurable financial benefits (saving water, energy, traveling by public transport, resignation from handbags that are additionally payable). On the other hand, behaviors which would consequently be an additional burden on the budget (buying relatively expensive ecological products), were clearly less willingly undertaken, despite the results of other studies of all Polish consumers indicating a significant willingness (over 60%) to buy an ecological product, even in the case of higher prices [Patrzałek 2017]. However, this should not come as a surprise in the context of the respondents' capabilities; similar relationships were also observed in another study of students [Ciążela 2019]. It should also be remembered that the largest group of respondents were people from rural areas who live in Warsaw, which is certainly a significant economic challenge for them. On the other hand, this origin could also result in the obtained answers – Anna Bednarek-Gejo et al., proved that students from the countryside show greater interest in activities to protect the natural environment [Bednarek-Gejo et al. 2012].

Interestingly, in the case of the declared behaviors, some differences were observed between students of the opposite gender. The biggest differences were visible in the repeated use of plastic bags - it turned out that women always do it almost four times more often than men (this solution is regularly used by over 80% of women and only 45% of men). It is certainly related that almost 2/3 of female students in the sample give up plastic bags when shopping, while similar actions concern only about half of men. Perhaps it is simply a result of the fact that ladies have handbags in which there is always room for a plastic bag. Women also turned out to be slightly more conscious consumers in the context of the selection of goods in terms of their ecological characteristics – such a relationship was observed concerning all types of products (mostly in the case of those in ecological

packaging). This is in line with other studies that have shown that women, regardless of the economic situation, are generally more likely to be environmentally friendly [Zelezny et al. 2000, Molina et al. 2013]. However, it should also be noted that not all researches have confirmed such a relationship - an example is the study of Malaysian students carried out by Booi-Chen Tan and Teck-Chai Lau [Tan, Lau 2009]. Interestingly, men were clearly less willing to use public transport (1/4 did it "rarely" and "never", among women the total percentage in these categories was less than 7%). At the same time, slightly more often, they chose to travel by emission-free means (bicycle, scooter).

Unfortunately, the presented behaviors do not go hand in hand with undertaking greater social activity to promote pro-ecological attitudes and solutions. It turned out that as many as 89% of the respondents are not members of any organization operating in this field (this was declared by only 4% of students - WWF and Greenpeace organizations) or did not support them. This is quite worrisome in the context of the group on which the study was conducted, especially that similar (although even lower) results were also obtained on the scale of many universities, also as a result of an interesting experiment regarding volunteering for the environment [Ciążela 2019]. Perhaps, in Poland, overall social activity is still too low, and young people are falling prey to older generations' historical reluctance to act in an institutionalized manner. This is not only a problem for Polish students, a similarly low social activity was observed in Hungary [Szerényi et al. 2009, Szerényi et al. 2011], a country with a similar history over the past few decades, as well as Turkey [Budak et al. 2005]. Nevertheless, it raises concerns about the respondents' future attitudes and actions, when they become burdened with the role of leaders responsible for changes and decisions concerning the whole society [Widiaswati, Sawitri 2018].

Finally, it is worth looking at the problems that the respondents indicated as important when undertaking pro-ecological behavior (Figure 1).

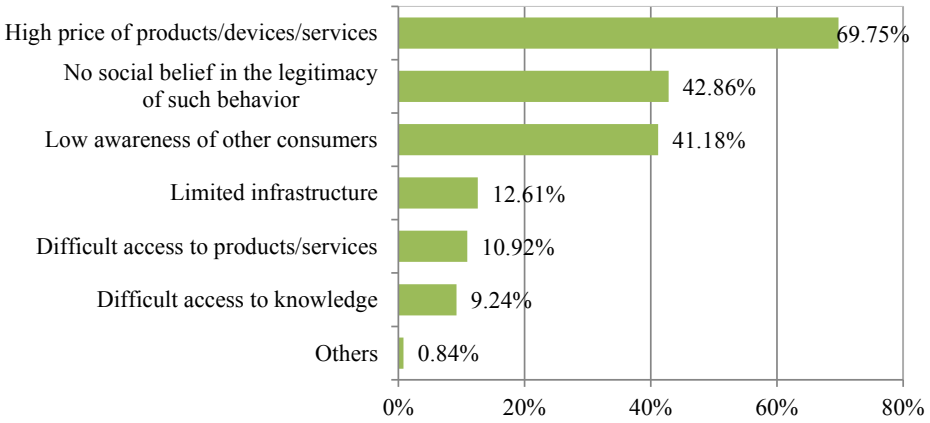

Figure 1. Problems encountered by respondents when trying to take up pro-ecological behavior (more than one answer could be given)

Source: own research

It turned out that, by far, the biggest obstacle is the high cost of ecological goods. Therefore, it is a confirmation of previous observations regarding the frequency of undertaking certain behaviors and the respondents' financial capacity. In this respect, similar relationships were also noticed among international students [Szerényi et al. 2011]. The second group of obstacles was those of a social nature – the respondents emphasized that other consumers are characterized by low environmental awareness, and there is a general belief in society that caring for ecology is unjustified, which may certainly discourage certain activities, especially if they involve greater personal effort. This issue gains additional significance concerning the opinions presented by respondents on the importance of pro-ecological behavior for decision-makers – since the example comes from above, and these behaviors are not clearly perceived as important for central and local government authorities, it is difficult to expect public interest in this type of activities. On the other hand, difficulties in accessing infrastructure (which may be largely a result of the respondents' current residence – Warsaw and the surrounding area), the goods themselves, and the necessary knowledge turned out to be of marginal significance. It is interesting because previous studies of other Polish student groups proved their low level of ecological awareness [Bednarek-Gejo et al. 2012]. Also, international students emphasized a lack of information to a much greater extent, e.g., Hungarian (27%) [Szerényi et al. 2011] and Turkish (77%) [Budak et al. 2005]. Even in a developed country such as Canada, this value was, among all Canadians, as high as 60%, while economic constraints were determined there only in 48% [Kennedy et al. 2009].

CONCLUSIONS

The presented results and their comparison with the research conducted by other authors allow to draw some general conclusions.

First of all, students of the Faculty of Economics of WULS-SGGW do not differ significantly in the range and frequency of their Polish peers' pro-ecological behaviors. More significant differences can be observed compared to other countries (e.g., the USA). However, it is also necessary to take into account different cultural structures and habits, typical for each nation [Molina et al. 2013]. The specificity of the Polish perception of the issue of the legitimacy of taking action for the natural environment in daily choices seems to be primarily caused by economic, not environmental, motives. This was also noticed by other domestic authors [Ciążela 2019]. It would also explain the low level of more advanced social activity of young people in this field.

Limited financial possibilities seem to be the most important problem for students when undertaking pro-ecological behavior. It can be cautiously assumed that young people are willing and aware of the need for specific actions. However, it would be necessary to provide them with adequate resources for their implementation. Although these results raise some doubts compared to those of foreign research, there is the impression that access to information does not necessarily go hand in hand with the activity of acquiring knowledge, which does not prevent Polish youth from highly assessing their own attitudes.

From the point of view of global benefits, it would probably be better to achieve some results for economic reasons now. Only then would it be possible to change the motivation of consumer actions, which would facilitate a faster reduction of the harmful impact of people on the environment. Proper education is necessary for this - better-educated people more often show concern for the natural environment, which has been confirmed in many studies [Schlegelmilch et al. 1996, Molina et al. 2013, MKŚ 2018, Janmaimool, Khajohnmanee 2019]. However, a clear relationship between these elements has still not been identified. In terms of cross-section, it is interesting that it is not young people who show the greatest degree of sensitivity to the natural environment, but people who are much more mature [Kłos 2015, MKŚ 2018]. It is apparently true that wisdom comes with age, although one could also say that it is simply education that brings good fruit only with time. It must also be remembered that the young generation will soon take over formal responsibility for environmental protection [Boca, Saraçlı 2019] and will become the tutor and educator of offspring, and – as Krzysztof Szulborski wrote – „parents cannot have an ecological effect if they themselves are not ecological" [Szulborski 2001, p. 146].

The main problem of most research on young people's pro-ecological behavior is usually concentration on only one university or country. Furthermore, although this is in a way justified by the different cultural specificity and economic possibilities of each country or even groups of students, it also causes the picture of the whole situation to blur, because all these activities should be perceived globally, it is impossible to only place responsibility for the future of the natural environment on the youth of a chosen country. Therefore, this study can also be treated more as a contribution to exploring the problem and the basis for further, much broader activities. The second problematic phenomenon is the difficulty in comparing the results obtained so far, especially at an international level – due to the use of various methods of obtaining data and their statistical processing, it is tough to clearly interpret the results and indicate differences in the quality and frequency of specific pro-ecological behaviors of educated youth. This would require access to complete research material and its continuous conversion. Therefore, it would be advisable to prepare a relatively universal tool, thanks to which it would be possible to make a global (or at least continental) cyclical study of students' pro-ecological attitudes and actions, a group constantly responsible in the future for the fate of our planet.

BIBLIOGRAPHY

Atav Esin, Bahattin Altunoğlu, Suzan Sönmez. 2014. The determination of the environmental attitudes of secondary education students. *Procedia. Social and Behavioral Sciences* 174: 1391-1396.

Bednarek-Gejo Anna, Anna Głowacka, Mariusz Mianowany, Paweł Skoczylas. 2012. Świadomość ekologiczna studentów (Environmental awareness of students). *Hygeia Public Health* 47 (2): 201-206.

Boca Gratiela Dana, Sinan Saraçlı. 2019. Environmental education and student's perception, for sustainability. Sustainability 11 (6): 1553.

Budak Dilek Bostan, Fuat Budak, Zeynep Zaimoglu, Secil Kekec, M. Yavuz Sucu. 2005. Behaviour and attitudes of students towards environmental issues at Faculty of Agriculture, Turkey. *Journal of Applied* Sciences 5: 1224-1227.

CBOS (Centrum Badania Opinii Publicznej – Public Opinion Research Center). 2011. *Zachowania proekologiczne Polaków* (Poles' pro-ecological behavior). https://www.cbos.pl/SPISKOM.POL/2011/K_023_11.PDF, access: 10.11.2020.

Ciążela Ariadna. 2019. Zachowania proekologiczne studentów polskich uczelni (Pro-ecological behavior of students of Polish universities). *Prakseologia* 161: 227-250.

Crumpei Irina, Gabriel Crumpei, Stefan Boncu. 2014. Environmental attitudes and Ecological moral reasoning in Romanian students. *Procedia. Social and Behavioral Sciences* 114: 461-465.

Crutzen Paul, Eugene Stoermer. 2000. The "Anthropocene". *Global Change Newsletter* 41: 17-18.

Emanuel Richard, J.N. Adams. 2011. College students' perceptions of campus sustainability. *The International Journal of Sustainability in Higher Education* 12 (1): 79-92.

Fu Liping, Ye Zhang, Xiong Xiong, Yin Bai. 2018. Pro-environmental awareness and behaviors on campus: evidence from Tianjin, China. *EURASIA Journal of Mathematics, Science and Technology Education* 14 (1): 427-445.

Garczewska Anna (ed.). 2017. *Współczesne problemy ekologicznego świata* (Contemporary problems of the ecological world). Toruń: Kolegium Jagiellońskie.

Janmaimool Piyapong, Samattaphong Khajohnmanee. 2019. Roles of environmental system knowledge in promoting university students' environmental attitudes and pro-environmental behaviors. Sustainability 11 (16): 4270.

Kennedy Emily, Thomas Beckley, Bonita Mcfarlane, Solange Nadeau. 2009. Why we don't "walk the talk": understanding the environmental values/behaviour gap in Canada. *Human Ecology Review* 16 (2): 151-160.

Kłos Lidia. 2015. Świadomość ekologiczna Polaków - przegląd badań (Ecological awareness of Poles – research review). *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania* 42 (2): 35-44.

Kortenkamp Katherine, Colleen Moore. 2001. Ecocentrism and anthropocentrism: moral reasoning about ecological commons dilemmas. *Journal of Environmental Psychology* 21 (3): 261-272.

Kwiatek Agnieszka, Maja Skiba. 2017. Świadomość ekologiczna młodych ludzi (Ecological awareness of young people). *Zeszyty Naukowe Politechniki Częstochowskiej Zarządzanie* 28 (2): 127–136.

Lövbrand Eva, Malin Mobjörk, Rickard Söder. 2020. The Anthropocene and the geo-political imagination: Re-writing Earth as political space. *Earth System Governance* 4: 100051.

MKŚ (Ministerstwo Klimatu i Środowiska – Ministry of Climate and Environment). 2018. *Trackingowe badanie świadomości i zachowań ekologicznych mieszkańców Polski. Raport z badania 2018* (Tracking study of ecological awareness and behavior of Polish inhabitants. Research report 2018), https://www.gov.pl/web/klimat/badania-swiadomosci-ekologicznej, access: 10.11.2020.

MSK (Młodzieżowy Strajk Klimatyczny – School Strike for Climate). 2020. *Postulaty* (Postulates), https://www.msk.earth/postulaty, access: 10.11.2020.

Ntanos Stamatios, Grigorios Kyriakopoulos, Garyfallos Arabatzis, Vasilios Palios, Miltiadis Chalikias. 2018. Environmental behavior of secondary education students: a case study at Central Greece. Sustainability 10 (5): 1663.

Patrzałek Wanda. 2016. Proekologiczne zachowania gospodarstw domowych (Pro-ecological behavior of households). *Marketing i Zarządzanie* 3 (44): 157-166.

Patrzałek Wanda. 2017. Znaczenie świadomości ekologicznej w zachowaniach konsumenckich (The importance of ecological awareness in consumer behavior). *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu* 501: 11-23.

Runhaar Piety, Hens Runhaar, Klaartje Wagenaar, Renate Wesselink. 2019. Encouraging students' pro-environmental behaviour: examining the interplay between student characteristics and the situational strength of schools. *Journal of Education for Sustainable Development* 13 (1): 45-66.

Schlegelmilch Bodo, Greg Bohlen, Adamantios Diamantopoulos. 1996. The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing* 30 (5): 35-55.

Südaş Hatice Doğan, Eda Yaşa Özeltürkay. 2014. Analyzing the thoughts of ecological footprints of university students: a preliminary research on Turkish students. *Procedia - Social and Behavioral Sciences* 175: 176-184.

Szerényi Zsuzsanna Marjainé, Ágnes Zsóka, Anna Széchy. 2009. *Environmental education and pro-environmental consumer behavior – results of a university survey.* [In] Joint Actions on Climate Change. Conference Proceedings. Rikke Dorothea Andersen, Martin Lehmann (ed.), 327-328. Aalborg University, Denmark.

Szerényi Zsuzsanna Marjainé, Ágnes Zsóka, Anna Széchy. 2011. Consumer behaviour and lifestyle patterns of Hungarian students in view of environmental awareness. *Society and Economy* 33 (1): 89-109.

Szulborski Krzysztof. 2001. Świadomość ekologiczna młodzieży w społeczeństwie postmodernistycznym (Ecological consciousness of teenagers in postmodernism's society). *Humanistyka i Przyrodoznawstwo* 7: 137-148.

Tan Booi-Chen, Teck-Chai Lau. 2009. Examining sustainable consumption patterns of young consumers: is there a cause for concern? *The Journal of International Social Research* 2 (9): 465-472.

Tezel Ecem, Heyecan Giritli, Mehmet Ugural. 2018. Pro-environmental behavior of university students: influence of cultural differences. *European Journal of Sustainable Development* 7 (4): 43-52.

Vicente-Molina María Azucena, Ana Fernández-Sáinz, Julen Izagirre-Olaizola. 2013. Environmental knowledge and other variables affecting pro-environmental behaviour: comparison of university students from emerging and advanced countries. *Journal of Cleaner Production* 61: 130-138.

Widiaswati Dewi, Dian Sawitri. 2018. Undergraduate students' pro-environmental behavior in daily practice. *E3S Web of Conferences* 31: 09025.

Zelezny Lynette, Poh-Pheng Chua, Christina Aldrich. 2000. Elaborating on gender differences in environmentalism. *Journal of Social Issues* 56 (3): 443-457.

***

ZACHOWANIA PROEKOLOGICZNE STUDENTÓW WYDZIAŁU EKONOMICZNEGO SGGW W WARSZAWIE

Słowa kluczowe: zachowania proekologiczne, studenci, płeć, świadomość ekologiczna, środowisko

ABSTRAKT

Celem badań było rozpoznanie zachowań proekologicznych podejmowanych przez osoby kształcące się na Wydziale Ekonomicznym SGGW w Warszawie, towarzyszących im problemów, a także ocena zachowania rodziny i znajomych oraz podejścia decydentów do kwestii proekologicznych. W badaniach wykorzystano technikę ankiety. Próba liczyła 119 respondentów ze wszystkich stopni, form i kierunków studiów realizowanych na Wydziale Ekonomicznym SGGW. Jedynie połowa respondentów uważała się za konsumentów postępujących proekologicznie, studenci dużo przychylniej oceniali w tym zakresie także własne rodziny niż znajomych. Dużo większy odsetek uczestników próby deklarował jednak regularne podejmowanie określonych działań w tym zakresie, z których najpopularniejsze były wielokrotne wykorzystywanie foliowych toreb w trakcie zakupów oraz korzystanie ze środków transportu zbiorowego. Najrzadziej studenci decydowali się na zakup spożywczych i przemysłowych produktów ekologicznych. Zaobserwowano przy tym pewne istotne różnice w deklaracjach kobiet i mężczyzn, ale w swoich zachowaniach i ich częstotliwości studenci Wydziału Ekonomicznego SGGW nie odstawali znacząco od rówieśników z Polski. Główną barierą ich zachowań proekologicznych były wysokie koszty ekologicznych dóbr.

AUTHORS

AGATA BALIŃSKA, DSC
ORCID: 0000-0002-8777-9955
Warsaw University of Life Sciences – SGGW, Poland
Institute of Economics and Finance
166 Nowoursynowska St., 02-787 Warsaw, Poland

PIOTR GABRYJOŃCZYK, PHD
ORCID: 0000-0002-8815-9723
Warsaw University of Life Sciences – SGGW, Poland
Institute of Economics and Finance
166 Nowoursynowska St., 02-787 Warsaw, Poland

JAN ZAWADKA, PHD
ORCID: 0000-0003-1979-0607
Warsaw University of Life Sciences – SGGW, Poland
Institute of Economics and Finance
166 Nowoursynowska St., 02-787 Warsaw, Poland