Klaudia **PRZYBYSZ** • Elżbieta **ROSZKO-WÓJTOWICZ** •
Agnieszka **STANIMIR**

IS SENIORS' TOURISM BEHAVIOR RELATED TO SUSTAINABLE TOURISM?

Klaudia **PRZYBYSZ** (ORCID: 0000-0001-7036-7439) – *Wroclaw University of Economics and Business*

Elżbieta **ROSZKO-WÓJTOWICZ** (ORCID: 0000-0001-9337-7218) – *University of Lodz*

Agnieszka **STANIMIR** (ORCID: 0000-0002-9206-9210) – *Wroclaw University of Economics and Business*

Correspondence address:
Komandorska Street 118/120, 53345 Wroclaw, Poland
e-mail: agnieszka.stanimir@ue.wroc.pl

ABSTRACT: The article addresses two global challenges in the realm of tourism participation: sustainable development and an ageing society. Our research aimed to determine whether European seniors engage in tourism and whether the factors influencing tourist destinations are related to sustainable tourism. To achieve this, we utilized correspondence analysis with representative Eurobarometer data. Our findings confirm that seniors actively participate in tourism. The majority of seniors in the European Union frequently express their heightened concern for health and safety measures when travelling in the post-COVID-19 era. Moreover, the analysis identified the countries where seniors actively pursue sustainable development goals during their tourism activities. Future research should focus on understanding the decision-making processes of seniors when choosing tourist destinations and accessing tourism offers. These results provide a foundation for designing tourism offerings that cater to the current and future needs of seniors.

KEYWORDS: sustainable development goals, seniors, tourism, correspondence analysis

Introduction

Population ageing is a global phenomenon which significantly affects not only societies and interactions between generations but also economic aspects (Acemoglu & Restrepo, 2017; Goodhart & Pradhan, 2020; Grześkowiak et al., 2021; Harper, 2014; Maier, 2015; Pesonen et al., 2015; Polakowski, 2015; Przybysz & Stanimir, 2022, 2023a, 2023b). The impact of this phenomenon cannot be limited only to age-related social policy. Based on Eurostat population prediction, in 2050, the share of elderly people (65 years or over) will be 52% of the working-age population (15 to 64 years) and 29,5% of the total population (Eurostat, 2023a). In 2100, these shares will increase to 57% and 31.3%, respectively. We should, therefore, be aware of the need to adapt products and services in the near future in every area related to current and future seniors.

Another pressing global need is to prevent further rapid, unsustainable economic growth, which could jeopardise the natural environment and, thus, human well-being (United Nations, 2015). These are the main assumptions that form the basis of the Sustainable Development Goals (SDGs). Very often, when talking about sustainable development policy, it is indicated that actions taken per related directives are to be carried out to guarantee today's children the opportunity to live in the future in a clean environment while maintaining its naturalness and prosperity. However, no social group can be excluded from the benefits of benefiting from the SDG effects. Particular attention should be paid to seniors here because older people are particularly at risk of lifestyle diseases and diseases resulting from climate change and environmental pollution. Considering the SDGs' assumptions, the actions taken under this strategy are expected to affect the ageing society positively. To better understand this connection, it is worth paying attention to two concepts: active and healthy ageing (Przybysz & Stanimir, 2023a; WHO, 2002, 2015). Healthy ageing (HA) is a strategy that aims to maintain well-being in old age by developing and maintaining functional abilities, meeting basic needs and making decisions, mobility, building and maintaining relationships, and social participation (WHO, 2015, 2020). Therefore, the main goal can be well-being in old age. The HA concept includes the active ageing (AA) strategy, in which it is crucial to perceive older people by implementing tasks within three pillars: health, participation and safety (WHO, 2002). Tourism is one of the socio-economic areas strongly shaped by the people participating in it and their financial situation. At the same time, in the case of older people, the intensity of participation in tourism is also strongly related to openness, social recognition and health (Jang et al., 2009; Nicolau et al., 2020).

The presented aspects and relationships of ST, AA and HA guided our research. The aim was to check whether European seniors participate in tourism and whether the determinants of tourist destinations are related to sustainable tourism. We posed the following research questions:

- Do seniors participate in tourism, and is there a geographical differentiation of this activity (RQ1)?
- Will seniors willingly return to tourist activity after the COVID-19 (RQ2) pandemic?
- After the COVID-19 pandemic, will seniors' main interest in tourism be focused on the aspects of sanitation (RQ3)?
- Do financial aspects significantly affect the diversity of senior tourism (RQ4)?
- How diverse are patterns of the use of sustainable tourism solutions by seniors in the EU (RQ5)?
- Are seniors aware of sustainable tourism solutions (RQ6)?

We focused our research on senior tourists who are EU residents. Thanks to this, we had the opportunity to compare the behaviour of seniors from different countries where the SDGs are implemented similarly. In the study, we used representative data related to tourism of people aged 65 and over from Flash Eurobarometer 499 (European Commission, 2022a). The correspondence analysis guaranteed the achievement of the goal. Apart from the introduction, the article consists of the following chapters: Literature review, Data and methods of analysis, Research results, Concussions and limitations. The literature review will include references to scientific studies on senior tourism, taking into account the implementation of the SDGs and its impact on the physical, mental and social aspects of seniors' functioning. In the next chapter, we will present the data used, explanations regarding the age of seniors and the approaches of correspondence analysis used in our study. A discussion of the results of the analysis will be presented in the Research results chapter. The paper's final section covers conclusions, limitations, and directions for future research.

Literature Review

The concept of sustainable tourism (ST) is defined as a form of tourism that is cognizant of and responsive to its economic, social, and environmental impacts, both present and future while fulfilling the requirements of visitors, the industry, the environment, and host communities (WTO & UNEP, 2017). It is posited that ST serves as a counterpoint to conventional mass tourism by enhancing the host community's quality of life and ensuring enriching experiences for tourists (Choi & Sirakaya, 2005). ST is characterised by a balance between economic considerations and environmental stewardship, with a commitment to conserving and preserving resources (Almeida-Silva et al., 2022). Sustainable development within tourism necessitates ongoing vigilance and innovation, as static measures are insufficient for maintaining progress (Han, 2021). The involvement of both the tourism industry and tourists is crucial for adhering to sustainable development (SD) principles (WTO & UNEP, 2008). ST's complexity spans economic, social, and environmental dimensions (Kollmuss & Agyeman, 2002), and it is

influenced by a matrix of factors including motivation, lifestyle, life satisfaction, and demographic variables such as gender and education (Faranda & Schmidt, 2000; Quan et al., 2022; Streimikiene et al., 2021). Therefore, maximising motivation and identifying behavioural opportunities are key to fostering sustainable practices (Loureiro et al., 2022). The importance of the presented ST assumptions increases in the face of the impact of tourism on the economic situation and transformation of countries. The development of tourism has an impact on other sectors and the creation of demand (Brida et al., 2020; Gössling et al., 2015; Grzelak & Roszko-Wójtowicz, 2020; Liu & Wu, 2019; Manzoor et al., 2019; Mańkowski, 2011; Le Serre & Chevalier, 2012). The World Travel & Tourism Council (n.d.) indicates that in 2022, the Travel & Tourism sector contributed 7.6% to global GDP, an increase of 22% from 2021 and only 23% below 2019 levels. Unfortunately, the impact of tourism on the economy is also harmful. If the tourism sector does not implement the SDGs, it contributes to environmental pollution, an increase in GHG emissions, and climate change. The period of the COVID-19 pandemic contributed to the reduction of tourism-related transport. However, research by the WTO and UNEP (2019) indicates that between 2016 and 2030, CO2 emissions from transport-related tourism will increase by 45% as a result of international tourism and by 21% as a result of domestic tourism. A necessary condition is to identify tourists' behaviour and tendency to implement the SDGs because this determines the possibilities of implementing sustainable solutions in tourism (Dolnicar et al., 2019; Kim et al., 2023; Kim & Filimonau, 2017; Larsen & Guiver, 2013; Lee, 2011).

The interconnection between tourism and the Sustainable Development Goals (SDGs) is extensively documented, with particular emphasis on SDG 8 (Decent Work and Economic Growth) and SDG 12 (Responsible Consumption and Production) (WTO, 2017). The tourism sector's role in achieving these goals is pivotal, as failure to do so could exacerbate poverty, inequality, and environmental degradation (Cox, 2020). The attainment of SDGs related to basic human needs, such as ending poverty, ensuring health and well-being, and achieving gender equality, is also integral to enhancing life quality, particularly for the elderly (Cox, 2020).

Tourism businesses are tasked with imparting sustainable values to tourists, who are then empowered to make informed, responsible choices that extend beyond their travel experiences (Almeida-Silva et al., 2022; WTO & UNDP, 2017). The dynamic nature of SD in tourism requires adaptation to technological advancements, evolving consumption patterns, and lifestyle changes (Losada et al., 2019; Streimikiene et al., 2021). This is especially relevant for senior tourists, who may not have the same access to digital information sources as other demographic groups (Abouzahra & Ghasemaghaei, 2022; Adamczyk & Betlej, 2021; Schirmer et al., 2022).

The beneficial effects of tourism on individual well-being are increasingly recognised. Modern tourism is intertwined with personal growth, learning, and

emotional fulfilment (de Andreis & Carioni, 2022). The literature underscores the strong correlation between tourism, quality of life, and life satisfaction (Alén et al., 2012; Chen & Petrick, 2013; Chen et al., 2015; Hrnjić et al., 2016; Karczewski, 2013; Kociszewski, 2016; Liew et al., 2021; Neal et al., 1999; Nimrod & Rotem, 2010; Przybysz & Stanimir, 2023a; Steptoe & Zaninotto, 2020). For seniors, factors such as health and financial status are significant determinants of tourism participation and are closely linked to their standard of living (Hwang & Lee, 2019; Nicolau et al., 2020; Orfin, 2011; Przybysz & Stanimir, 2022, 2023a). Tourist activity provides seniors with many benefits. It allows you to strengthen social ties (Minnaert et al., 2006) and reduces social isolation and exclusion (Havighurst, 1961; Tucker & Lynch, 2005) by increasing self-esteem, thanks to gaining new experiences (Weaver & Lawton, 2002; Kim et al., 2012).

Incorporating SDGs into senior tourism offerings can provide long-term benefits, emphasising sustainable leisure and rejuvenation (Chilufya et al., 2019). Emotional engagement in travel experiences not only enriches memories but also fosters a sense of environmental stewardship as a moral imperative (Bolderdijk et al., 2013).

The detrimental effects of unsustainable tourism practices on the environment are undeniable. ST initiatives aim to mitigate these impacts, including reducing greenhouse gas emissions, which are particularly relevant given the tourism sector's climate dependency. Tourists' deviation from eco-friendly practices during vacations is often linked to perceived restrictions on freedom and enjoyment (Chilufya et al., 2019). A deep-rooted commitment to the SDGs is necessary for tourists to consistently engage in sustainable actions, such as choosing eco-friendly infrastructure and services (Larsen & Guiver, 2013). The financial implications of sustainable choices are a significant consideration for seniors, as cost is a primary barrier to travel for those over 65 (Przybysz & Stanimir, 2022, 2023a). It is also worth paying attention to research on factors encouraging tourism in line with the SDGs. Bučar et al. (2022) discussed the importance of the implementation of various eco-labels in the tourism industry in order to promote sustainability. Kim et al. (2023) presented the results of a study on how to manage and shape policies so as to mitigate the tourism carbon footprint. Larsen and Guiver (2013) found that the shift towards ST depends on how tourists perceive distance, not only in the strict sense (physical dimensions) but also in terms of the time spent on reaching a destination, and thus using a specific means of transport.

Research methods

In research aimed at international comparisons, it is essential to use data that guarantees representativeness. For this reason, we used the Flash Eurobarometer 499 study, which was conducted on tourism. The CATI (Computer-Assisted Telephone Interviews) survey was conducted in October 2021. It was

attended by 25,714 citizens of the 27 EU Member States aged 15 years and older. The questions posed in the questionnaire correspond to the scope of our research. The advantage of the Eurobarometer database is the correct selection of a representative sample and the possibility of using post-stratification weighting. The technical aspects of sample collection are described in detail in the final report published by the European Commission (2022b). Our analysis concerned the group of seniors defined as people aged 65 and over – this age limit for seniors results from the ongoing discussion in the literature (Alén et al., 2012; Begg et al., 2010; European Commission, 2010, 2019; Pesonen et al., 2015; Przybysz et al., 2021; Przybysz & Stanimir, 2022, 2023a) and seniors' opinions (Przybysz et al., 2021; Przybysz & Stanimir, 2023a).

Of the people participating in Flash Eurobarometer 499, there were 4,842 people aged 65 and over whose opinions made it possible to achieve the goal we set. The sample size and the method used in the analysis are sufficient for this study.

Around 57% of the total respondents were female (Appendix A.1, 0.5% did not provide an answer to this question). Most of the respondents were younger seniors, i.e. they were aged 65-74 (65.6%). The rest were older than 74 years. The vast majority of the seniors were already retired (83.5%). Most respondents were from small or medium-sized towns (37.6%), and a comparable number were from rural areas and large cities (30.3% and 31.6%, respectively).

Table 1 presents the questions from the Flash Eurobarometer questionnaire (we retained the original numbering): DX1, Q1 and Q4.

Table 1. List of analysed questions from Flash Eurobarometer 499

Question number	Literal question	Possible answers
DX1	Before the COVID-19 pandemic, how frequently did you travel for leisure or work?	several times a year (1), once or twice a year (2), once every few years (3), never (4), don't know (5)
Q1	What long-term effects, if any, do you expect the COVID-19 pandemic will have on your travelling behaviour?	type of travel destination (1), destination countries (2), type of accommodation (3), activities on holiday (4), transport mode to the destination (5), less travelling overall (6), more holidays in own country (7), more attention to health and safety measures (8), more attention to impact of tourism on local communities (9), no expectation of long-term effects (10), other (11), don't know (12)

Question number	Literal question	Possible answers
Q4	When you choose a destination to visit, which of the following are most important?	cultural offerings at the destination (Q4_1), natural environment in the destination (Q4_2), activities available in the destination (Q4_3), the price of the overall trip (Q4_4), accessibility of services and activities for all: children, elderly, persons with disabilities (Q4_5), destination (city, region) promotes eco-friendly practices (Q4_6), destination can be reached by low-impact transport (Q4_7), sustainability certification of accommodation and attractions (Q4_8), local population involved in tourism activities (Q4_9), clear information on health and safety guidelines (Q4_10), something else (Q4_11), don't know (Q4_12)

Source: authors' work based on European Commission (2022b).

Multiple correspondence analysis (MCA) was used in the study. This method is very useful when nominal and ordinal variables are in the data set. MCA enables the graphical presentation of the results in the low-dimensional space. Correspondence analysis (CA) belongs to the family of methods based on SVD (singular value decomposition). In MCA eigenvalue decomposition (EVD) is used. To carry out MCA, it is necessary to build a Burt matrix, which is a square symmetric block matrix. On the diagonal are blocks, which include the cross-tabulation of each variable with itself, while cross-tabulation of variable A with variable B is the transpose of that of variable B with variable A, which are in an off-diagonal position. To perform MCA, you need to save the data in the indicator matrix , in which rows correspond to the observational units (e.g. individuals), while the columns describe categories of analysed variables. The values in this table are only zeros and ones. The value of one occurs if a specific variable category has been selected for a given observation unit. Therefore, each row can only contain as many 1s as there are variables. Burt matrix is calculated as follows:

$$B = Z^{T}Z, \tag{1}$$

The graphical presentation of the results of the MCA in the Burt matrix describing the relationships of the categories of the analysed variables is carried out through eigenvalue decomposition (EVD). During MCA, it is necessary to determine the coordinates of the categories of the analysed variables. For this purpose, defining a correspondence matrix based on the contingency table is necessary (2):

$$A = D_r^{-1/2} (P - rr^{T}) D_r^{-1/2}, \tag{2}$$

where:

$D_r = [p_i]$ – diagonal matrix of row masses in Burt matrix (the same values are in r – vector of row),

P – matrix of observed proportion $(1/n \cdot Q^2) \cdot B$

The principal coordinates of the rows are calculated using the formula (3):

$$F = D_r^{-1/2} \, U\Gamma, \tag{3}$$

where:

Λ, U – result from the singular value decomposition of A matrix $(A = U\Lambda U^T)$,

and $\Gamma^2 = \Lambda$, $\Lambda = [\lambda_k]$.

This procedure is described in detail in the books by Backhaus et al. (2003), Blasius (2001) and Greenacre (1984). The key concept in any variant of CA is total inertia λ. It is the sum of the eigenvalues (principal inertias) determined during the EVD. The presentation of the relations of the variable categories given in the multiway contingency table can be performed in the K-dimensional space, where for the Burt matrix, $K = J - Q$, and J are all categories of the analysed variables and Q is the number of analysed variables. When there are many categories of variables, it is usually a very large space, and therefore a projection into a 2- or 3-dimensional space. Principal inertias in descending order are responsible for creating one-, two-, and three-dimensional up to K-dimensional space, respectively. The principal inertia number is equal to K. The cumulative values of the shared principal inertias in total inertia determine the degree of mapping of the actual relationships between the categories sequentially in a one- to K-dimensional space.

The MCA algorithm for the Burt Matrix considers submatrices down the diagonal. If we ignore the blocks we obtain the adjusted inertia of the Burt matrix:

$$\lambda^{adj} = \left(\frac{Q}{Q-1}\right)\left(\lambda - \frac{J-Q}{Q}\right), \tag{4}$$

However, in the Burt matrix only those axes for which principal inertias (λ_k) are larger than $1/Q^2$ should be taken into account in the analysis (Blasius, 2001; Greenacre, 2006, 2010). Therefore, the adjustment of the principal inertias is as follows:

$$\lambda_k^{adj} = \left(\left(\frac{Q}{Q-1}\right)\left(\lambda_k - \frac{1}{Q}\right)\right)^2, \tag{5}$$

After calculating the adjusted principal inertias, the coordinates of the points also need to be corrected according to the formula:

$$\tilde{F} = F^*\Gamma^{-1}\tilde{\Lambda}, \tag{6}$$

where:

$\tilde{\Lambda}$ – is a diagonal matrix of K^* adjusted principal inertias λ_k^{adj},
F^* – matrix of K^* original coordinates (3).

It should be noted that actions involving the adjustment of total inertia do not change the relationship between the categories of variables. However, they significantly contribute to improving the quality of the presentation of the results.

When selecting the best dimension for the presentation of the correspondence analysis results, we also used a scree plot, for both principal inertias as well as adjusted principal inertias, in order to identify the elbow in the descending sequence (Blasius & Greenacre, 2006). We also checked the contribution of the principal axis to points:

$$cor_{ik}^2 = \frac{\tilde{\lambda}_{ik}}{\tilde{\lambda}_i}, \tag{7}$$

to determine which axis best describes each point (variable category). The quality of display of a point is thus determined:

$$qcor_{ik}^2 = \sum_{k=1}^{K^*} cor_{ik}^2. \tag{8}$$

We also checked the criterion given by (Blasius & Greenacre, 1994), according to which one should select the dimension with the amount of explained inertia higher or equal to the average ($100\%/K$).

If, as a result of our search, the best dimension representing the relationships of the variable categories was higher than R^2, we additionally carried out Ward's hierarchical clustering based on the coordinates of the points (Landau & Everitt, 2004).

When presenting the results of the analyses, we indicated which research questions were answered.

Results of the research

Senior tourists and their habits

In our study, we first checked whether seniors had travelled before the pandemic (question DX1) (answer to RQ1). It turned out that the majority of the respondents had participated in travel. In Bulgaria, Finland, Hungary, Luxembourg, Sweden, Slovenia and Slovakia, seniors most often indicated that they travelled several times a year, and in other countries, once or twice a year. Unfortunately, there was also a group of seniors who did not travel before the pan-

demic. Based on Eurobarometer data, it should be stated that, on average, 11% of EU residents aged 65 or older did not travel for leisure or work before the pandemic. The smallest number of seniors (less than 6%) forwent tourism in Finland, Cyprus, Ireland, Greece and Malta, and most in the Netherlands, Belgium, France, Germany and Estonia (over 17%). Analysing the data published by Eurostat (2023, 2023b, 2023c), we found that the share of seniors not participating in tourism is much higher. On average, among seniors aged 65+, it was 54% (2013), 51% (2016), 49% (2019) before the pandemic, and 68% (2020) and 85% (2021) during the pandemic. Unfortunately, based on the data set used, it is not possible to determine the reasons for not participating in tourism. For this reason, in further studies, the responses of these people will be taken into account as they may include those who have travelled before and have their own travel habits. At the same time, it may also make it possible to assess the effects of tourism.

When asked about the changes in their travel habits caused by the pandemic in the long term (question Q1), the seniors did not indicate any change in the type of travel destination, destination countries or the kind of accommodation. Among all the seniors from Greece, Cyprus, the Czech Republic, Spain, Finland, Hungary, Luxembourg, Poland, Romania, Sweden and Slovakia, the response paid more attention to health and safety measures (answer to RQ3). In Greece, Germany, Spain, Finland and Slovakia, the seniors indicated that they would take more holidays in their own country, and in Greece, Cyprus, Romania, Sweden and Slovakia – less travelling overall (answer to RQ2). Only the Greeks indicated a change in transport mode to the destination and paid more attention to the impact of tourism on local communities. Responses did not change significantly when frequent travellers' answers from before the pandemic were checked. More attention to health and safety measures, less travelling overall and more holidays in their own country were also the most frequently selected in this group. Greeks, Romanians and Swedes also indicated that they paid more attention to tourism's impact on local communities. On the other hand, among these frequent senior tourists, a change in transport mode to the destination was not indicated as something they would modify in their tourist habits. Perhaps they already used sustainable transport before the pandemic.

We also checked whether seniors who did not travel before the pandemic indicated that their habits and travelling behaviours would change after the pandemic (this is also an extension of the answer to RQ2 and RQ3). In this group of seniors, 18% do not expect any long-term effects on their travel behaviour, and 11% indicate that they intend to participate in less travel overall. It follows that many seniors who have not travelled so far still do not intend to do so. On the other hand, a change in existing habits was indicated by a larger group of seniors, who paid more attention to health and safety measures – 13%, more holidays in their own country – 11%, and more attention to the impact of tourism on local communities – 7%.

Thus, the sample of respondents participating in the study consisted primarily of seniors participating in tourism who noticed the need to change their habits due to the pandemic. As a result of adequately communicated information about the SDGs, they are willing to consider subsequent necessary changes in their tourism habits. Meanwhile, people who did not participate in tourism may have decided to participate in tourism in the future due to the pandemic.

Significant features of senior travel destinations

In the next step of the analysis, we decided to indicate the differences that existed between the demographic groups of seniors when selecting the destination to visit. In addition to question Q4, we selected age, gender, place of residence and employment status for the analysis. The total number of categories in the six variables is 50, so $K = 50–6 = 44$. Table 2 shows the principal and total inertias and their adjustments. We present only a fragment of the results for the first five main axes. After analysing the scree plot, the contribution of the principal axis to the points, and the Blasius criterion, we found that the two-dimensional space does not contain enough information about variable relationships. The elbow criterion indicates a slight jump in the descending order in the eigenvalues at $k = 5$, and $qcor^2$ is significantly higher in the 5-dimensional space for each category of analysed variables. The average explained variance (% of λ) in the criterion given by Blasius is 2.27%, so the dimension for presentation should not be greater than 26.

Table 2. Total inertia, principal inertias, adjusted values of inertias (question Q4)

k	λ_k	% of λ	cumulative value (%)	λ_k^{adj}	% of λ^{adj}	cumulative value (%)
1	0.056	4.447	4.45	0.007	30.839	30.84
2	0.047	3.762	8.21	0.004	16.277	47.12
3	0.044	3.534	11.74	0.003	12.252	59.37
4	0.042	3.361	15.10	0.002	9.493	68.86
5	0.040	3.197	18.30	0.002	7.163	76.02
…	…	…	…	…		
44	0.011	0.897	100	-		
$\lambda = \sum_{k=1}^{44} \lambda_k$	1.252		$\lambda^{adj} = \sum_{k=1}^{26} \lambda_k^{adj}$	0.022		

Source: authors' work based on European Commission (2022a).

The adjusted values of the inertias presented (λ^{adj}_k) in the table were determined for the first 26 principal inertias because only they were higher or equal to $1/Q^2$. Without correcting the eigenvalues, the presentation in the two-dimensional space and the five-dimensional space contained, respectively, 8.21% and 18.30% of information on the relationships of the variable categories (Table 2). Meanwhile, introducing the correction and re-determining the coordinates increased these values to 47.12% and 76%, respectively.

Graphical presentation of the results in five-dimensional space is not possible. For this reason, we conducted hierarchical Ward clustering using a new set of point presentation coordinates. The results are presented in Figure 1. Since the coordinates have no units, according to recommendations (Landau & Everitt, 2004), normalising the variables is not necessary. The linking lengths presented in the classification diagram allow the number of classes to be determined. A sudden increase in the difference of the distances in adjacent steps is taken as an indication of the intersection of the dendrogram. For the dendrogram in Figure 1, the first significant jump occurs between stages 40 and 41, indicating an eleven-group solution. The increase in the distance between classes also indicated an increase in their heterogeneity. We marked the place of the dendrogram division with the green line in Figure 1. The categories belonging to each of the classes are presented in Table 3.
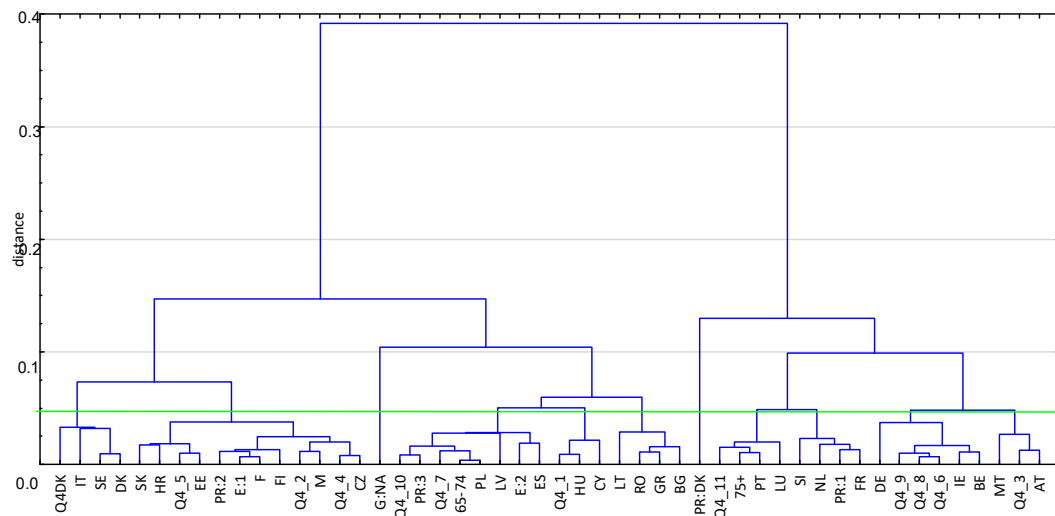
Figure 1. The main factor in choosing a travel destination (Q4) – hierarchical clustering

Source: authors' work based on European Commission (2022a).

The groups of seniors presented in Table 3 are listed in order, starting with the one that indicated the most factors consistent with SDGs determining tourist trips (the designated first four classes answer RQ5 and RQ6). Features of the stay,

such as the destination promoting eco-friendly practices, having a sustainability certification for the accommodation, and involving the local population in tourism activities, are closely related to implementing the eighth SDG. These trip characteristics are most significant for seniors from Belgium, Germany and Ireland.

Table 3. The main factor in choosing a travel destination (Q4) – results of Ward clustering

Group	Characteristic
1 (3×SDGs)	Country: BE, DE, IE; Destination factor: Q4_6, Q4_8, Q4_9
2 (2×SDGs)	Country: CZ, EE, FI, HR, SK; Place of residence: PR: 2, Employment status: E:1; Gender: M, F; Destination factor: Q4_2, Q4_4, Q4_5
3 (1×SDGs)	Country: ES, LV, PL; Place of residence: PR:3, Age: 65-74; Employment status: E:2; Destination factor: Q4_7; Q4_10
4 (1×SDG)	Country: CY, HU; Destination factor: Q4_1
5	Country: AT, MT; Destination factor: Q4_3
6	Country: LU, PT; Age: 74+; Destination factor: Q4_11
7	Country: DK, IT, SE; Destination factor: Q4_12

Source: authors' work based on European Commission (2022a).

The group of seniors for whom two factors related to the SDGs are important are retired men and women from the Czech Republic, Estonia, Finland, Croatia and Slovakia living in small or medium-sized towns (Table 3). For them, the natural environment in the destination (Q4_2) and the accessibility of services and activities for all (Q4_5) are essential in determining the destination. At the same time, the financial conditions of travel are very important to them (Q4_4). This indicates that implementing the SDGs in tourism must strive to reduce the cost of such trips, especially for senior groups (answer RQ4).

For residents of Spain, Latvia and Poland living in large cities, aged 65-74, and still working, the factor related to the SDGs when choosing a travel destination is the possibility of reaching the destination by low-impact transport (Q4_7). At the same time, precise information on health and safety guidelines at the destination is essential for this group of seniors (Q4_10).

Cypriots and Hungarians, when planning their next trip, mainly take into account cultural offerings at the destination (Q4_1), which is also a travel condition related to the implementation of the SDGs.

In the following three groups, seniors indicated characteristics they check when choosing a destination which is not related to implementing the SDGs. Inhabitants of Austria and Malta pay attention to the types of proposed attractions when choosing their next travel destination (W4_3). Residents of Luxem-

bourg and Portugal over 75 years of age indicated factors influencing their travel planning other than those above (Q4_11). These factors may be strongly related to culture and tourist habits. Danes, Italians and Swedes do not give an important reason for choosing a travel destination (Q4_12).

In addition to the groups presented in Table 3, four more were created. Two one-element groups were formed, consisting of people who did not reveal their gender and could not describe their place of residence. For Bulgarians, Greeks, Lithuanians and Romanians, as well as residents of rural areas or villages in France, the Netherlands and Slovenia, it was not possible to identify the factors determining their choice of subsequent travel destinations.

Conclusions, limitation and future research

The problems presented in the article regarding sustainable development, tourism, economic development and ageing societies are closely related to senior tourism.

Preserving the values of the natural environment and cultural heritage to make tourism possible is the task of the tourism sector and institutions responsible for implementing activities consistent with the SDGs. It is also a moral obligation of all generations participating in tourism, from the youngest to the oldest (de Andreis & Carioni, 2022; Streimikiene et al., 2021). Therefore, it is necessary to take appropriate actions to introduce the SDGs to tourism to maintain access to it and so that poverty reduction objectives continue to be implemented. In such a situation, it is crucial to recognise tourists' behaviour, their knowledge and their tendency to implement the SDGs (Dolnicar et al., 2019; Kim et al., 2023; Kim & Filimonau, 2017; Larsen & Guiver, 2013; Lee, 2011). Alén et al. (2015) and Olsson and Schuller (2012) indicate that the behaviour of tourists depends on the life cycle stage, which also affects the readiness to implement the SDGs. As Grzelak and Roszko-Wójtowicz (2020) point out, a planned and systematic tourism policy should be initiated. Considering the above, defining the purpose of our study is appropriate, and the presented conclusions from the analysis are an essential contribution to determining the needs of sustainable senior tourists.

When considering senior tourism, one should also pay attention to the multi-directional impact such activities have on the quality of life of seniors. First of all, attention should be paid to the positive impact of tourism on individuals, especially seniors, which is multifaceted and significant (Alén et al., 2017). Tourism offers seniors a unique avenue for enhancing their quality of life by providing opportunities for relaxation, cultural exchange, and physical activity, which are essential for a holistic approach to healthy ageing (Hrnjić et al., 2016; Alén et al., 2012). Engaging in travel allows older adults to break from routine, engage in new learning experiences, and enjoy a sense of adventure, which can lead to improved mental well-being and life satisfaction (Amaral et al., 2020; Alén et al.,

2012). For seniors, tourism is a leisure activity and a means to fulfil living needs beyond basic sustenance, encompassing social, intellectual, and emotional dimensions (Karczewski, 2013). It caters to their desire for continued growth, social interaction, and active social participation (Kociszewski, 2016; Kaiser & Major, 2006). Moreover, tourism can empower seniors by addressing their specific lifestyle requirements, such as accessible travel options and tailored health and wellness programs. As such, the tourism industry holds the potential to significantly contribute to the well-being of the senior population by creating travel experiences that are not only enjoyable but also supportive of their living needs, ultimately leading to a more engaged and enriched older community (Lehto et al., 2006; Minnaert et al., 2006).

To summarise the results of our study, all research questions were answered. It should be noted that seniors actively participate in tourism and are aware of their needs. However, there is a group of seniors who give up tourism and should be given a lot of attention in subsequent research due to the lost benefits from such activity.

Considering the impact of the COVID-19 pandemic, two theses can be put forward: knowing the danger caused by large groups of people, seniors may decide not to participate in tourism, or they may be more willing to use tourism because the danger of falling sick can originate from anywhere, and being the group most exposed to the disease, they are not able to isolate themselves from society. The seniors studied do not want to change their habits regarding the type of travel destination, country of destination, or type of accommodation. In most countries, however, seniors intend to pay special attention to health and safety measures. This is a crucial indicator for the tourism industry because, due to ageing societies, they must take into consideration an increasing number of senior tourists with more diverse needs. The implementation and pursuit of the SDGs in tourism will also depend, to an increasing extent, on senior tourists.

During the analysis, it was possible to identify groups of Europeans whose tourist destinations are characterised by similar features. As choices, some factors could be considered as related to the SDGs (Q4_1, Q4_2, Q4_5-Q4_9). During the analysis, it was indicated that the inhabitants of the Czech Republic, Estonia, Finland, Croatia and Slovakia consider the natural environment in the destination (Q4_2) and the accessibility of services and activities (Q4_5) to be important, but in conjunction with the trip's price (Q4_4). For this reason, the ST offer must be structured so that it does not strain household budgets or lead to seniors withdrawing from tourism. Therefore, ST cannot be too expensive and must be understood as a regular travel standard (Cohen et al., 2014; de Andreis & Carioni, 2022). Chilufya et al. (2019) also reported a similar conclusion from their research. They contend that implementing individual ST for seniors cannot be an additional costly burden for them. This conclusion is significant in the context of the implementation of SDGs 1 and 3.

Table 3 shows the group of countries in which seniors indicated that they did not know what factors guided them when planning trips. These were Denmark, Italy and Sweden. No characteristics were determined during the analysis for the Bulgarians, Lithuanian Greeks and Romanians. Identifying the reasons for people's hesitancy in these countries about the factors that shape their travel should be the subject of another study. The reasons can be very diverse. They may result from low involvement in organising the trip, environmental influence, and withdrawal.

For a more comprehensive exploration, future research could delve into the psychological underpinnings of why seniors may prioritise financial considerations over sustainable tourism practices. Additionally, examining the role of education in shaping sustainable tourism behaviours across different age groups could yield insights into targeted strategies for promoting ST. It would also be beneficial to investigate the impact of emerging technologies on the accessibility of sustainable tourism for seniors, potentially mitigating the digital divide and fostering inclusive growth within the sector. Considering senior tourists' needs, it will be possible to effectively promote the cultural and other assets of the country (Grzelak & Roszko-Wójtowicz, 2020).

The contribution of the authors

Conceptualisation, K.P., E.R.W. and A.S.; literature review, K.P., E.R.W. and A.S.; methodology, A.S.; formal analysis, K.P., E.R.W. and A.S.; writing, K.P., E.R.W. and A.S.; conclusions and discussion, K.P., E.R.W. and A.S.

The authors have read and agreed to the published version of the manuscript.

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Appendix A.1

Characteristics of the study sample

Characteristics	Frequency, N=4842	[%]
Gender (G) Male (M) Female (F) No answer (NA)	2065 2753 24	42.6 56.9 0.5
Age (A) 65-74 (1) 75+ (2)	3175 1667	65.6 34.4
Employment status (E) Retired 1) Other (2)	4041 801	83.5 16.5
Place of residence (PR) Rural area or village (1) Small or medium-sized town (2) Large town/city (3) Not stated (4)	1465 1819 1530 28	30.3 37.6 31.6 0.6

Source: authors' work based on European Commission (2022a).

References

Abouzahra, M., & Ghasemaghaei, M. (2022). Effective use of information technologies by seniors: The case of wearable device use. European Journal of Information Syststems, 31(2), 241-255. https://doi.org/10.1080/0960085x.2021.1876534

Acemoglu, D., & Restrepo, P. (2017). Secular Stagnation? The Effect of Aging on Economic Growth in the Age of Automation. NBER Working Paper, 23077, 1-9. https://doi.org/10.3386/w23077

Adamczyk, M., & Betlej, A. (2021). Social determinants of digital exclusion in an ageing society. The case of Poland. Entrepreneurship and Sustainability, 8(3), 122-135. https://doi.org/10.9770/jesi.2021.8.3(7)

Alén, E., Domínguez, T., & Losada, N. (2012). New Opportunities for the Tourism Market: Senior Tourism and Accessible Tourism. In M. Kasimoglu (Ed.), *Visions for Global Tourism Industry – Creating and Sustaining Competitive Strategies* (pp. 139-166). InTech. https://doi.org/10.5772/2278

Alén, E., Losada, N., & De Carlos, P. (2015). Profiling the segments of senior tourists throughout motivation and travel characteristics. Current Issues in Tourism, 20(14), 1454-1469. https://doi.org/10.1080/13683500.2015.1007927

Alén, E., Losada, N., & de Carlos, P. (2017). Understanding tourist behaviour of senior citizens: Lifecycle theory, continuity theory and a generational approach. Ageing & Society, 37, 1338-1361. https://doi.org/10.1017/S0144686X16000325

Almeida-Silva, M., Monteiro, A., Carvalho, A. R., Teixeira, A. M., Moreira, J., Tavares, D., Tomás, M. T., Coelho, A., & Manteigas, V. (2022). Sustainable and Active Program – Development and Application of SAVING Methodology. International Journal of Envi-

ronmental Research and Public Health, 19(11), 6803. https://doi.org/10.3390/ijerph19116803

Amaral, M., Rodrigues, A. I., Diniz, A., Oliveira, S., & Leal, S. (2020). Designing and evaluating tourism experiences in senior mobility: An application of the OEC Framework. Tourism and Management Studies, 16, 59-72. https://doi.org/10.18089/tms.2020.160405

Backhaus, K., Erichson, B., Plinke, W., & Weiber, R. (2003). *Multivariate Analysemethoden Eine anwendungsorientierte Einführung*: *10th edition.* Springer.

Begg, I., Bongardt, A., & Torres, F. (2010). Europe 2020 and employment. In Europe 2020 – A Promising Strategy? Intereconomics, 45, 146-151.

Blasius, J. (2001). *Korrespondenzanalyse*. München: Oldenbourg Verlag.

Blasius, J., & Greenacre, M. (1994). Computation of correspondence analysis. In J. Blasius & M. Greenacre (Eds.), *Correspondence Analysis in the Social Sciences* (pp. 53-78). Academic Press.

Blasius, J., & Greenacre, M. (2006). Correspondence Analysis and Related Methods in Practice. In M. Greenacre & J. Blasius (Eds.), *Multiple Correspondence Analysis and Related Methods* (pp. 3-40). New York: Chapman and Hall/CRC Press.

Bolderdijk, J. W., Steg, L., Geller, E. S., Lehman, P. K., & Postmes, T. (2013). Comparing the effectiveness of monetary versus moral motives in environmental campaigning. Nature Climate Change, 3(4), 413-416. https://doi.org/10.1038/NCLIMATE1767

Brida, J. G., Gómez, D. M., & Segarra, V. (2020). On the empirical relationship between tourism and economic growth. Tourism Management, 81, 104-131. https://doi.org/10.1016/j.tourman.2020.104131

Bučar, K., Hendija, Z., & Katić, I. (2022). Ecolabels as a Tool of Sustainable Development in Tourist Destinations. Sustainability, 14(10), 6313. https://doi.org/10.3390/su14106313

Chen, Ch.-Ch., & Petrick, J. F. (2013). Health and Wellness Benefits of Travel Experiences: A Literature Review. Journal of Travel Research, 52(6), 709-719. https://doi.org/10.1177/0047287513496477

Chen, Y., Edossa, A., & Morro-Howell, N. (2015). Social Exclusion Among Older Adults: A Spatial Analysis Using Geographic Information System (GIS). Gerontologist, 55(2), 93. https://doi.org/10.1093/geront/gnv499.02

Chilufya, A., Hughes, E., & Scheyvens, R. (2019). Tourists and community development: corporate social responsibility or tourist social responsibility? Journal of Sustainable Tourism, 27(10), 1513-1529. https://doi.org/10.1080/09669582.2019.1643871

Choi, H. S. C., & Sirakaya, E. (2005). Measuring residents' attitude toward sustainable tourism: Development of sustainable tourism attitude scale. Journal of Travel Research, 43(4), 380-394. https://doi.org/10.1177/0047287505274651

Cohen, S. A., Prayag, G., & Moital, M. (2014). Consumer behaviour in tourism: Concepts, influences and opportunities. Current Issues in Tourism, 17(10), 872-909. https://doi.org/10.1080/13683500.2013.850064

Cox, C. (2020). The Sustainable Development Goals and Aging: Implications for Social Work. Journal of Human Rights and Social Work, 5, 39-47. https://doi.org/10.1007/s41134-019-00110-3

de Andreis, F., & Carioni, M. (2022). Destination management and experiential tourism. Conferencii, 2(5), 35-41. https://doi.org/10.51586/RAI2022-2-5

Dolnicar, S., Knezevic Cvelbar, L., & Grün, B. (2019). A Sharing-Based Approach to Enticing Tourists to Behave More Environmentally Friendly. Journal of Travel Research, 58(2), 241-252. https://doi.org/10.1177/0047287517746013

European Commission. (2010). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Platform Against Poverty and Social Exclusion: A European Framework for Social and Territorial Cohesion, Pub. L. No. 52010DC0758. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52010DC0758

European Commission. (2019). *Assessment of the Europe 2020 Strategy. Joint Report of the Employment Committee (EMCO) and Social Protection Committee (SPC)*. https://ec.europa.eu/social/main.jsp?langId=en&catId=1063&furtherNews=yes&newsId=9487

European Commission. (2022a). *Flash Eurobarometer 499 (Attitudes of Europeans towards Tourism, Autumn 2021).* https://search.gesis.org/research_data/ZA7807

European Commission. (2022b). *Flash Eurobarometer 499 (Attitudes of Europeans towards Tourism, Autumn 2021) – Report.* https://doi.org/10.2873/035869

Eurostat. (2023a, December 5). *Demographic balances and indicators by type of projection.* https://ec.europa.eu/eurostat/databrowser/view/proj_19ndbi__custom_8851272/default/table?lang=en

Eurostat. (2023b, May 24). *Persons not participating in tourism by reason and sex.* https://ec.europa.eu/eurostat/databrowser/view/TOUR_DEM_NPSEX$DEFAULTVIEW/default/table?lang=en

Eurostat. (2023c, May 24). *Persons participating in tourism for personal purposes by age group.* https://ec.europa.eu/eurostat/databrowser/view/TOUR_DEM_TOAGE/default/table?lang=en

Faranda, W. T., & Schmidt, S. L. (2000). Segmentation and the Senior Traveler: Implications for Today's and Tomorrow's Aging Consume. Journal of Travel & Tourism Marketing, 8(2), 3–27. https://doi.org/10.1300/J073v08n02_02

Goodhart, C., & Pradhan, M. (2020). The Great Demographic Reversal and Its Effect on Future Growth. In C. Goodhart & M. Pradhan (Eds.), *The Great Demographic Reversal* (pp. 41-51). Cham: Palgrave Macmillan.

Gössling, S., Scott, D., & Hall, C. M. (2015). Inter-market variability in CO2 emission-intensities in tourism: Implications for destination marketing and carbon management. Tourism Management, 46, 203-212. https://doi.org/10.1016/j.tourman.2014.06.021

Greenacre, M. (1984). *Theory and Applications of Correspondence Analysis.* London: Academic Press.

Greenacre, M. (2006). From Simple to Multiple Correspondence Analysis. In M. Greenacre & J. Blasius (Eds.), *Multiple Correspondence Analysis and Related Methods* (pp. 41-76). New York: Chapman & Hall/CRC.

Greenacre, M. (2010). *Biplots in Practice.* Bilbao: Fundación BBVA.

Grzelak, M. M., & Roszko-Wójtowicz, E. (2020). Tourist attractiveness of voivodeships in Poland in the light of selected indicators: a dynamic approach. Economic Annals-XXI, 184(7-8), 161-177. https://doi.org/10.21003/ea.V184-14

Grześkowiak, A., Przybysz, K., Peternek, P., & Stanimir, A. (2021). *Pokolenie 65+ Perspektywa Społeczno-Ekonomiczna*. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu. (in Polish).

Han, H. (2021). Consumer behavior and environmental sustainability in tourism and hospitality: a review of theories, concepts, and latest research. Journal of Sustainable Tourism, 29(7), 1021-1042. https://doi.org/10.1080/09669582.2021.1903019

Harper, S. (2014). Economic and social implications of aging societies. Science, 346, 587-591. https://doi.org/10.1126/science.1254405

Havighurst, R. J. (1961). Successful Aging. The Gerontologist, 1(1), 8-13. https://doi.org/10.1093/geront/1.1.8

Hrnjić, A., Šuta, N., & Pilav-Velić, A. (2016). Innovation in senior tourism: Creating energy efficient and health supported tourist offer. Review of Innovation and Competitiveness, 2(4), 5-18. https://hrcak.srce.hr/clanak/253431

Hwang, J., & Lee, J. (2019). A strategy for enhancing senior tourists' well-being perception: focusing on the experience economy. Journal of Travel & Tourism Marketing, 36(3), 314-329. https://doi.org/10.1080/10548408.2018.1541776

Jang, S. Sh., Bai, B., Hu, C., & Wu, C.-M. E. (2009). Affect, Travel Motivation, and Travel Intention: a Senior Market. Journal of Hospitality & Tourism Research, 33(1), 51-73. https://doi.org/10.1177/1096348008329666

Kaiser, C., & Major, B. A. (2006). Social Psychological Perspective on Perceiving and Reporting Discrimination. Law & Social Inquiry, 31, 801-830.

Karczewski, E. (2013). Wpływ aktywności turystycznej na równowagę duchową i zdrowie człowieka. Zeszyty Naukowe. Turystyka i Rekreacja, 2(12), 75-87. (in Polish).

Kim, J. H., Ritchie, J. R. B., & McCormick, B. (2012). Development of a scale to measure memorable tourism experiences. Journal of Travel Research, 51(1), 12-25. https://doi.org/10.1177/0047287510385467

Kim, S., & Filimonau, V. (2017). On linguistic relativity and pro-environmental attitudes in tourism. Tourism Management, 63, 158-169. https://doi.org/10.1016/j.tourman.2017.06.012

Kim, S., Filimonau, V., & Dickinson, J. E. (2023). Tourist Perception of the Value of Time on Holidays: Implications for the Time Use Rebound Effect and Sustainable Travel Practice. Journal of Travel Research, 62(2), 362-381. https://doi.org/10.1177/00472875211064636

Kociszewski, P. (2016). Turystyka seniorów jako istotny czynnik aktywizacji osób starszych. Zeszyty Naukowe Uczelni Vistula, 46(1), 217-237. (in Polish).

Kollmuss, A., & Agyeman, J. (2002). Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? Environmental Education Research, 8(3), 239-260. https://doi.org/10.1080/13504620220145401

Landau, S., & Everitt, B. (2004). A handbook of statistical analyses using SPSS. New York: Chapman & Hall/CRC Press LLC.

Larsen, G. R., & Guiver, J. W. (2013). Understanding tourists' perceptions of distance: A key to reducing the environmental impacts of tourism mobility. Journal of Sustainable Tourism, 21(7), 968-981. https://doi.org/10.1080/09669582.2013.819878

Le Serre, D., & Chevalier, C. (2012). Marketing travel services to senior consumers. Journal of Consumer Marketing, 29(4), 262-270. https://doi.org/10.1108/07363761211237335

Lee, T. H. (2011). How recreation involvement, place attachment and conservation commitment affect environmentally responsible behavior. Journal of Sustainable Tourism, 19(7), 895-915. https://doi.org/10.1080/09669582.2011.570345

Lehto, X. Y., Kim, D.-Y., & Morrison, A. M. (2006). The effect of prior destination experience on online information search behaviour. Tourism and Hospitality Research, 6(2), 160-178. http://www.jstor.org/stable/23745500

Liew, S. L., Hussin, S. R., & Abdullah, N. H. (2021). Attributes of Senior-Friendly Tourism Destinations for Current and Future Senior Tourists: An Importance-Performance Analysis Approach. SAGE Open, 11(1). https://doi.org/10.1177/2158244021998658

Liu, A., & Wu, D. C. (2019). Tourism productivity and economic growth. Annals of Tourism Research, 76, 253-265. https://doi.org/10.1016/j.annals.2019.04.005

Losada, N., Alén, E., Cotos-Yáñez, T. R., & Domínguez, T. (2019). Spatial heterogeneity in Spain for senior travel behavior. Tourism Management, 70, 444-452. https://doi.org/10.1016/j.tourman.2018.09.011

Loureiro, S. M. C., Guerreiro, J., & Han, H. (2022). Past, present, and future of pro-environmental behavior in tourism and hospitality: a text-mining approach. Journal of Sustainable Tourism, 30(1), 258-278. https://doi.org/10.1080/09669582.2021.1875477

Maier, M. (2015). Skutki społeczno-ekonomiczne starzenia się społeczeństwa. Wybrane aspekty. Europa Regionum, 25, 241253. (in Polish).

Mańkowski, T. (2011). Rola turystyki i rekreacji w rozwoju społeczno-gospodarczym. In A. Panasiuk (Ed.), Ekonomika turystyki i rekreacji (pp. 176-201). Warszawa: Wydawnictwo Naukowe PWN. (in Polish).

Manzoor, F., Wei, L., Asif, M., ul Haq, M. Z., & ur Rehman, H. (2019). The Contribution of Sustainable Tourism to Economic Growth and Employment in Pakistan. International Journal of Environmental Research and Public Health, 16(19), 3785. https://doi.org/10.3390/ijerph16193785

Minnaert, L., Maitland, R., & Miller, G. (2006). Social tourism and its ethical foundations. Tourism, Culture & Communication, 7(1), 7-17. https://doi.org/10.3727/109830406778493533

Neal, J. D., Sirgy, M. J., & Uysal, M. (1999). The role of satisfaction with leisure travel/tourism services and experience in satisfaction with leisure life and overall life. Journal of Business Research, 44(3), 153-163. https://doi.org/10.1016/S0148-2963(97)00197-5

Nicolau, J. L., Losada, N., Alén, E., & Domínguez, T. (2020). The Staged Nature of Decision Making among Senior Tourists. Journal of Travel Research, 59(4), 602-613. https://doi.org/10.1177/0047287519851229

Nimrod, G., & Rotem, A. (2010). Between relaxation and excitement: activities and benefits gained in retirees' tourism. Internationa Journal of Tourism Research, 12(1), 65-78. https://doi.org/10.1002/jtr.739

Olsson, M., & Schuller, B. J. (2012). Living standard, quality of life, globalization and competitiveness in the EU and the neighbour countries–an empirical analysis. Acta Scientiarum Polonorum. Oeconomia, 11, 5-21.

Orfin, K. (2011). Uczestnicy rekreacji. In A. Panasiuk (Ed.), Ekonomika turystyki i rekreacji (pp. 42-45). Warszawa: Wydawnictwo Naukowe PWN. (in Polish).

Pesonen, J., Komppula, R., & Riihinen, A. (2015). Typology of senior travellers as users of tourism information technology. Information Technology & Tourism, 15, 233-252. https://doi.org/10.1007/s40558-015-0032-1

Polakowski, M. (2015). Społeczne i ekonomiczne konsekwencje starzenia się społeczeństwa główne kierunki reform systemów emerytalnych w Europie. Studia BAS, 2(30), 169-200. (in Polish).

Przybysz, K., & Stanimir, A. (2022). Tourism-Related Needs in the Context of Seniors' Living and Social Conditions. International Journal of Environmental Research and Public Health, 19(22), 15325. https://doi.org/10.3390/ijerph192215325

Przybysz, K., & Stanimir, A. (2023a). How Active Are European Seniors—Their Personal Ways to Active Ageing? Is Seniors' Activity in Line with the Expectations of the Active Ageing Strategy? Sustainability, 15(13), 10404. https://doi.org/10.3390/su151310404

Przybysz, K., & Stanimir, A. (2023b). Measuring Activity – The Picture of Seniors in Poland and Other European Union Countries. Sustainability, 15(12), 9511. https://doi.org/10.3390/su15129511

Przybysz, K., Stanimir, A., & Wasiak, M. (2021). Subjective Assessment of Seniors on the Phenomenon of Discrimination: Analysis Against the Background of the Europe 2020 Strategy Implementation. European Research Studies Journal, 24, 810-835. https://doi.org/10.35808/ersj/2075

Quan, L., Kim, J. J., & Han, H. (2022). Customer views on comprehensive green hotel selection attributes and analysis of importance-performance. Journal of Travel & Tourism Marketing, 39(6), 535-554. https://doi.org/10.1080/10548408.2022.2162657

Schirmer, W., Geerts, N., Vercruyssen, A., & Glorieux, I. (2022). *Digital Skills Training for Older People: The Importance of the 'Lifeworld'*. https://ssrn.com/abstract=4003089

Steptoe, A., & Zaninotto, P. (2020). Lower socioeconomic status and the acceleration of aging: An outcome-wide analysis. *Proceedings of the National Academy of Sciences of the United States of America*, 117(26), 14911-14917. https://doi.org/10.1073/pnas.1915741117

Streimikiene, D., Svagzdiene, B., Jasinskas, E., & Simanavicius, A. (2021). Sustainable tourism development and competitiveness: The systematic literature review. Sustainable Development, 29(1), 259-271. https://doi.org/10.1002/sd.2133

Tucker, H., & Lynch, P. (2005). Host-Guest Dating. Journal of Quality Assurance in Hospitality & Tourism, 5(2-4), 11-32. https://doi.org/10.1300/J162v05n02_02

United Nations. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development.* https://sustainabledevelopment.un.org/post2015/transformingourworld

Weaver, P. A., & Lawton, L. J. (2002). Overnight ecotourist market segmentation in the Gold Coast hinterland of Australia. Journal of Travel Research, 40(3), 270-280. https://doi.org/10.1177/004728750204000305

WHO. (2002). *Active Ageing. A Policy Framework*. https://extranet.who.int/agefriendlyworld/wp-content/uploads/2014/06/WHO-Active-Ageing-Framework.pdf

WHO. (2015). *World Report on Ageing and Health*. https://apps.who.int/iris/handle/10665/186463

WHO. (2020). *Decade of Healthy Ageing: Baseline Report*. https://www.who.int/publications-detail-redirect/9789240017900

World Travel & Tourism Council. (n.d.). *Economic Impact Research*. https://wttc.org/research/economic-impact

WTO & UNEP. (2008). *Climate Change and Tourism – Responding to Global Challenges.* https://doi.org/10.18111/9789284412341

WTO & UNEP. (2017). *Tourism and the Sustainable Development Goals – Journey to 2030*. https://doi.org/10.18111/9789284419401

WTO & UNEP. (2019). *Transport-related CO2 Emissions of the Tourism Sector – Modelling Results.* https://doi.org/10.18111/9789284416660

WTO. (2017). *UNWTO Annual Report 2016*. https://doi.org/10.18111/9789284418725

Klaudia PRZYBYSZ • Elżbieta ROSZKO-WÓJTOWICZ • Agnieszka STANIMIR

CZY ZACHOWANIA TURYSTYCZNE SENIORÓW SĄ POWIĄZANE ZE ZRÓWNOWAŻONĄ TURYSTYKĄ

STRESZCZENIE: W artykule rozpatrzono w obszarze uczestniczenia w turystyce dwa globalne wyzwania jakimi są zrównoważony rozwój oraz starzenie się społeczeństwa. Celem badania było sprawdzenie, czy europejscy seniorzy uczestniczą w turystyce i czy determinanty kierunków turystycznych są powiązane z turystyką zrównoważoną. Dla reprezentatywnych danych Eurobarometru zastosowano analizę korespondencji. Potwierdzono, że seniorzy uczestniczą w turystyce. Najczęściej seniorzy z Unii Europejskiej deklarują, że podróże po pandemii Covid19 zwracanie większej uwagi na środki bezpieczeństwa i higieny. Wskazano, w których krajach seniorzy realizują cele zrównoważonego rozwoju w trakcie turystyki. Kolejne badania muszą być ukierunkowane na brak zdecydowania seniorów w trakcie wyborów turystycznych i dostępności do oferty turystycznej. Otrzymane wyniki są przesłanką do właściwego konstruowania oferty turystycznej uwzględniającej obecne i przyszłe potrzeby seniorów. Otrzymane wyniki są przesłane do konstruowania usług turystycznych, które są dostępne na poziomie seniorów.

SŁOWA KLUCZOWE: cele zrównoważonego rozwoju, seniorzy, turystyka, analiza korespondencji