

Article

Demographic Challenges for the Tourism Industry: The Future of Seniors' Activities—A Case Study of Poland

Agnieszka Stanimir *  and Klaudia Przybysz

Department of Econometrics and Operational Research, Wrocław University of Economics and Business, 53-345 Wrocław, Poland; klaudia.przybysz@ue.wroc.pl

* Correspondence: agnieszka.stanimir@ue.wroc.pl

Abstract: The increasing number of elderly tourists requires adapting tourism services to address their specific health and comfort needs, which presents a new challenge for the industry. The aim of this study is to check the readiness of the tourism sector for demographic changes, to identify the characteristics of seniors that should be taken into account when constructing tourist offers, and to learn about the reasons for non-participation in tourism by different age groups. The study used data from a survey conducted among Polish companies from the tourism sector and data from Statistics Poland regarding the travelling habits of Polish people. Correspondence analysis and Sequence, Association and Link Analysis (SAL) were used. The surveyed companies from the tourism sector have noticed demographic changes related to the ageing of the population and are actively responding to these changes. The most important factors influencing the construction of offers for seniors are health and mobility issues and problems with modern technology. Seniors give up tourism mainly because they prefer to stay at home followed by health or mobility issues.

Keywords: tourism industry; population ageing; seniors' needs; SAL method; correspondence analysis



Citation: Stanimir, A.; Przybysz, K. Demographic Challenges for the Tourism Industry: The Future of Seniors' Activities—A Case Study of Poland. *Tour. Hosp.* **2024**, *5*, 1456–1476. <https://doi.org/10.3390/tourhosp5040081>

Academic Editor: Brian Garrod

Received: 14 November 2024

Revised: 4 December 2024

Accepted: 13 December 2024

Published: 16 December 2024



Copyright: © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Tourism, as an industry particularly vulnerable to economic, climate, and health crises, faces many challenges. Currently, it is in the recovery phase following the COVID-19 pandemic. According to forecasts from the World Travel and Tourism Council [1] and the United Nations World Tourism Organization [2], the industry may return to pre-pandemic levels by 2025, which underscores its dynamic nature.

To sustain or increase growth in the coming years, it is essential to implement measures aimed at targeting the senior segment. Older adults constitute an expanding demographic that may soon form the majority of tourism service consumers [3]. This shift requires a reevaluation of how seniors are perceived, alongside an acknowledgment of the need to tailor offerings to their specific needs, limitations, requirements, and expectations [4], given the substantial beneficial impact of tourism on the physical and mental health of older adults [5]. An additional challenge for the tourism industry lies in the significant diversity within this segment. The heterogeneity of this group can be discussed in various ways; however, from the perspective of tourism, it is useful to focus on the dimension of activity levels. Active seniors are more likely to engage in tourism, gaining health benefits that are both physical and psychological. It is worth noting that a significant proportion of those currently classified as seniors are fully capable, financially independent, active in new technologies, and open to new opportunities [6]. Despite their activity and inclination to travel, offerings targeted at this consumer group should consider specific requirements associated with later life, such as a slower pace, possible mobility limitations, or slower or reduced sensory perception [7]. A much greater challenge for the tourism industry related to the ageing of societies is encouraging participation in tourism among less active seniors. Research indicates that there are numerous reasons why older adults may not

participate in tourism [8], and this, combined with the heterogeneity of the group itself [9], makes it impossible to create a universally applicable offering. These are the reasons why continued research, repeated studies, and the identification of previously unexplored areas are essential if a focus on the senior segment is to help the tourism industry offset the decline in the number of younger consumers.

The proposed study closely relates to the needs outlined above.

The study aims to assess the readiness of the tourism sector for demographic changes, to identify the characteristics of seniors that should be taken into account when constructing tourist offers and to learn about the reasons for non-participation in tourism by different age groups. Implementing the study's objectives will facilitate the identification of challenges that the tourism sector faces now and will have to deal with in the future.

This article is divided into six parts. The introduction addresses the challenges facing the tourism industry in the context of social transformations associated with an ageing society. The literature review is organised into six thematic sections, covering the economic and social implications of population ageing, the concepts of active and healthy ageing, the development of the silver economy as an opportunity amidst structural changes in European societies, the role of the tourism sector in the economy, the potential of seniors as a growing market segment in tourism, and the specific challenges that the senior market presents to tourism. The following section describes the data used and the research methods employed. Then the results of the study are presented, and the conclusions and discussion are provided. The last chapter outlines the study's limitations and potential directions for future research.

2. Literature Review

2.1. Economic and Social Implications of an Ageing Population

Social transformations within the European Union primarily relate to the ageing of populations in European countries. Population ageing affects all aspects of society, including healthcare, social security, education, the labour market, socio-cultural activities, and family life [10–12]. Consequently, numerous challenges arise, particularly of a political and economic nature. These include issues related to pension systems and social security provisions, as well as labour markets and health policies [12–15]. One of the greatest challenges facing society is the shifting balance between the working-age population and the non-working-age population, which may negatively impact national income [16,17]. This shift has significant implications for pensions and other policies in which the current workforce funds benefits for retirees [18]. As early as 1998, the OECD addressed this issue, noting that 'Fewer workers to support a larger number of retirees raises fiscal issues and questions of intergenerational equity' [19] (p. 9). Evidently, in addition to economic concerns, social implications were also recognized. These include negative stereotypes about the elderly being perceived as a burden on younger generations [20], as well as age discrimination, particularly in health and employment contexts [21–24]. Older adults are often identified as passive, with limited interest in social engagement or adaptation to changes (such as technological advances), viewed as frail or disabled, and as being 'near the end of life' [25].

In the intergenerational sphere, there is also a notable lack of social capital, reflected in the fact that typical family structures now provide less intergenerational support than in the past [26].

Alongside these challenges, there are also emerging opportunities, with the development of the silver economy coming to the forefront [27–30]. The trajectory of this development will directly depend on the well-being of the older segment of society [8]. Consequently, numerous initiatives at the social, governmental, and pan-European levels are being introduced, such as programs to support seniors and the promotion of active aging and healthy ageing principles.

2.2. Active and Healthy Aging

The concepts of active and healthy ageing play a crucial role in transforming the challenges posed by ageing societies into opportunities for affected economies. The theoretical foundations of active ageing trace back to Robert Havighurst [31], who recognised that the well-being of older adults is linked to/results from their continued engagement in activities. The concept of active ageing has been developed by the World Health Organization. It aims to enable seniors to remain active in the labour market while also preventing their stigmatisation and social exclusion. Active ageing focuses on allowing people to maintain their independence and reach their potential regardless of age. It emphasises the importance of maximising health, participation, and security in enhancing well-being as individuals age [32]. According to the definition provided by the International Council on Active Aging (ICAA), the vision promoted encompasses all individuals—regardless of age, socio-economic status, or health condition—fully engaging in life across seven dimensions of well-being: emotional, environmental, intellectual/cognitive, physical, occupational/vocational, social, and spiritual (Figure 1).

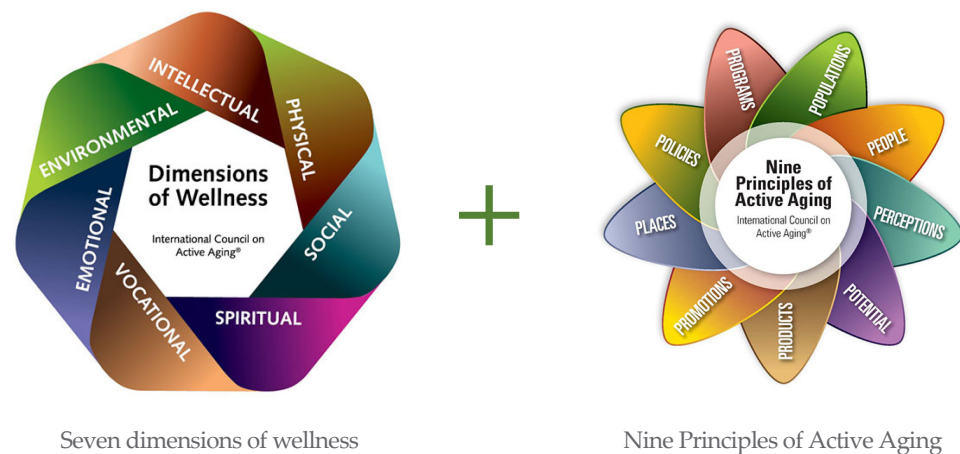


Figure 1. Principles of Wellness and Active Ageing. Source: [33].

The ICAA Model [33] has introduced nine principles of active ageing to assist governments, providers of products and services, employers, and health-related sectors in addressing the challenges posed by an aging population:

- Populations: The varied demographic of older adults necessitates a range of solutions;
- People: It is essential to have trained and dedicated individuals to cater to the needs, capabilities, aspirations, and desires of older adults;
- Perceptions: Ageism and negative stereotypes associated with ageing hinder the development of an inclusive society;
- Potential: The ageing population is giving rise to new economic opportunities;
- Products: There is a demand for products and services specifically designed to meet the needs and expectations of older adults;
- Promotions: Older adults represent a crucial market segment that should be targeted;
- Places: Environments should be designed to accommodate a variety of functional abilities;
- Policies: The rights of older adults must be safeguarded;
- Programs: The seven dimensions of wellness provide a foundation for these principles.

The World Health Organization (WHO) has focused on the concept of “healthy ageing” as a key part of its work on ageing from 2015 to 2030. This shift replaces the earlier emphasis on “active ageing”, which was a policy framework introduced in 2002. Healthy ageing aims to enable older individuals to remain valuable contributors to their families, communities, and economies, emphasising the importance of action across various sectors [34].

Both the concepts of active ageing and healthy ageing align with the principles of structural functionalism [35], which view society as a complex system where its components work together to foster solidarity and stability.

Jia et al. [36] research results indicate the multidimensionality of prosocial tourist behaviour and the relationship between tourist prosocial and tourist well-being. This aspect is crucial for the well-being of senior tourists. Structural functionalism, a perspective in sociology and related disciplines, views society as a complex system composed of interdependent institutions, roles, norms, and relationships [37]. Each element is seen as essential to maintaining the stability and functioning of society as a whole. According to this framework, social change occurs as an adaptive response to tensions or imbalances within the system. When one component of the system changes, it creates tension with other components, prompting adjustments in those parts to restore equilibrium and ensure the system's overall continuity. Within the framework of these concepts, a vision emerges of seniors being integral members of society aware of their roles and increasingly influencing various areas of social life. The proactive attitude of this growing demographic translates into shifts in preferences, needs, and expectations regarding market offerings.

2.3. Silver Economy

For many years, there has been a noticeable phenomenon of significant heterogeneity within the senior demographic [38–40], which can be broadly categorised into active and inactive individuals. In this context, the development of the silver economy is expected to unfold in a bidirectional manner [41]. Regarding inactive seniors, it can be anticipated that this development will focus on the provision of products and services related to caregiving, support for the lonely and ill, as well as an increase in the number of day-care and long-term care facilities. In contrast, for seniors who remain active, the development of the silver economy must consider their current needs while also adapting to changes brought about by generational shifts in the profile of older adults.

The generational transformation indicated above refers to the significant differences between today's seniors and their predecessors [42]. Primarily, this group consists of individuals who enjoy better health, are aware of their needs, and are willing to embrace challenges. They possess strong digital skills [43–45] acquired during their younger years, which enhances their connectivity. Typically, their financial situation is also more favourable. As a result, the consumer behaviours of today's seniors differ significantly from those of previous generations. In 2014, Harper noted that future generations of older adults are likely to possess an even higher level of human capital in terms of education, skills, and abilities, as well as improved health profiles. This advancement will enable them to remain active, productive, and contributors to societal development for a significantly longer period ([11], p. 2).

As highlighted by Bond et al. [46], the 1990s saw a shift in the definition of retirement transition from a focus on the style and values acquired during one's working years to personal and social identity expressed through lifestyles shaped by a consumer society and various activities outside of paid work. Consequently, older adults no longer operate within the frameworks of their previous employment and do not define themselves by their past professional roles. Their identities are increasingly expressed through consumption. In this context, the significance of the transition from paid employment to retirement diminishes as consumption patterns become more decisive than paid work in shaping personal identities.

As noted by Kiezel [47], older consumers were observed to shift from actively seeking offers to engaging in habitual or family-established purchasing patterns. However, considering the aforementioned generational changes in the senior profile, it can be posited that today's seniors are actively searching for offers, gathering information, and making comparisons. This indicates that they are evolving into a group of informed consumers, akin to individuals from other age cohorts [48].

The silver economy thus focuses on older adults as a new class of consumers, whose contributions are expected to drive growth in European economies. Its central principle is that ageing represents an investment and a business opportunity, rather than merely a burden on public healthcare resources, forming the foundation of EU policies related to active and healthy ageing [49,50]. Promoting active ageing can be achieved not only

through the adoption of technological and scientific innovations but also by implementing new business strategies aimed at gaining a deeper understanding of the behaviours and emerging proactive attitudes of older adults [25].

Ageing societies present both challenges and opportunities for business marketing. Older individuals are increasingly controlling a significant portion of family wealth and contributing substantially to national consumption, thus exerting a strong influence on corporate performance through their consumer behaviours, which have been referred to as the *grey tsunami* [25]. Among the sectors poised to benefit significantly from the silver economy, tourism is prominently mentioned [51].

2.4. The Tourism Sector in the Economy

Tourism is a significant driver of economic growth due to its impact on stimulating economic activity, creating jobs, promoting regional development, supporting local communities, and generating income and foreign exchange [52–54].

The tourism industry affects countries' Gross Domestic Product (GDP) in three primary ways [55]. The first, known as the direct effect, involves industries that are directly related to tourism spending. The second is referred to as the indirect effect, which comprises the goods and services purchased by tourism businesses from their suppliers, forming part of the tourism supply chain. The third impact, called the induced effect, pertains to the sales, income, or employment generated from household spending resulting from income derived from tourism expenditures, whether directly or indirectly.

Recent annual research conducted by the World Travel and Tourism Council [1] reveals that, in 2019, prior to the pandemic, travel and tourism—including its direct, indirect, and induced effects—accounted for 10.5% of all employment (334 million jobs) and 10.4% of global GDP (USD 10.3 trillion). By 2023, the travel and tourism sector contributed 9.1% to global GDP, marking a 23.2% increase compared to 2022, and just 4.1% below the 2019 level. Additionally, 27 million new jobs were created in 2023, reflecting a growth of 9.1% from the previous year and only 1.4% short of the pre-pandemic figure. According to the UNWTO, the direct GDP of tourism globally returned to pre-pandemic levels in 2023 [2]. The tourism industry is particularly sensitive to demographic shifts and economic fluctuations, primarily due to its reliance on consumer spending, which is closely tied to the overall economic climate [56]. For instance, global financial crises, such as the one in 2008–2009, significantly curtailed travel activities and reduced spending on tourism, directly impacting the sector's revenues [2]. Likewise, the COVID-19 pandemic in 2020 led to an unprecedented drop in international travel by approximately 74%, resulting in a revenue loss of USD 1.3 trillion, which equated to nearly 2.5% of global GDP [57].

2.5. The Potential of Seniors as an Emerging Market Segment in Tourism

Tourism and recreational activities are two key areas associated with active and healthy ageing of the senior population, playing a significant role in the silver economy. Seniors, in particular, have greater flexibility in managing their leisure time compared to younger age cohorts [58]. Engaging in tourism and recreational pursuits enhances mobility, positively impacting their mental, psychological, and physical well-being. With advancements in technology and healthcare, along with the provision of transportation solutions for individuals with limited mobility, silver tourism has emerged as a crucial component of the silver economy, especially within the context of an increasingly ageing Europe [59]. Since the early 21st century, there has been a growing interest in senior tourism [60,61]. The expanding demographic of seniors has attracted the attention of tourism industry institutions due to their purchasing power. This is because older travellers tend to be wealthier, healthier, more active, and possess more leisure time than their predecessors [62–64]. As a result, seniors now constitute a primary market segment for the tourism industry, including cruises [65], both in terms of the volume of trips taken and the magnitude of their expenditures [66].

2.6. Specific Challenges for Tourism Related to the Senior Market

The process of active aging recognizes the value and importance of maintaining good health among older adults while allowing them to remain in their usual environments [67]. This perspective has served as a foundation for research on active ageing, with particular emphasis placed on the development, maintenance, and enhancement of skills that lead to a greater sense of well-being. One aspect of well-being that has attracted increasing scholarly attention is travel. Research has shown that tourism positively influences the subjective well-being of older adults and their level of social engagement by enhancing their self-esteem and confidence [68,69]. Considering the potential of active ageing to positively improve the overall health of seniors on both physical and psychological levels, initiatives that promote active ageing, including tourism, have emerged as significant areas of research concerning factors related to seniors' health. One way to achieve a better health profile, help people to adjust to retirement, and improve their quality of life is through travel. Research confirms the positive impact of travel on the overall well-being of seniors [70]. Travel experiences, including romantic tourism [71], social tourism [68], and local tourism [72], significantly elevate the level of this well-being. Some authors suggest that a higher frequency of travel [73–76] is more meaningful for seniors than the average duration of their trips. Additionally, the level of activity during travel not only influences the experience itself but also affects the overall well-being of the older traveller [70]. Factors that serve as specific triggers for well-being among older travellers include the aesthetics of locations and therapeutic landscapes [77]. It is also emphasised that relationships with people are as important for the well-being of tourists as contact with the natural environment [78].

Seniors represent a highly heterogeneous group of travellers, which presents significant challenges for the tourism industry. One result of this considerable heterogeneity and diversity in the senior tourism market is the requirement for a greater variety of travel options than in previous years—ranging from preferences for organised tours to individual trips [79]. The demand for tourism and recreation is expected to grow systematically, as these activities are now recognized as important aspects of senior life, which—evidence suggests—enhance mental and physical well-being and help seniors adjust to retirement [3]. The same observations are made by seniors engaged in cruise tourism [80].

Based on the literature review, the following research hypotheses are proposed:

- H1: the tourism sector recognises demographic changes related to the ageing of the population;
- H2: market observation ensures that the tourism sector recognises the factors necessary for the proper design of the tourist offer;
- H3: demographic changes affect the lower involvement of the tourism sector in adapting the offer to the needs of seniors;
- H4: there are generational differences in the determinants of abandonment of tourism;
- H5: seniors give up tourism due to habits acquired during their professional activity.

Given the significant body of literature on the impact of demographic change on the tourism sector, it is reasonable to hypothesize (H1) that the tourism industry is increasingly recognizing the need to adapt to these shifts. Hypothesis H1 is built on the premise that the tourism sector must acknowledge the ageing of the population and respond with tailored strategies to meet the needs of seniors.

Based on the literature and the understanding that older adults have specific and evolving needs, hypothesis H2 posits that market observation ensures that the tourism sector recognizes these needs. By observing and analysing the behaviour and preferences of senior tourists, the tourism industry can design more suitable offerings for this demographic.

The behaviour of the tourism sector described in hypothesis H3 may result from the need to incur financial outlays for infrastructure modernization. The tourism sector may also expect that seniors, compared to professionally active people, have lower financial resources that they can allocate for tourist activity. This may discourage the tourism sector from developing an offer for seniors.

Hypothesis H4 is grounded in the significant diversity within the senior segment. Studies on generational differences in senior tourism indicate that older generations may exhibit distinct attitudes towards tourism when compared to younger seniors.

The reasoning behind hypothesis H5 is rooted in the literature suggesting that work habits influence retirement behaviours, including travel patterns. Given that seniors often face lifestyle adjustments after retirement, it is hypothesized that these adjustments, shaped by professional activity, influence their participation in tourism.

The study aims to address the following research questions:

- RQ1: Is the tourism sector ready for demographic changes, and does it recognise the factors determining a good tourist offer for seniors?
- RQ2: What are the reasons for not participating in tourism, and can the tourism sector increase the tourist activity of seniors?

3. Data and Methods

The COVID-19 pandemic has temporarily shaken the growing importance of the tourism sector in the economy. However, as statistics have shown, this sector has been recovering quickly since the crisis.

The study aimed to determine whether the tourism sector is preparing for demographic changes, how it differentiates offers for seniors from other offers, and to identify the challenges that companies, institutions and service providers of tourist goods and services will have to face in the future.

The objective of the study was achieved using two data sources. First, the data collected during a survey among exhibitors during the Tourism and Leisure Fair were used. This event took place on 22–24 March 2024 in Wrocław, Poland. Respondents participated voluntarily and anonymously in the Tourism Sector Readiness Survey for the Changing Needs of Current and Future Seniors. A PAPI-type survey (Paper and Pencil Interview) was carried out. The organiser of the fair, MTT Sp. z o.o., agreed to conduct interviews during the fair. Of 47 exhibitors (domestic and foreign), 42 participated in the survey, and five refused to participate. The respondents represented companies, organisations, national and foreign governments. The survey does not include representatives of hotels, travel agencies, or catering companies (a separate study on the indicated topic is planned for this part of the tourism sector). The questionnaire design allowed for the identification of the readiness of the tourism sector for demographic changes.

The following questions were asked in the questionnaire:

1. Q1: Do you see the need to adapt your offer to demographic changes? (Yes, No);
2. Q2: Do you currently have an offer dedicated to seniors? (Yes, No);
3. Q3: Are you going to launch such an offer? (Yes, No);
4. Q4: When do you intend to introduce the offer for seniors? (In a few months; In one year; In more than a year; It is difficult to determine);
5. Q5: Is your offer for seniors different from other age groups? (Yes, No);
6. Q6: How does the offer for seniors differ from those for other age groups? (open question);
7. Q7: Should the offer for seniors differ from the offer for other age groups (Yes, No);
8. Q8: Based on your experience, what qualities of a senior should be included in the offer? (Need for peace and quiet (1); Less financial capacity (2); Mobility problems (3); Lack of knowledge of foreign languages (4); Slower reactions to stimuli (5); Lack of knowledge of new technologies (6); Need for physical safety (7); Need for mental safety (8); Lack of companionship (9); Other (10));
9. Q9: How do you reach seniors with your offer?/How do you plan to reach seniors with your offer? (Internet; magazines + newspapers; Senior clubs; parishes; Universities of the Third Age; By existing (younger) customers; By existing customers (seniors); Other);
10. Q10: Why don't you plan to introduce an offer for seniors/adapt the offer to the needs of seniors? (Financial reasons; The demand for such services will be too low; There is no need to differentiate offers based on age; We observe the behaviour of the

competition, we will take action if necessary; Organising an offer for seniors requires too much effort; Lack of state support in co-financing such an offer; Difficulties in reaching the target group with the offer; Other);

11. Q11: How would you determine the age of a senior citizen? (55+; 60+; 65+; 70+; 75+; It's hard to say).

The second data source used in the analysis was non-identifiable individual data collected by the Central Statistical Office in Poland. Data collected in 2023 based on the questionnaire titled *Participation of Polish residents in domestic/foreign trips* [81] were used. The survey of residents' participation in travel involved 98,083 people and 68,550 non-residents travelling to Poland (Table 1). Selected data allowed us to identify factors determining the participation of pre-seniors and seniors in tourism in the future.

Table 1. Structure of the studied populations.

Age Groups	Participation of Polish Residents in Domestic/Foreign Trips				
	Men		Women		
	% of M	% of N	% of W	% of N	
Under 15	17%	8%	16%	8%	
15–24	10%	5%	9%	4%	
25–34	11%	5%	12%	6%	
35–44	19%	9%	20%	10%	
45–54	17%	8%	17%	8%	
55–64	12%	6%	14%	7%	
65 or over	15%	7%	19%	9%	
Total (M or W)	47,174		50,909		
Total (N)	98,083				

Note: % of N—percentage of total respondents. Source: Own study based on Statistics Poland data [81].

Women predominate in the questionnaire survey on tourism among Polish residents and visitors to Poland. In the survey of tourist behaviour of Polish residents, the most significant number of women aged 35–44 was observed. On the other hand, in the survey of non-residents coming to Poland, similar shares were recorded for women and men aged 35–44 and those aged 45–54. When analysing the participation of seniors (65+) in the conducted research, it should be pointed out that in the group of people travelling to Poland, they constituted only 7% of men and 5% of women. In contrast, in the study on tourism participation, this age group was 15% male and 19% female. Statistics Poland data [81] gathered information on respondents' gender, age, and reasons for not participating in tourism.

The aim of this study was achieved using SAL analysis and correspondence analysis.

Sequence, Association and Link Analysis (SAL) is one of the basket analysis methods for searching for relationships and discovering dependencies. This method detects solutions to meet customer needs [82–84]. The term transaction appears in the following interpretations since it was initially a method dedicated to analysing shopping baskets. However, this method is now more widely used to associate specific choices made by the studied individuals.

The results of the SAL analysis are association rules assessed according to their frequency in the studied data set. It is necessary to recognize the rules of association, which are conditional sentences *if the Antecedent, then the Consequent*. The antecedent indicates the successor, and there is a cause-and-effect relationship between them. Therefore, it is necessary to determine the confidence (1) and support (2) indicators [85]:

$$P(A) = \frac{P(A \cap B)}{P(A)} = \frac{\text{number of transactions containing } A \text{ and } B}{\text{number of transactions containing } A} \tag{1}$$

$$P(A \cap B) = \frac{\text{number of transactions containing } A \text{ and } B}{\text{total number of transactions}} \quad (2)$$

The confidence score allows for the determination of what percentage of transactions (client choices) of A also contain B . Support, on the other hand, is the percentage of transactions (client choices) in the entire set of transactions (client choices) that contain both A and B . When evaluating phenomena in terms of their co-occurrence with other phenomena or their occurrence against the background of others, it is necessary to establish rules that evaluate sets of transactions (client choices) as significant. Therefore, indicating a minimum value for confidence and support factors is essential. These values vary depending on the research problem. In addition, the correlation coefficient is determined in the analysis. It informs us to what extent making a transaction (client choices) A increases (positive correlation) or decreases (negative correlation) the probability that a transaction (client choices) B will be executed ($\text{if } A \text{ then } B = \frac{\text{support if } A \text{ then } B}{\text{confidence if } A \text{ then } B}$). Lift is a modification of the correlation measure. It determines the impact of selling product A on the probability of selling product B ($\text{if } A \text{ then } B = \frac{\text{confidence if } A \text{ then } B}{\text{support of } B}$).

Based on the criteria for assessing confidence and support, a network of association rules is created, showing the consequents and antecedents in the acceptable sets. Networks show their connections. Support for the antecedent of the rule, as well as its consequent, is illustrated by the size of the points representing transactions (choices). The thickness of each line determines the relative support for the two sets connected by the line, and its colour determines the relative level of growth.

Another method used in the study is the analysis of correspondence. The scope of application of this method is vast, e.g., regarding socio-economic areas [86–88] or the behaviour of individuals [89–92]. Correspondence analysis can be used for nominal and ordinal data. The data must be recorded in the contingency table. As a result, the actual relationships of variable categories in low-dimensional space are checked. The advantage of correspondence analysis is the possibility of a graphical presentation of the results. For this purpose, it is necessary to determine the coordinates of the rows and columns of the contingency table. This operation is carried out based on singular value decomposition (SVD) for a correspondence matrix based on the contingency matrix:

$$\mathbf{A} = \mathbf{D}_r^{-1/2} (\mathbf{P} - \mathbf{r}\mathbf{r}^T) \mathbf{D}_r^{-1/2} \quad (3)$$

where

$\mathbf{D}_r = [p_{i.}]$ ($\mathbf{D}_c = [p_{.j}]$)—diagonal matrix of row (column) masses in multiway contingency table;

\mathbf{P} —matrix of observed proportion ($\mathbf{P} = [p_{ij}] = \left[\frac{n_{ij}}{n} \right]$, n_{ij} —the frequency in the i -th row and j -th column).

The principal coordinates of the rows and columns are calculated using Formulas (4) and (5):

$$\mathbf{F} = \mathbf{D}_r^{-1/2} \mathbf{U} \mathbf{\Gamma} \quad (4)$$

$$\mathbf{G} = \mathbf{D}_c^{-1/2} \mathbf{V} \mathbf{\Gamma} \quad (5)$$

where

$\mathbf{\Lambda}$, \mathbf{U} , and \mathbf{V} result from the singular value decomposition of the \mathbf{A} matrix ($\mathbf{A} = \mathbf{U} \mathbf{\Lambda} \mathbf{V}^T$), and $\mathbf{\Gamma}^2 = \mathbf{\Lambda}$, $\mathbf{\Lambda} = [\lambda_k]$.

Based on singular values (γ_k), eigenvalues (λ_k) are determined, followed by the total inertia λ : $\lambda = \sum_{k=1}^K \lambda_k = \sum_{k=1}^K \gamma_k^2$. The presentation of the relations of the variable categories given in the contingency table can be performed in the K -dimensional space, where $K = \min(r - 1; c - 1)$ is the number of rows (columns) of the matrix. The participation of eigenvalues in the total inertia contributes to assessing the quality of reflecting the real relationships of variable categories presented in low-dimensional space.

The conclusions presented in the article are the result of the applied analyses. For this purpose, an Excel spreadsheet, as well as the Statistica v13 and IBM SPSS Statistics 29 (PS IMAGO PRO 10.9) programs, were used. Statistica uses modules to analyse correspondence and SAL. SPSS was used to develop the datasets. The results were visualised using Excel and Statistica v13.

4. Results of the Study

The survey provides many interesting conclusions related to the sector's recognition of the tourist needs of seniors and the readiness to meet these needs. Figure 2 presents a diagram of the order of answers with an indication of the number of respondents choosing individual categories.

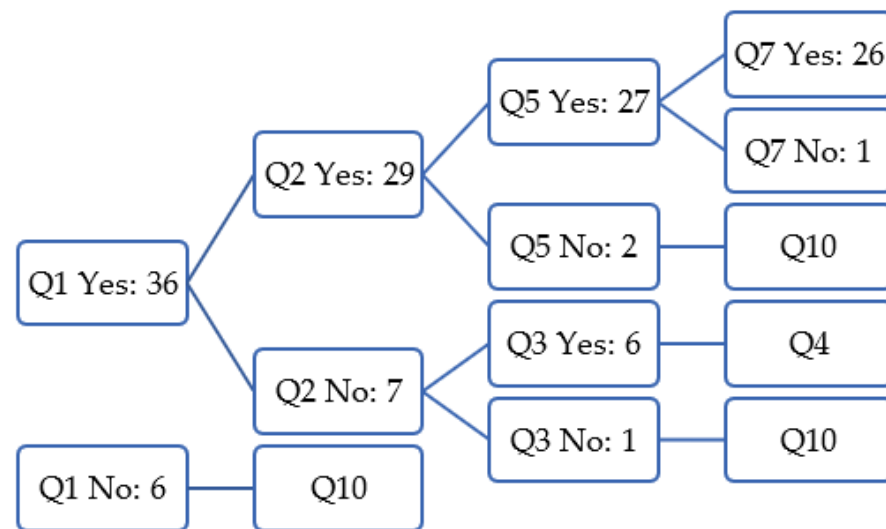


Figure 2. Response pattern and number of respondents.

Demographic changes related to the ageing of societies and the need to adapt the tourist offer to this situation (Q1 Yes) were noticed by 36 companies (Figure 1). Only 7 of them currently do not have an offer dedicated to seniors (Q2 No). Therefore, it was checked in which of the 29 companies with an offer for seniors this offer is different from other age groups. It turned out that this situation occurred at 27 exhibitors (Q5 Yes). Of the exhibitors who do not have offers for tourists (Q2 No), six stated that they intend to introduce such an offer (Q3 Yes), but in more than a year (Q4). Requesting a more detailed answer to question 5 was performed to indicate how the offers for seniors proposed by exhibitors differ from offers for other age groups. These were most often the price of tickets and taking into account the physical abilities of seniors, as well as the off-season offer, groups for seniors without the participation of younger people, weekend offers, additional attractions included in the price, extra transport, duration of attractions, pace of implementation, and straightforward language. This is essential information showing how the available offers are diversified as a result of identifying the needs of seniors, which the exhibitors indicated in their responses to question eight:

1. Mobility problems (28 exhibitors) and lack of knowledge of new technologies (24);
2. Lower financial capacity (19) and lack of foreign language skills (20);
3. Slower responses to stimuli (15) and the need for physical safety (13);
4. The need for peace and quiet (9), the need for psychological safety (9) and the lack of company (8);
5. Other (3).

Identifying the needs of seniors and creating an adequate offer by the tourism sector must be accompanied by selecting the right communication channel. Figure 3 shows

the paths that the exhibitors at the Tourism Fair intended to take with their offer to reach seniors.

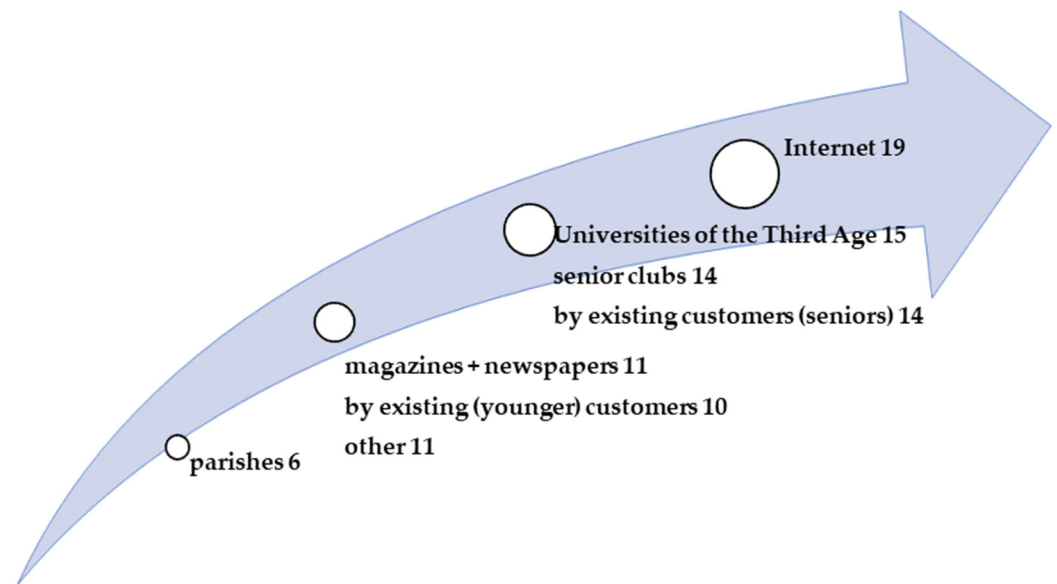


Figure 3. Ways of presenting tourist offers.

Respondents who were directed to question Q10 during the completion of the questionnaire specified why they would not introduce an offer for seniors. Most often, they stated that they did not see the need to do so, believing that the demand for such services and goods would be too low, or anticipating difficulties in reaching the target group. For the exhibitors, seniors are those aged 60+ (18) or 65+ (17). Only five companies recognise seniors as aged 75+ (Q11).

The SAL analysis brought further important conclusions from the questionnaire survey. It was assumed that the rules according to which the consequents have the characteristics of a senior citizen should be taken into account in the tourist offer (Q8) will be considered. A minimum support of 50% and a minimum confidence of 90% are assumed, i.e., 50% of items saved in the consequent are selected only from items from antecedents. However, the confidence condition imposes the selection of only those rules that indicate that 90% of items from the consequent occur only from items in the antecedent. Therefore, it was important to have the characteristics of seniors necessary for a tourist offer with a 50% chance, and specific solutions in the offers must be associated with 90% of the other factors taken into account in the analysis. The analysis omitted trivial rules resulting from the questionnaire passage scheme (Figure 2), which, in effect, indicated 100% confidence. Table 2 contains the rules in which, with the assumptions made regarding support and confidence, the consequent includes the variant of the answer to question 8.

The only category of answers to question 8 that meets the condition of minimum support and confidence are mobility problems of seniors (Table 2), which is indicated as the consequent. Of all the respondents' choices, almost 60% were recorded in which exhibitors have an offer dedicated to seniors (Q2_Yes), believe that solutions responding to the mobility problems of seniors should be included in the offer (Q8_3Yes), and did not indicate other characteristics of seniors (Q8_10). If this solution is accompanied by the view of the need to differentiate offers (Q7Yes), it is still 60% of all respondents' responses. When the indication that demographic changes in society are taken into account in the company (Q1Yes) is added to this set of responses, the share of responses containing Q8_3Yes declines to 57%.

Table 2. Rules with seniors’ characteristics necessary to be included in the tourist offer as the consequent of the SAL.

Min: Support = 50.0%, Confidence = 90.0%					
Antecedent	==>	Consequent	Sup. (%)	Con. (%)	Lift
Q8_10No, Q2Yes	==>	Q8_3Yes, Q7Yes	59.52	92.59	1.5
Q8_10No, Q2Yes	==>	Q8_3Yes	59.52	92.59	1.39
Q8_10No, Q2Yes, Q7Yes	==>	Q8_3Yes	59.52	92.59	1.39
Q8_10No, Q1Yes, Q2Yes	==>	Q8_3Yes, Q7Yes	57.14	92.31	1.49
Q8_10No, Q1Yes, Q2Yes	==>	Q8_3Yes	57.14	92.31	1.39
Q8_10No, Q1Yes, Q2Yes, Q7Yes	==>	Q8_3Yes	57.14	92.31	1.39
Q8_10No, Q2Yes, Q5Yes	==>	Q8_3Yes, Q7Yes	54.76	92.00	1.49
Q8_10No, Q2Yes, Q5Yes	==>	Q8_3Yes	54.76	92.00	1.38
Q8_10No, Q2Yes, Q5Yes, Q7Yes	==>	Q8_3Yes	54.76	92.00	1.38
Q8_10No, Q1Yes, Q2Yes, Q5Yes	==>	Q8_3Yes, Q7Yes	52.38	91.67	1.48
Q8_10No, Q1Yes, Q2Yes, Q5Yes	==>	Q8_3Yes	52.38	91.67	1.38
Q8_10No, Q1Yes, Q2Yes, Q5Yes, Q7Yes	==>	Q8_3Yes	52.38	91.67	1.38

Combinations of respondents’ choices consisting of answers indicating that exhibitors have an offer dedicated to seniors (Q2_Yes) that is different from offers for other generations (Q5Yes) (regardless of whether there is an indication that the offer should be differentiated between age groups—Q7Yes), that they believe that the offer should include solutions responding to the mobility problems of seniors (Q8_3Yes), and did not indicate other characteristics of seniors (Q8_10) account for 55%. Again, when the indication that demographic changes in society are taken into account (Q1Yes) is added to this set of responses, the share of responses containing Q8_3Yes declines to 52.4%.

These two examples indicate that the issue of demographic changes related to the ageing of society is an aspect that negatively affects the preparation of tourist offers for seniors and may limit or inhibit the activities of the tourism sector in this aspect.

The highest confidence value was recorded in three situations (Table 2):

- A total of 92.6% of respondents who indicated that they have an offer dedicated to seniors (Q2Yes) and did not mention other factors (Q8_10Yes) that should be taken into account in the offer for this social group suggested that the offer for seniors should differ from the offer for other customers (Q7Yes), taking into account the mobility problems of seniors (Q8_3Yes);
- A total of 92.6% of respondents who indicated that they have an offer dedicated to seniors (Q2Yes) and did not mention other factors (Q8_10Yes) that should be taken into account in the offer for this social group suggested that the offer for seniors should take into account the mobility problems of seniors (Q8_3Yes);
- A total of 92.6% of respondents who indicated that they have an offer dedicated to seniors (Q2Yes) believe that the offer for seniors should differ from the offer for other customers (Q7Yes) and did not mention other factors (Q8_10Yes) that should be taken into account in the offer for this social group suggested that the offer for seniors should take into account their mobility problems (Q8_3Yes).

In all the rules presented in Table 2, the lift value indicates an increase in the chances of choosing a successor when the predecessor occurs.

The conditions of minimum support and confidence are also met by the rules, which include the lack of knowledge of new technologies (Q8_6Yes), which is a feature of seniors that is necessary to consider when constructing a tourist offer. However, this feature is indicated only in the antecedent for the given analysis conditions.

It can be pointed out that among the exhibitors who indicated that the offer should be adapted due to the lack of knowledge of new technologies, 96% also noticed demographic changes in society (Q1Yes). At the same time, 91.7% did not provide other conditions that should be included in offers for seniors (Q8_10No). On the other hand, among those respondents who indicated that the offer should be adapted due to the lack of knowledge

of new technologies and noticed demographic changes in society (Q1Yes), 91.3% did not provide other characteristics of seniors that should be taken into account when creating an offer for seniors.

The network graph (Figure 4) shows the most common connections between the antecedent and consequent categories in Tables 2 and 3.

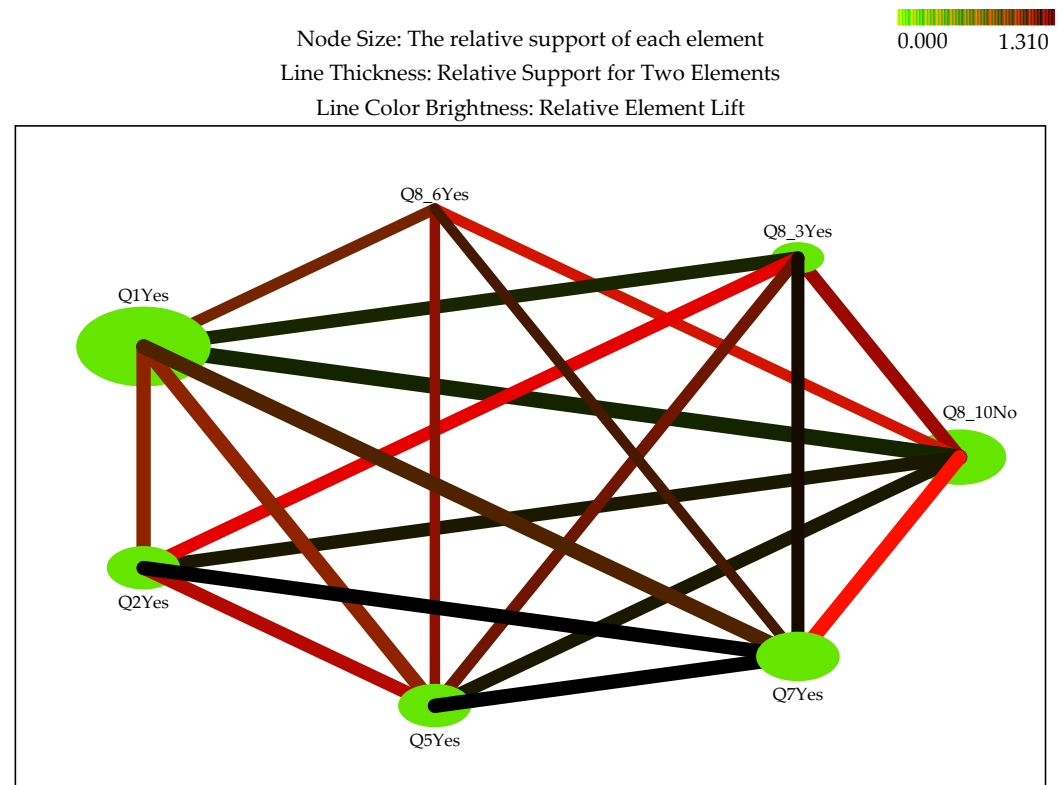


Figure 4. Network graph of selected responses.

Table 3. Rules with lack of knowledge of new technologies (Q8_6Yes) as seniors’ characteristics necessary to be included in the tourist offer.

Min: Support = 50.0%, Confidence = 90.0%					
Antecedent	==>	Consequent	Sup. (%)	Con. (%)	Lift
Q8_6Yes	==>	Q1Yes	54.76	95.83	1.12
Q8_6Yes	==>	Q8_10No	52.38	91.67	1.2
Q8_6Yes, Q1Yes	==>	Q8_10No	50.00	91.3	1.19

The network graph (Figure 4) shows the relationships between the selected answers. The size of the nodes indicates that when analysing the response categories individually, the Q1Yes category was the most frequently chosen, i.e., an indication that the issuer recognizes demographic changes. The size of the node Q8_10No indicates that many respondents did not cite factors other than those mentioned. The next answer, often chosen individually from the examined response categories, is Q7Yes. The most common two-element occurrences of the answers from all respondents’ answers are as follows (support line on Figure 2):

- exhibitors observe demographic changes (Q1Yes) but do not indicate what needs of seniors should be included in the tourist offer (Q8_10No);
- exhibitors have an offer available for seniors (Q2Yes) and believe that it should be different from the offer for other age groups (Q7Yes);

- exhibitors have an offer for seniors that differs from those for other generations (Q5Yes) and believe that it should differ from those for other age groups (Q7Yes).

On the other hand, the respondents most often indicated that the tourist offer should be adapted to the mobility problems of seniors in connection with having an offer dedicated to seniors (Q2Yes), and then when they did not indicate other features that should be included in the offer for seniors (Q8_10No).

To sum up the conducted study, it should be pointed out that among all the characteristics of seniors, tourism exhibitors most often notice movement problems. Such a focus in the construction of future offers may result from their experience and knowledge of the architectural barriers that seniors encounter while implementing a classic offer. Therefore, the problem revealed here should be solved not only by the sector strictly related to tourism but also by companies around tourism and local governments.

To solve additional challenges that concern seniors, it was decided to use data from Statistics Poland [81] on the travel of Poles, which helped to identify the reasons for not participating in tourism by seniors. There were several possible reasons: financial resources (1), lack of available time due to family (2), lack of available time due to professional and educational reasons (3), limited mobility (4), lack of access to travel or preference to stay at home (5); lack of sense of security (6); other factors (7); the COVID-19 pandemic (8).

Among the Poles participating in the study, most people aged 65+ did not participate in tourism in 2023 (Figure 5).

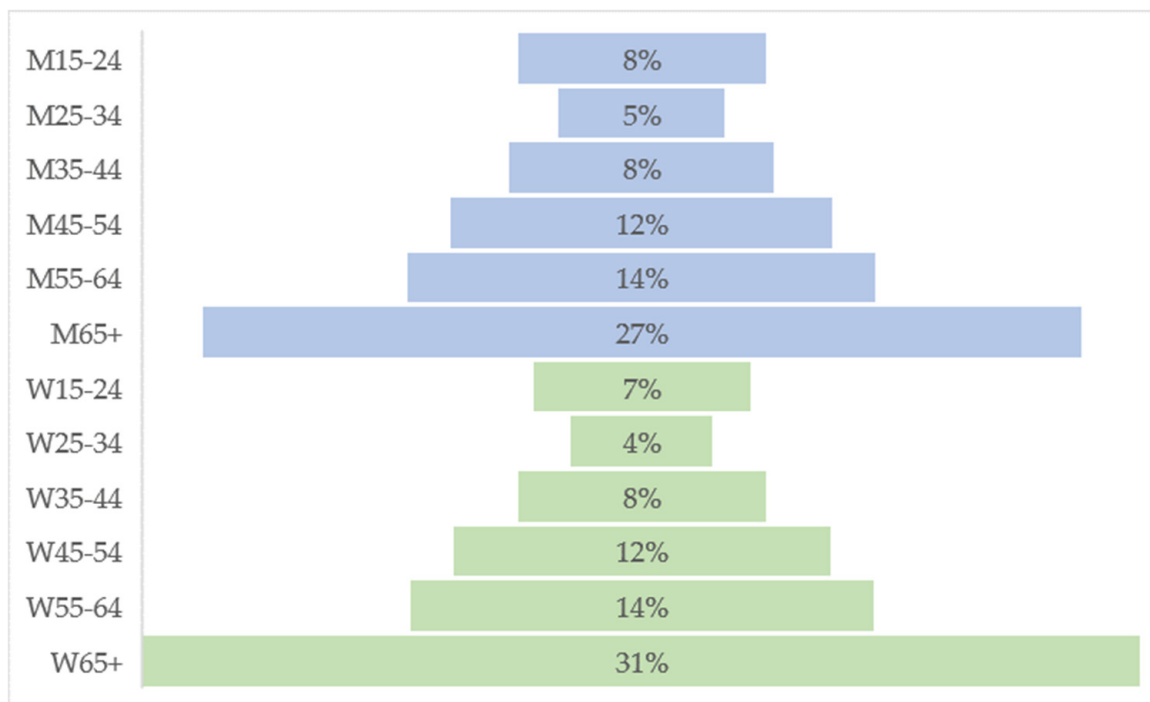


Figure 5. Persons not participating in tourism by age group (%). Notes: M15-24 are men aged 15–24 (analogous subsequent age groups) and W15-24 are women aged 15–24 (analogously subsequent age groups).

The observed significant change in non-participation in tourism among women and men after the end of professional activity directs the subsequent study to the reasons for such choices. For this purpose, correspondence analysis was used, and the effects are presented in Figure 6.

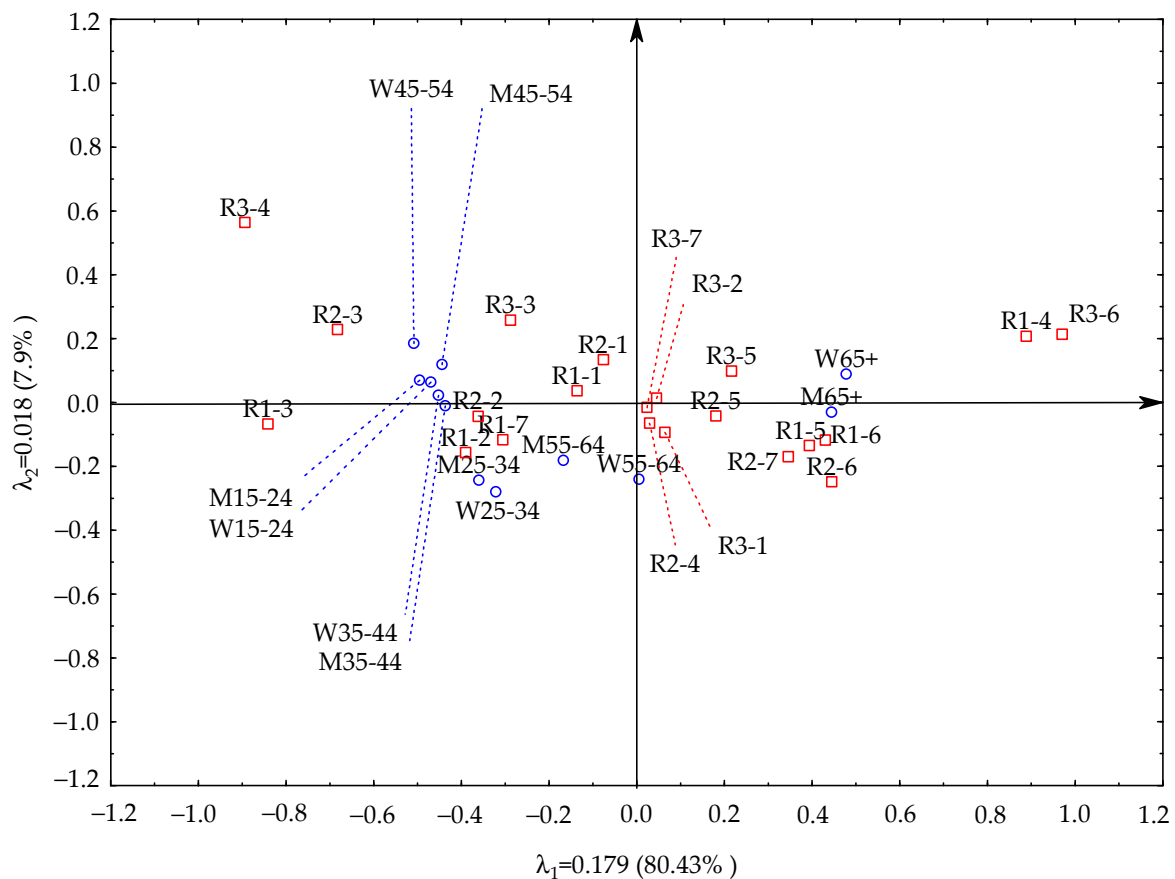


Figure 6. Reasons for not participating in tourism by age group. Notes: M15-24 are men aged 15-24 (analogous subsequent age groups), W15-24 are women aged 15-24 (analogously subsequent age groups), and R1-i is the first (analogously second and third) reason ($i = 1-8$; the reasons given above and taken from Statistics Poland [81]).

The quality of the presentation in the R^2 space of the results of the analysis of correspondence of the reasons for non-participation in tourism by age and gender of Poles is very high (88.3%). First of all, it is worth noting the reasons related to the results obtained in the survey. The location of points R1-4, R2-4, and R3-4, indicating health problems or limited mobility as reasons for non-participation, was checked. In the first choice, this reason was chosen by the oldest people, but a very strong relationship cannot be found here. A more characteristic reason for the oldest women and men not participating in tourism is the desire to stay at home (R1-5) and the lack of security given in the first and second choices. In the group of pre-seniors, differences in the assessment of the reasons for not participating in tourism are observed. Women aged 55-64 choose health and financial reasons, while men indicate other reasons. The youngest respondents most often indicate a lack of time due to family responsibilities. People aged 35-44, like men aged 25-34, point to family responsibilities and other reasons. Women and men aged 45-54 mainly do not participate in tourism due to professional and family obligations.

5. Conclusions and Discussion

The questionnaire survey allowed us to find an answer to the first research question. The vast majority of representatives of the tourism sector participating in the Tourism Fair indicated that they have observed demographic changes resulting from the ageing of society. Thus, the first hypothesis of H1 has been confirmed. At the same time, 26 exhibitors out of 42 participating in the study declared that they have an offer dedicated to seniors that differs from offers for other generational groups, and that this differentiation of offers due to the age of recipients is necessary. Therefore, the new business strategies indicated by

Guido et al. [25], suitable for the requirements of senior tourists, are also being introduced in the Polish tourism sector.

Respondents from the tourism sector also indicated that offers addressed to seniors should take into account, in particular, mobility problems and lack of knowledge of new technologies for older people. This is important because today's seniors differ from those who have just passed or will pass the age limit of 65 in the coming years. These youngest seniors, as noted by González et al. [43], Mangra [44] and Roszko-Wójtowicz et al. [45], will cope better with new technologies and their physical capabilities while travelling will not be a barrier. The exhibitors pointed out with similar frequency that offers for seniors must be properly structured in terms of finances and availability in a foreign language. These are two other characteristics of seniors to which the tourism sector should be sensitive if it does not want to lose valuable travel participants. This part of the study confirmed hypothesis H2 and completed the answer to the first research question.

The conducted SAL analysis indicated associations for the most frequently indicated factors conditioning a well-designed offer for seniors, i.e., problems with mobility and problems with new technologies. Hypothesis H3 was confirmed. Introducing an aspect confirming knowledge about demographic changes in societies to the association rules resulted in a lower frequency of selecting rules with factors determining the construction of tourist offers.

On the one hand, the tourism sector should constantly monitor the situation of tourists' participation in travel activities. On the other hand, the tourism sector faces the challenge of identifying the reasons for non-participation in tourism to attract new recipients of tourist products with appropriate actions. For this reason, based on Statistics Poland data from 2023 [81], it was checked what reasons cause people to give up travelling in each age group. The analysis provided an answer to the second research question. In the first place, it was not financial and health reasons that decided the seniors' non-participation in tourism, but the desire to stay at home (Hypothesis H5 was confirmed). This may be related to habits and lifestyle during professional activity because, as Vargas et al. [93] pointed out, an individual's lifestyle affects how they engage in tourism.

On the other hand, the factors characterising other age groups are variable over time. In this case, it is necessary to observe variables related to household finances and family and professional responsibilities over a long time to recognize trends in the changes of these factors. Seniors also indicated health or mobility problems, but with less weight. For the tourism sector, it is essential to point out that health and mobility problems were indicated by women aged 55–64. Therefore, in the future, it will be necessary to adapt the offer for seniors so that this aspect is taken into account. This is an important observation because women make up the majority of tourists. Thus, hypothesis H4 was also confirmed.

Summing up, the increase in the number of older tourists necessitates the adaptation of tourism services to address their specific health and comfort needs, which presents a new challenge for the industry. Therefore, the tourism sector, as an industry vulnerable to changes in income and demographic structures, must adapt to shifting consumer preferences and economic challenges. Demographic changes, such as the ageing population, affect the structure and preferences of travellers. Additionally, health limitations that may worsen with age necessitate the adaptation of tourism programs, the provision of appropriate medical conditions, and the introduction of insurance options that cover emergencies. Accessibility issues, such as adequate facilities for individuals with limited mobility, present challenges for tourism establishments seeking to attract older clients. Therefore, the tourism industry must adjust its offerings to meet the diverse expectations and health constraints of older travellers.

6. Limitations and Further Suggestions

Numerous studies have focused on the reasons and methods of travel among seniors, considering them as consumers of tourism services. These studies analyse their preferences

and limitations, as well as the benefits of engaging in tourism. The literature clearly delineates a segment of older purchasers of tourism services.

However, it is also important to recognize a specific market niche emerging from the development of what is referred to as filial duty [94], which is increasingly prolonged due to the longevity of parents. In this context, the issue of family-oriented tourism may play a significant role in the growth of the tourism sector. This involves examining the potential of intergenerational tourism, including the role of seniors in travel planning, their financial contributions, and the influence of intergenerational relationships on the choice of destination.

Social or health tourism are the most frequently mentioned activities that encourage seniors to participate in tourism. Diekmann et al. [95] highlight opportunities for greater intensity of research on the importance of policy in advancing social tourism and stress the fundamental role that social tourism can play in achieving strategic policy goals towards enhancing well-being, citizenship, and quality of life in the future. Both analyses we conducted complement each other's knowledge about seniors' concerns about participating in tourism. From the point of view of the tourism sector, the most critical barriers are mobility problems, lack of knowledge of new technologies, lack of understanding of foreign languages, and financial considerations. However, many Polish seniors did not participate in tourism due to safety concerns.

The reasons for not participating in tourism listed above show areas in which not only the tourism sector itself should take action to facilitate seniors' participation in tourism, but also regional governments or institutions supporting seniors can play an important role here. It is easiest to adapt infrastructure to the limited mobility of seniors. However, reaching the mental sphere of fear of tourism is much more challenging. Supporting seniors in learning new technologies and foreign languages will contribute to tourism development and reduce seniors' concerns about safety while travelling.

The conducted survey and the methods used to analyse the data are examples carried out among companies from the tourism sector that are very active in this area. Participation and promotion during tourism fairs indicate activities aimed at acquiring new customers. The study should be extended to more companies, but the questionnaire and analysis methods should still be used.

Research related to unidentified individual data obtained from Statistics Poland [81] in the following steps should be carried out, taking into account data from several years to observe the occurrence of trends and changes in individual reasons for non-participation in tourism.

Author Contributions: Conceptualization, A.S. and K.P.; methodology, A.S.; software, A.S. and K.P.; validation, A.S. and K.P.; formal analysis, A.S.; investigation, A.S. and K.P.; resources, A.S. and K.P.; data curation, A.S.; writing—original draft preparation, A.S. and K.P.; writing—review and editing, A.S. and K.P.; visualization, A.S. and K.P.; supervision, A.S. and K.P. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The questionnaire was administered following the ethical principles in force at the University of Economics in Wrocław. The use of data on the travel of Polish residents was carried out under the agreement concluded with Statistics Poland. Ethical review and approval were waived for this study due to the use of the solutions included in the REGULATION No. 170/2021 OF THE RECTOR OF THE WROCLAW UNIVERSITY OF ECONOMICS of 15 December 2021 on the introduction of the Code of Ethics for Academic Teachers (ZARZDZENIE NR 170/2021 REKTORA UNIWERSYTETU EKONOMICZNEGO WE WROCLAWIU z dnia 15 grudnia 2021 r. w sprawie wprowadzenia Kodeksu Etyki Nauczyciela Akademickiego).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the questionnaire survey.

Data Availability Statement: The questionnaire data are stored by the authors and are available after request.

Acknowledgments: This article is a part of the Sustainable Tourism Academy Project, financed from the state budget by the Ministry of Education and Science within the program “Science for Society II”, Poland.

Conflicts of Interest: The authors declare no conflicts of interest.

References

- World Travel & Tourism Council. Travel and Tourism Economic Impact. WTTC. 2024. Available online: <https://researchhub.wttc.org/#geographic-reports-factsheets> (accessed on 1 November 2024).
- United Nations World Tourism Organization (UNWTO). UN Tourism Dashboard. UNWTO. 2023. Available online: <https://www.unwto.org/tourism-data/un-tourism-tourism-dashboard> (accessed on 1 November 2024).
- Patterson, I.; Balderas, A. Continuing and emerging trends of senior tourism: A review of the literature. *Popul. Ageing* **2020**, *13*, 385–399. [[CrossRef](#)]
- Nyaupane, G.P.; McCabe, J.T.; Andereck, K.L. Seniors’ travel constraints: Stepwise logistic regression analysis. *Tour. Anal.* **2008**, *13*, 341–354.
- Wang, H.X.; Xu, W.; Pei, J.J. Leisure activities, cognition and dementia. *Biochim. Biophys. Acta (BBA)-Mol. Basis Dis.* **2012**, *1822*, 482–491. [[CrossRef](#)] [[PubMed](#)]
- Qiao, G.; Ding, L.; Xiang, K.; Prideaux, B.; Xu, J. Understanding the Value of Tourism to Seniors’ Health and Positive Aging. *Int. J. Environ. Res. Public Health* **2022**, *19*, 1476. [[CrossRef](#)] [[PubMed](#)]
- Lee, B.; Bowes, S. A study of older adults’ travel barriers by examining age segmentation. *J. Tour. Hosp. Manag.* **2016**, *4*, 1–16. [[CrossRef](#)]
- Przybysz, K.; Stanimir, A. 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* **2023**, *15*, 10404. [[CrossRef](#)]
- Sert, A.N. Senior Tourism in the aging world. In *Theory and Practice in Social Sciences*; Krystev, V., Efe, R., Atasoy, E., Eds.; ST. Kliment Ohridski University Press: Sofia, Bulgaria, 2019; pp. 488–498.
- Carone, G.; Costello, D.; Diez Guardia, N.; Mourre, G.; Przywara, B.; Salomäki, A. *The Economic Impact of Ageing Populations in the EU25 Member States*; Directorate General for Economic and Financial Affairs European Economy Economic Working Paper; European Commission: Brussels, Belgium, 2005; p. 236.
- Harper, S. Economic and social implications of aging societies. *Science* **2014**, *346*, 587–591. [[CrossRef](#)] [[PubMed](#)]
- Yenilmez, I.M. Economic and social consequences of population aging: The dilemmas and opportunities in the twenty-first century. *Appl. Res. Qual. Life* **2015**, *10*, 735–752. [[CrossRef](#)]
- Čajka, P. Issues of an ageing population in the European Union. *J. Environ. Sci. Eng. B* **2012**, *1*, 966–970.
- Grinin, L.; Grinin, A.; Korotayev, A. Global aging: An integral problem of the future. How to turn a problem into a development driver? In *Reconsidering the Limits to Growth: A report to the Russian Association of the Club of Rome*; Springer International Publishing: Cham, Germany, 2023; pp. 117–135. [[CrossRef](#)]
- Zaidi, A. Features and challenges of population ageing: The European perspective. *Policy Brief* **2008**, *1*, 1–16.
- Alper, F.O.; Alper, A.E.; Ucan, O. The economic impacts of aging societies. *Int. J. Econ. Financ. Issues* **2016**, *6*, 1225–1238.
- Maestas, N.; Mullen, K.J.; Powell, D. The effect of population aging on economic growth, the labor force, and productivity. *Am. Econ. J. Macroecon.* **2023**, *15*, 306–332. [[CrossRef](#)]
- Tinker, A. The social implications of an ageing population. *Mech. Ageing Dev.* **2002**, *123*, 729–735. [[CrossRef](#)]
- OECD. *Maintaining Prosperity in an Ageing Society*; OECD Publishing: Paris, France, 1998.
- Pickard, S. *Politics, Protest and Young People: Political Participation and Dissent in 21st Century Britain*; Palgrave Macmillan: London, UK, 2019.
- Bytheway, B. Ageism and age categorization. *J. Soc. Issues* **2005**, *61*, 361–374. [[CrossRef](#)]
- McEwen, E. *Age: The Unrecognized Discrimination*; Age Concern: London, UK, 1990.
- Hobman, D. (Ed.) *The Social Challenge of Ageing*; Taylor & Francis: Abingdon, UK, 2024; Volume 22.
- Przybysz, K.; Stanimir, A.; Wasiak, M. Subjective Assessment of Seniors on the Phenomenon of Discrimination: Analysis Against the Background of the Europe 2020 Strategy Implementation. *Eur. Res. Stud.* **2021**, *24*, 810–835. [[CrossRef](#)]
- Guido, G.; Ugolini, M.M.; Sestino, A. Active ageing of elderly consumers: Insights and opportunities for future business strategies. *SN Bus. Econ.* **2022**, *2*, 8. [[CrossRef](#)] [[PubMed](#)]
- Sander, M.; Oxlund, B.; Jespersen, A.; Krasnik, A.; Mortensen, E.L.; Westendorp, R.G.J.; Rasmussen, L.J. The challenges of human population ageing. *Age Ageing* **2015**, *44*, 185–187. [[CrossRef](#)]
- Knapińska, M. Is the silver generation still on the labour market or already inactive? The situation of the elderly on the Polish labour market. *Ruch Praw. Ekon. I Socjol.* **2023**, *85*, 199–219. [[CrossRef](#)]
- Kotschy, R.; Bloom, D.E. A comparative perspective on long-term care systems. *Int. Soc. Secur. Rev.* **2022**, *75*, 47–69. [[CrossRef](#)]
- Kuppelwieser, V.G.; Klaus, P. Revisiting the age construct: Implications for service research. *J. Serv. Res.* **2021**, *24*, 372–389. [[CrossRef](#)]
- Sharma, G.D.; Stanimir, A.; Przybysz, K.; Roszko-Wójtowicz, E. How do European seniors perceive and implement the postulates of sustainable tourism? *Equilibrium. Q. J. Econ. Econ. Policy* **2023**, *18*, 1217–1249. [[CrossRef](#)]

31. Havighurst, R.J. Successful aging. *The Gerontologist* **1961**, *1*, 8–13. [CrossRef]
32. World Health Organization. *Active Ageing: A Policy Framework*; (No. WHO/NMH/NPH/02.8); World Health Organization: Geneva, Switzerland, 2002.
33. International Council on Active Aging (ICAA). The ICAA Model. Available online: <https://www.icaa.cc/activeagingandwellness.htm> (accessed on 1 November 2024).
34. World Health Organization. WHO's Work on the UN Decade of Healthy Ageing (2021–2030). 2020. Available online: <https://www.who.int/initiatives/decade-of-healthy-ageing> (accessed on 1 November 2024).
35. Macionis, J.J. *Sociology*, 17th ed.; Pearson: London, UK, 2020.
36. Jia, G.; Fan, D.X.F.; Xu, J.; Shen, J.H. Tourist Prosocial Behavior: Scale Development and Its Role between Tourist Destination Social Exclusion and Wellbeing. *J. Sustain. Tour.* **2023**, *32*, 1–22. [CrossRef]
37. Ritzer, G.; Stepnisky, J. *Modern Sociological Theory*; Sage publications: London, UK, 2021.
38. Berg, H.; Liljedal, K.T. Elderly consumers in marketing research: A systematic literature review and directions for future research. *Int. J. Consum. Stud.* **2022**, *46*, 1640–1664. [CrossRef]
39. Grześkowiak, A.; Przybysz, K.; Peternek, P.; Stanimir, A. *Pokolenie 65+ Perspektywa Społeczno-Ekonomiczna (Generation 65+ Socio-Economic Perspective)*; Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu: Wrocław, Poland, 2021.
40. Przybysz, K.; Stanimir, A. Measuring Activity—The Picture of Seniors in Poland and Other European Union Countries. *Sustainability* **2023**, *15*, 9511. [CrossRef]
41. Altimari, A.C.N.V.A.; Melia, M. The transformative power of technology to turn the silver economy into a gold society: A systematic literature review. *Sinergie Ital. J. Manag.* **2022**, *40*, 19–41. [CrossRef]
42. Olejniczak, T. *Konsumenci Seniorzy Wobec Innowacji Produktowych (Senior Consumers Towards Product Innovations)*; Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu: Poznań, Poland, 2019.
43. González García, E.; Amaro Agudo, A.; Martínez Heredia, N. Comparative study of competences 2.0 between young and senior people: Present time and challenges for their inclusion. *Rev. Espac.* **2019**, *40*. Available online: <http://es.revistaespacios.com/a19v40n05/19400515.html> (accessed on 1 November 2024).
44. Mangra, A.M.A. Seniors and the use of new technologies: Loneliness and support networks. *Cult. Soc. Econ. Politics* **2023**, *3*, 37–49. [CrossRef]
45. Roszko-Wójtowicz, E.; Sharma, G.D.; Dańska-Borsiak, B.; Grzelak, M.M. Innovation-driven e-commerce growth in the EU: An empirical study of the propensity for online purchases and sustainable consumption. *Sustainability* **2024**, *16*, 1563. [CrossRef]
46. Bond, J.; Dittmann-Kohli, F.; Peace, S. *Ageing in Society*; Sage: Newcastle upon Tyne, UK, 2007. Available online: <http://digital.casalini.it/9781848607248> (accessed on 1 November 2024).
47. Kieźel, E. (Ed.) *Konsumenci i Jego Zachowania na Rynku Europejskim*; PWE: Warszawa, Poland, 2010.
48. Olejniczak, T. Innovativeness of senior consumers' attitudes—An attempt to conduct segmentation. *Folia Oeconomica Stetin.* **2021**, *21*, 76–91. [CrossRef]
49. European Commission. *Report on the Impact of Demographic Change*; European Commission: Brussels, Belgium, 2020. Available online: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1056 (accessed on 1 November 2024).
50. European Commission. *Green Paper on Ageing—Fostering Solidarity and Responsibility Between Generations*; (COM(2021) 50 Final); European Commission: Brussels, Belgium, 2021. Available online: https://ec.europa.eu/info/sites/default/files/1_en_act_part1_v8_0.pdf (accessed on 1 November 2024).
51. European Commission. *Growing the European Silver Economy (Background Paper)*; European Commission: Brussels, Belgium, 2015. Available online: <http://ec.europa.eu/research/innovation-union/pdf/active-healthy-ageing/silvereco.pdf> (accessed on 1 November 2024).
52. OECD. *OECD Tourism Trends and Policies 2024*; OECD Publishing: Paris, France, 2024. Available online: <https://doi.org/10.1787/80885d8b-en> (accessed on 1 November 2024).
53. Khan, N.; Hassan, A.U.; Fahad, S.; Naushad, M. Factors Affecting Tourism Industry and Its Impacts on Global Economy of the World. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3559353 (accessed on 1 November 2024).
54. Sharida, N.; Shaliza, A.; Syafiqah, W.N. The impact of tourism industry on local economy: Case of Malaysia. *J. Islam. Soc. Econ. Dev.* **2023**, *8*, 0128–1755. Available online: <https://academicinspired.com/jised/article/view/1615> (accessed on 1 November 2024).
55. Thommandru, A.; Espinoza-Maguiña, M.; Ramirez-Asis, E.; Ray, S.; Naved, M.; Guzman-Avalos, M. Role of tourism and hospitality business in economic development. *Mater. Today Proc.* **2023**, *80*, 2901–2904. [CrossRef]
56. Senbeto, D.L.; Hon, A.H.Y. The impacts of social and economic crises on tourist behaviour and expenditure: An evolutionary approach. *Curr. Issues Tour.* **2018**, *23*, 740–755. [CrossRef]
57. OECD. *OECD Tourism Trends and Policies*; OECD Publishing: Paris, France, 2020. [CrossRef]
58. Varnai, P.; Worthington, H.; Simmonds, P.; Farla, K. *The Silver Economy: Final Report*; European Commission: Brussels, Belgium, 2018. [CrossRef]
59. Taloş, A.M.; Lequeux-Dincă, A.I.; Preda, M.; Surugiu, C.; Mareci, A.; Vijulie, I. Silver tourism and recreational activities as possible factors to support active ageing and the resilience of the tourism sector. *J. Settl. Spat. Plan.* **2021**. [CrossRef]
60. Jang, S.S.; Wu, C.M.E. Seniors' travel motivation and the influential factors: An examination of Taiwanese seniors. *Tour. Manag.* **2006**, *27*, 306–316. [CrossRef]

61. Sellick, M.C. Discovery, connection, nostalgia: Key travel motives within the senior market. *J. Travel Tour. Mark.* **2004**, *17*, 55–71. [[CrossRef](#)]
62. Horneman, L.; Carter, R.W.; Wei, S.; Ruys, H. Profiling the senior traveler: An Australian perspective. *J. Travel Res.* **2002**, *41*, 23–37. [[CrossRef](#)]
63. Kim, H.; Woo, E.; Uysal, M. Tourism experience and quality of life among elderly tourists. *Tour. Manag.* **2015**, *46*, 465–476. [[CrossRef](#)]
64. Shoemaker, S. Segmenting the mature market: 10 years later. *J. Travel Res.* **2000**, *39*, 11–26. [[CrossRef](#)]
65. Gerardi, M.L.; Perlangeli, G. Roaring seniors go on a cruise: Applications of intelligent automation to boomers' tourist experience. In *Turismo: Verso una Ripresa Responsabile—Strategie, Rischi, Opportunità, Proceedings of the XIV Riunione Scientifica SISTUR tenutosi a Sapienza, Rome, Italy, 24–26 November 2022*; SISTUR—Italian Society of Tourism Sciences: Roma, Italy, 2002. Available online: <https://hdl.handle.net/11573/1673399> (accessed on 1 November 2024).
66. Fleischer, A.; Pizam, A. Tourism constraints among Israeli seniors. *Ann. Tour. Res.* **2002**, *29*, 106123. [[CrossRef](#)]
67. Xiang, K.; Xu, C.; Wang, J. Understanding the relationship between tourists' consumption behavior and their consumption substitution willingness under unusual environment. *Psychol. Res. Behav. Manag.* **2021**, *14*, 483–500. [[CrossRef](#)]
68. Morgan, N.; Pritchard, A.; Sedgley, D. Social tourism and well-being in later life. *Ann. Tour. Res.* **2015**, *52*, 1–15. [[CrossRef](#)]
69. Qiao, G.; Li, F.; Xiao, X.; Prideaux, B. What does tourism mean for Chinese rural migrant workers? Perspectives of perceived value. *Int. J. Tour. Res.* **2022**, *24*, 227–239. [[CrossRef](#)]
70. Wei, S.; Milman, A. The impact of participation in activities while on vacation on seniors' psychological well-being: A path model application. *J. Hosp. Tour. Res.* **2002**, *26*, 175185. [[CrossRef](#)]
71. Stončikaite, I. On the hunt for noble savages: Romance tourism and ageing femininities. *Societies* **2020**, *10*, 47. [[CrossRef](#)]
72. den Hoed, W. Where everyday mobility meets tourism: An age-friendly perspective on cycling in the Netherlands and the UK. *J. Sustain. Tour.* **2020**, *28*, 185–203. [[CrossRef](#)]
73. Bai, X.; Hung, K.; Lai, D.W.L. The role of travel in enhancing life satisfaction among Chinese older adults in Hong Kong. *Ageing Soc.* **2017**, *37*, 1824–1848. [[CrossRef](#)]
74. Diekmann, A.; Vincent, M.; Bauthier, I. The holiday practices of seniors and their implications for social tourism: A Wallonian perspective. *Ann. Tour. Res.* **2020**, *85*, 103096. [[CrossRef](#)]
75. Mélon, M.; Agrigoroaei, S.; Diekmann, A.; Luminet, O. The holiday-related predictors of wellbeing in seniors. *J. Policy Res. Tour. Leis. Events* **2018**, *10*, 221–240. [[CrossRef](#)]
76. Totsune, T.; Matsudaira, I.; Taki, Y. Curiosity—Tourism interaction promotes subjective wellbeing among older adults in Japan. *Humanit. Soc. Sci. Commun.* **2021**, *8*, 1–11. [[CrossRef](#)]
77. Chang, L.; Moyle, B.D.; Dupre, K.; Filep, S.; Vada, S. Progress in research on seniors' well-being in tourism: A systematic review. *Tour. Manag. Perspect.* **2022**, *44*, 101040. [[CrossRef](#)]
78. Filep, S.; Moyle, B.D.; Skavronskaya, L. Tourist wellbeing: Re-thinking hedonic and Eudaimonic dimensions. *J. Hosp. Tour. Res.* **2022**, *48*, 184–193. [[CrossRef](#)]
79. Patterson, I. *Tourism and Leisure Behaviour in an Ageing World*; CABI: Wallingford, UK, 2017.
80. Swain, R. Seniors and Cruising: Motivations and Satisfactions. Master's Thesis, University of Waterloo, Waterloo, ON, Canada, 2008. Available online: <http://hdl.handle.net/10012/3595> (accessed on 1 November 2024).
81. Statistics Poland. *Participation of Polish Residents in Domestic/Foreign Trips (Symbol 1.30.17) [Data Set]. Program Badań Statystycznych Statystyki Publicznej na rok 2023 [Programme of Statistical Surveys of Official Statistics for 2023]*; Statistics Poland: Warsaw, Poland, 2024.
82. Agrawal, R.; Imieliński, T.; Swami, A. Mining association rules between sets of items in large databases. In Proceedings of the 1993 ACM SIGMOD International Conference on Management of Data (SIGMOD '93), Association for Computing Machinery, New York, NY, USA, 26–28 May 1993. [[CrossRef](#)]
83. Agrawal, R.; Srikant, R. Mining sequential patterns. In Proceedings of the Eleventh International Conference on Data Engineering, Taipei, Taiwan, 6–10 March 1995. [[CrossRef](#)]
84. Nayeem, M.J.; Zaman, M.S.U. Association Rules Mining for Season-Specific Time Frame in a Retail Supermarket. In Proceedings of the 3rd International Conference on Advancement in Electrical and Electronic Engineering (ICAEEE), Gazipur, Bangladesh, 25–27 April 2024. [[CrossRef](#)]
85. Larose, D.T.; Larose, C.D. *Discovering Knowledge in Data: An Introduction to Data Mining*, 2nd ed.; John Wiley & Sons: Hoboken, NJ, USA, 2014.
86. Kos-Łabędowicz, J.; Trzysiok, J. Do Seniors Get to the Disco by Bike or in a Taxi?—Classification of Seniors According to Their Preferred Means of Transport. In *Data Analysis and Classification. SKAD 2020. Studies in Classification, Data Analysis, and Knowledge Organization*; Jajuga, K., Najman, K., Walesiak, M., Eds.; Springer: Berlin/Heidelberg, Germany, 2021; pp. 271–291. [[CrossRef](#)]
87. Peters, J.; Roose, H. The Grant Proposal as a Genre. A Multiple Correspondence Analysis of Visual Artists and their Legitimations for Government Grants in Flanders, 1965–2015. *Cult. Sociol.* **2023**, *17*, 514–537. [[CrossRef](#)]
88. Przybysz, K.; Stanimir, A.; Wasiak, M. Europe 2020 Strategy—Objective Evaluation of Realization and Subjective Assessment by Seniors as Beneficiaries of Social Assumptions. In *Data Analysis and Classification; SKAD 2020. Studies in Classification, Data Analysis, and Knowledge Organization*; Jajuga, K., Najman, K., Walesiak, M., Eds.; Springer: Berlin/Heidelberg, Germany, 2021; pp. 245–269. [[CrossRef](#)]

89. Ezzedine, K.; Bergqvist, C.; Baissac, C.; Cullell, N.P.; Aroman, M.S.; Taïeb, C.; Lim, H.W. Use of multiple correspondence analysis to explore associations between caregivers and sun protective habits during summer vacations. *Clin. Exp. Dermatol.* **2023**, *49*, 1–9. [[CrossRef](#)]
90. Jagoda, A.; Kołakowski, T.; Marcinkowski, J.; Cheba, K.; Hajdas, M. E-customer preferences on sustainable last mile deliveries in the e-commerce market: A cross-generational perspective. *Equilib. Q. J. Econ. Econ. Policy* **2023**, *18*, 853–882. [[CrossRef](#)]
91. Przybysz, K.; Stanimir, A. Tourism-Related Needs in the Context of Seniors' Living and Social Conditions. *Int. J. Environ. Res. Public Health* **2022**, *19*, 15325. [[CrossRef](#)]
92. Kiba-Janiak, M.; Cheba, K.; Mucowska, M.; de Oliveira, L.K. Segmentation of e-customers in terms of sustainable last-mile delivery. *Oeconomia Copernic.* **2022**, *13*, 1117–1142. [[CrossRef](#)]
93. Vargas, E.P.; de-Juan-Ripoll, C.; Panadero, M.B.; Alcañiz, M. Lifestyle segmentation of tourists: The role of personality. *Heliyon* **2021**, *7*, e07579. [[CrossRef](#)]
94. Heimtun, B. Holidays with aging parents: Pleasures, duties and constraints. *Ann. Tour. Res.* **2019**, *76*, 129–139. [[CrossRef](#)]
95. Diekmann, A.; McCabe, S.; Cardoso Ferreira, C. (Eds.) *Social Tourism at the Crossroads*, 1st ed.; Routledge: Abingdon, UK, 2020. [[CrossRef](#)]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.