



Original Article

Assessing Elderly Tourists' Satisfaction Based on Infrastructural, Social, and Environmental Factors Using Structural Equation Modeling (Case Study: Khabr, Baft County)

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Abstract

Purpose- Population aging has increased the importance of senior tourism as a distinct and growing segment of the tourism market. However, elderly tourists may have specific requirements related to accessibility, social interaction, safety, comfort, and environmental quality. This study aims to examine the relationships between infrastructural, social, and environmental dimensions and elderly tourists' satisfaction and to assess these relationships within an integrated structural framework in Khabr District, Baft County, Kerman Province, Iran.

Design/methodology/approach- The study employed an applied, quantitative, descriptive-analytical research design. The statistical population consisted of elderly tourists aged 60 years and above, with the individual tourist serving as the unit of analysis. Data were collected from 375 elderly tourists through a structured questionnaire using random sampling. The measurement model comprised three latent constructs—infrastructural, social, and environmental dimensions—measured through nine observed indicators. Data were analyzed using descriptive statistics, confirmatory factor analysis, and Structural Equation Modeling (SEM). The reliability and validity of the measurement model were assessed using standardized factor loadings, Composite Reliability (CR), Average Variance Extracted (AVE), and discriminant validity.

Findings- The results demonstrated that all three dimensions had positive and statistically significant relationships with elderly tourists' satisfaction. The social dimension showed the strongest effect ($\beta = 0.38$, C.R. = 5.76, $P < 0.001$), followed by the infrastructural dimension ($\beta = 0.31$, C.R. = 4.82, $P < 0.001$) and the environmental dimension ($\beta = 0.24$, C.R. = 3.91, $P < 0.001$).

Originality/Value- The findings indicate that elderly tourists' satisfaction is a multidimensional phenomenon shaped by the interaction of social, infrastructural, and environmental conditions. The study's originality lies in integrating these three dimensions into a unified SEM framework rather than examining them independently. The findings provide empirical support for age-sensitive tourism planning and suggest that developing senior-friendly destinations requires coordinated attention to social participation, accessible infrastructure, and safe, clean, and attractive environments.

Keyword: Senior tourism, Leisure, Satisfaction, Tourism development, Khabr District.

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1. Introduction

Today, both developed countries and several developing nations are facing the phenomenon of population aging, which presents numerous opportunities for diverse economic activities (Le Serre & Chevalier, 2012). Among these activities, tourism stands out as one of the largest and most varied global industries (Zahmatkesh Saredorahi et al., 2022). In recent decades, the tourism industry has emerged as a pivotal and fundamental sector in the global economy due to its capacity to generate income, employment, and tax revenues (Pérez-Calderón et al., 2020; Camilleri, 2018). This is because it contributes significantly to the economic and social development of countries (Bharti, 2019) and is regarded as a primary driver of economic growth (Ashrafi & Hadi, 2019). Within the various branches of tourism, senior tourism has attracted substantial attention owing to its distinctive capabilities and competitive advantages (Asadi, 2016). One of the key achievements of the current century, stemming from advancements in healthcare systems, disease prevention, and increased life expectancy, is the phenomenon of population aging. This demographic shift has resulted in longer lifespans and a consequent rise in the global elderly population (Zahmatkesh Saredorahi et al., 2022). Thanks to progress in medical sciences and rapid technological development, people today enjoy longer lives accompanied by improved health and quality of life, with global life expectancy rising from 50 years in the 1950s to 71.4 years in 2017 (Otoo, Felix & Kim, Seongseop, 2020). According to United Nations projections, by 2050, individuals over the age of 65 will constitute one-sixth of the world population, numbering approximately 2.1 billion, compared to one-eleventh in 2019. Although aging is more pronounced in developing countries, the United Nations warns that this challenge will affect almost all countries worldwide, necessitating greater scholarly engagement to address it effectively (Nielsen, 2014).

Aging, an inevitable and integral aspect of human development, has accelerated dramatically in contemporary times. Among the activities conducive to enhancing the physical and mental well-being of older adults, travel and tourism are

particularly beneficial (Tabrizi, Nozarasl, naghavi & Esmaceli, 2018). Accordingly, the tourism and travel industry must evolve in tandem with the aging trend. By nature, humans are not sedentary; they continuously strive for growth and fulfillment. Tourism and travel facilitate this dynamism across diverse environmental, spiritual, social, and cultural contexts, especially for seniors who often have more leisure time (Alén, Losada, & Domínguez, 2016). Although the physical and psychological health of elderly individuals is vulnerable to illness, providing a safe and comfortable environment enables them to engage in recreational and tourism activities (Gobbens & van Assen, 2018).

The growth of tourism participation among the elderly, compared to their non-elderly counterparts, is attributable to rapid health improvements within this demographic, greater available leisure time, and personal motivations such as escaping daily routines, socializing, seeking knowledge, and nostalgia (Nemati, Cheraghi, FeyzolahPour & Abbasi, 2025). Given the potential of active aging to foster positive health outcomes—including physical, mental, and social well-being—stimulating activities such as tourism have emerged as a critical area of research within the field of elderly health (Qiao et al., 2022). Older adults display a higher propensity to participate in recreational and tourism activities and, compared to younger generations, prioritize travel as a key life goal (Nemati et al., 2025). In fact, with the growth of the aging population, seniors are more active travelers than previous generations (Friman & Olsson, 2020), indicating that the proportion of elderly tourists is likely to continue increasing (Losada, Alen, Cotos-Yanez, & Dominguez, 2019).

The intersection of the two fields mentioned—aging and tourism—gives rise to the concept of senior tourism, which has gained increasing significance due to the simultaneous growth of the elderly population on one hand, and the expansion and flourishing of the tourism industry on the other. The importance of senior tourism can be examined from two key perspectives: economic and social. From an economic standpoint, a large proportion of countries that serve as tourist sources are experiencing population aging, moving toward an older demographic structure. Consequently, the

new generation of seniors typically enjoys greater leisure time, better health status, higher disposable income, and fewer social responsibilities, which collectively lead to a heightened propensity for travel-related activities and expenditures in the travel market. Moreover, given the seasonal nature of tourism products, the senior tourism market presents a strategic opportunity to balance demand fluctuations by bridging low and peak seasons effectively. Simultaneously, the development of senior tourism is especially critical in developing countries like Iran, which face challenges such as mono-product economies and foreign exchange constraints. From a social perspective, travel plays a significant role in enhancing the quality of life for older adults by improving their psychological well-being and helping them feel connected to society despite their age. Enhancing quality of life in this demographic indirectly contributes to better health outcomes and, consequently, reduces community healthcare costs (Kord, Karoubi, Ghaderi & Yavari Gohar, 2024).

In the global trend of population aging, Iran is no exception. In 2020, approximately 6% of Iran's total population consisted of elderly individuals, with projections estimating this figure to reach around 30% by 2050 (Mehri, Messkoub & Kunkel, 2020). According to United Nations forecasts (2019), in 2020, approximately 5 million people aged over 65 constituted part of Iran's 83.4 million population, with this number expected to increase to 20.3 million out of a total 92.2 million by 2050 (Kord et al., 2024).

Effective management within the tourism sector ensures that seniors are not marginalized and continue to play active roles in society. In this context, organized senior trips and tours can serve as fundamental strategies enabling the elderly to fulfill their diverse desires and needs across different communities, particularly in Iran. This approach could significantly contribute to the revitalization and advancement of the tourism industry, which has often been overlooked in the country (Khaligh, Alizadeh & Jafari, 2024). Demographic shifts necessitate comprehensive planning to address the evolving needs of the aging population. Given the positive impacts of travel and tourism on physical and mental health, as well as overall well-being of seniors, there is a pressing need for targeted research in this domain (Tavangar & Hashemian, 2024). Khabr District in

Baft County, Kerman Province, is a scenic destination with considerable tourism and ecotourism potential. The area contains diverse natural and recreational attractions and receives visitors from different locations. However, the development of senior tourism in such destinations requires a better understanding of whether the existing tourism environment adequately responds to the needs and expectations of older visitors.

Previous studies have examined various aspects of senior tourism, including tourists' motivations, preferences, accessibility, tourism experiences, and satisfaction. However, much of the existing research has considered these issues either separately or primarily from a descriptive perspective. Less attention has been paid to examining how different characteristics of the tourism environment are simultaneously associated with elderly tourists' satisfaction within an integrated analytical framework. In particular, the relationships among infrastructural, social, and environmental dimensions and elderly tourists' satisfaction require further empirical investigation in local tourism destinations. This gap is important because satisfaction among elderly tourists may not be determined by a single characteristic of a destination; rather, it may reflect the combined influence of physical and infrastructural conditions, social interactions and services, and environmental characteristics.

Against this background, the present study seeks to address this gap by developing and empirically examining an integrated measurement and structural framework comprising infrastructural, social, and environmental dimensions in relation to elderly tourists' satisfaction. Rather than treating these dimensions solely as descriptive characteristics of the destination, the study examines their structural relationships with satisfaction using Structural Equation Modeling (SEM). The theoretical contribution of the study lies in bringing these dimensions together within a unified analytical framework and empirically examining their relationships with elderly tourists' satisfaction. This integrated approach provides a more systematic understanding of how different dimensions of the tourism environment are associated with the satisfaction of older visitors and extends the discussion beyond the isolated examination of individual tourism characteristics.

Accordingly, the central research problem addressed in this study is the limited empirical understanding of how infrastructural, social, and environmental conditions are associated with elderly tourists' satisfaction and how these dimensions can be examined jointly within tourism planning. This problem is particularly relevant because older tourists may have specific requirements related to accessibility, safety, comfort, social interaction, and environmental conditions. Identifying the relationships between these dimensions and satisfaction can provide empirical evidence for more responsive and age-sensitive tourism planning and policymaking.

Therefore, the main objective of this study is to examine the relationships between infrastructural, social, and environmental dimensions and elderly tourists' satisfaction and to assess the adequacy of the proposed measurement and structural model. To achieve this objective, data were collected from 375 elderly tourists aged 60 years and above, and Structural Equation Modeling was employed to evaluate the measurement model and examine the hypothesized structural relationships among the study constructs. Accordingly, the study addresses the following research question:

To what extent do infrastructural, social, and environmental dimensions influence elderly tourists' satisfaction in the study area?

By linking the research question directly to the conceptual framework and the SEM approach, this study seeks to provide empirical evidence that can inform more evidence-based and age-responsive tourism planning and policymaking in the study area.

2. Research Theoretical Literature

Seniors represent one of the important groups that should be considered in tourism development planning, as population aging has become a major demographic issue. Although population aging initially emerged as a prominent phenomenon in industrialized countries, it has gradually become a global issue and is increasingly evident in developing countries as well (Zahmatkesh Saredorahi et al., 2022). The concept of aging encompasses multiple dimensions, including chronological, biological, psychological, and social aspects. Aging is a natural stage of the human life cycle (Dugarova, 2017). According to the World Health Organization, older age is generally defined as age 60 years and above (Mahdavi, Emadzadeh

& Ansari, 2018). The growth of the older population does not necessarily imply a decline in their inclination to travel; rather, population aging has contributed to the emergence of older adults as an increasingly important target market within the tourism industry, particularly since the late twentieth century. This demographic trend has attracted the attention of researchers, planners, and tourism marketers. Consequently, understanding the characteristics and needs of senior tourists has become increasingly important for tourism planning and destination development (Zielińska-Szczepkowska, 2021; Hou Ren, Li & Yao, 2025). Travel can contribute to identity affirmation and life satisfaction among older adults (Sanmargaraja & Wee, 2015). Older adults may have particular conditions that influence their participation in tourism, including greater availability of leisure time after retirement and, for some individuals, greater financial resources and fewer work-related obligations (Mahdavi et al., 2018). In this regard, senior tourists have increasingly been recognized as an important market segment in the tourism industry. The development of senior tourism has attracted growing attention for several reasons: (1) the continued growth of the older population has increased the potential size of this market; (2) some older adults have greater availability of leisure time and financial resources for tourism activities; and (3) the travel patterns and duration of trips may vary according to older tourists' health, financial circumstances, and physical conditions (Mahdavi et al., 2018; Zahmatkesh Saredorahi et al., 2022). Therefore, understanding the characteristics and needs of older tourists is important for tourism planners and destination managers in developing tourism services and facilities appropriate for this market segment.

The travel motivations of older adults may be influenced by their income, health status, age, and physical conditions, which can also affect the duration and characteristics of their trips. Among tourists over the age of 65, changes in income and physical health may contribute to variations in travel frequency and duration. As physical limitations become more common with advancing age, recognizing the specific needs and constraints of older tourists is important for the development and segmentation of senior tourism markets. Many tourism destinations have increasingly considered senior tourism as an important market segment and

have sought to develop tourism products and services that are better adapted to older tourists' needs. Senior tourism can provide opportunities for recreation, social interaction, and engagement in tourism activities suited to older adults' capabilities and preferences. Therefore, the growing number and life expectancy of older adults have increased the importance of this market segment for tourism planners and destination managers (Nasiri Hendeh Khaleh & Mohagheghpour, 2024; Zahmatkesh Saredorahi et al., 2022; Liew, Hussin & Abdullah, 2021).

Travel and excursions can provide opportunities for recreation, social interaction, and engagement with new environments for people of different ages, including older adults. For seniors, tourism can be particularly relevant as a form of leisure and social participation after retirement. Older adults may have distinct travel needs and expectations due to their age, health conditions, physical capabilities, and previous life experiences. Senior tourism can be defined as the totality of phenomena and relationships arising from interactions among elderly tourists, tourism suppliers and vendors, governments, and host communities during the process of attracting and hosting older tourists (Tavangar & Hashemian, 2024). Seniors may therefore seek different values and benefits from tourism experiences. A better understanding of their expectations and values can enable destination managers to improve destination attributes according to the needs of senior tourists or to focus on market segments whose motivations are compatible with the characteristics and resources of the destination (Chen & Shoemaker, 2014).

In senior tourism, improving recreational and welfare facilities near tourist attractions can contribute to the comfort and safety of older tourists. Preserving the value and attractiveness of tourism resources, improving accessibility through appropriate signage indicating distances, routes, and directions, enhancing pathways and road conditions, providing scenic views and suitable rest areas, ensuring adequate sanitation facilities, and providing access to food and beverages, shops, and appropriate transportation can contribute to a more suitable tourism environment for older adults (Liew et al., 2021; Bagus & Utama, 2012). These destination attributes are particularly relevant to senior-friendly tourism because accessibility,

safety, cleanliness, amenities, and supporting services can influence the suitability of tourism destinations for older visitors.

Senior tourists may have several characteristics and requirements that should be considered in tourism planning. These include adequate financial resources for travel, the possibility of travelling throughout different seasons depending on their individual circumstances, the importance of social interaction and communication during travel, and access to medical and health services throughout the trip. In particular, access to appropriate health and support services can be an important consideration for older tourists when selecting and experiencing tourism destinations (Vila, Darcy, & González, 2015; Zielińska-Szczepkowska, 2021).

Tourism has increasingly become an important leisure and social activity in modern societies. For older adults, participation in tourism can provide opportunities for recreation, social interaction, engagement with cultural and natural environments, and participation in activities suited to their interests and capabilities. Accordingly, tourism development for older adults should extend beyond economic considerations and take into account the social, environmental, accessibility, and service-related conditions that shape their tourism experiences. In this context, the development of senior-friendly tourism requires appropriate tourism resources, accessible facilities, transportation, accommodation, safety, and support services that respond to the specific needs of older tourists (Liew et al., 2021; Zielińska-Szczepkowska, 2021; Hou et al., 2025).

2.1 Review of Literature

Numerous studies have investigated senior tourism from different perspectives and within different geographical and social contexts. Bagus & Utama (2012), in a study entitled "Motivation and Satisfaction of Senior Tourists Visiting Bali (an Indonesian Tourism Destination)," employed statistical and multivariate techniques, including structural equation modeling, to identify the motivational factors influencing the satisfaction of foreign senior tourists during their holidays in Bali. The findings revealed that several motivational factors significantly influenced tourists' satisfaction, with relaxation and the desire to explore new places among the most prominent motivations.

Ghalamkari (2015) proposed strategies for the development of senior tourism based on market segmentation using neural networks. The study identified different segments of senior tourists, including young seniors, affluent seniors, and collectivist seniors, highlighting the heterogeneity of the senior tourism market and the importance of considering differences among older tourists when developing tourism strategies.

Woo, Kim & Uysal (2016), in their study entitled "A Measure of Quality of Life in Elderly Tourists," examined the relationship between the travel behaviors of elderly tourists and their quality of life. Focusing on tourists aged 65 years and older who were retired, the study used structural equation modeling to examine the relationships among travel motivation, travel constraints, leisure-life domain satisfaction, and overall life satisfaction. The findings showed that travel motivation positively influenced satisfaction with the leisure-life domain, while satisfaction with the leisure-life domain was associated with overall life satisfaction. However, travel constraints did not significantly affect leisure-life domain satisfaction. In a subsequent study, Wu, Wang, Wingate & Guo (2017) examined the sustainable development of the senior tourism market in China. Based on a review of the literature on senior tourism consumption, they applied the 4C marketing framework to develop recommendations for promoting the senior tourism industry. Their recommendations emphasized four key dimensions of marketing: customer needs, cost, convenience, and communication. The study highlighted the importance of adapting tourism products and marketing strategies to the characteristics and needs of older consumers.

Asadi, Boroumandzad & Malekinejad, (2017) concluded that insurance, health standards, security, special services, and transportation play pivotal roles in senior tourism development. Mahdavi et al. (2018), in their study on identifying and forecasting the senior tourist market based on expected values, showed that market segmentation facilitates improved travel package development and more effective strategies, identifying conservative, affluent, and young seniors via neural networks. Saeida Ardakani, Pezeshki Najaf Abadi, Alhosseini Almodarresi & Hosseini (2019), examined the cognitive structure of Iranian senior tourists regarding accommodation centers using the Means-End Chain theory. The study focused on the attributes and values considered important by senior tourists when selecting accommodation facilities.

Zieliska-Szczepkowska (2021), in her study entitled "What Are the Needs of Senior Tourists? Evidence from Remote Regions of Europe," investigated the tourism behavior, motivations, and decision-making factors of senior tourists in 11 remote regions across nine European countries. The study analyzed data from 1,705 questionnaires and used a mixed-methods approach combining survey data and interviews. The findings showed that rest and tranquility were important motivations for senior tourists. Safety, natural environments, historical sites, service quality, and convenient transportation connections were among the main factors considered when selecting a destination. The study also identified several barriers to the development of senior tourism in remote regions, including difficulties in reaching older tourists with tourism offers, insufficient promotion of tourism products designed for seniors, and limited financial resources for local tourism development projects.

Boonpat, Yolthasart & Uthaya (2022), investigated the development of wellness tourism activities to promote the tourism market for elderly tourists in Chiang Rai Province, Thailand. Using questionnaires, interviews, and focus groups, the study examined the travel behavior and tourism preferences of elderly tourists. The findings showed that the variety of tourist attractions, ethnic and cultural diversity, scenic beauty, architectural heritage, friendliness of local residents, quality of tourism services and facilities, and accessibility to destinations were among the factors that contributed to positive tourism experiences among elderly tourists. The study also identified cultural and religious activities, meditation, and nature-based activities as relevant forms of wellness tourism for this market segment.

Hu et al. (2023) through an interdisciplinary literature review and conceptual model, examined the potential role of tourism in promoting healthy aging among older adults. Their findings indicated that tourism can help older adults maintain functional abilities and quality of life through physical, cultural, sporting, and recreational activities, social participation, adequate nutrition, and positive emotions. The authors argued that tourism can contribute to healthy aging by supporting health and well-being among older adults and extending their healthspan. Tavangar & Hashemian (2024), in their study titled "Senior Tourism as a Strategy to Promote Elderly Well-being," examined tourism patterns of elderly in Khorasan Razavi province, demonstrating that tourism patterns constitute the primary basis for market segmentation.

They argued that the development of domestic tourism, especially quiet tourism, providing special services to seniors at tourist sites, designing recreational and health villages with dedicated senior facilities, and organizing affordable tours via activating relevant communication networks and senior membership can transform senior tourism into an effective tool for enhancing seniors' health levels.

More recent research has further strengthened this line of inquiry. Nergiz & Toker (2025) systematically reviewed 66 studies concerning healthy aging in tourism and highlighted the increasing academic attention to older adults as an important tourism market. Their review emphasized the importance of considering older tourists' specific needs and health status when developing tourism services and market segmentation strategies. The authors also identified senior tourism and healthy aging as an evolving research area requiring further empirical investigation into the experiences, needs, and preferences of older tourists.

Ruiz-Moreno Rodriguez-Sanchez, Bagnato & Ali (2026), in their study entitled "Mapping Seniors' Paths to Sustainable Tourism: An Enhanced Goal-Directed Behavior Approach," investigated the factors influencing seniors' participation in sustainable tourism using an extended goal-directed behavior model. Based on data collected from 1,202 senior tourists in Western and Eastern Europe, the findings revealed that all the variables examined significantly increased seniors' intentions to participate in sustainable tourism. The study emphasizes the importance of understanding the motivational and behavioral factors influencing seniors' participation in sustainable tourism and provides valuable evidence for developing tourism strategies that are more responsive to the characteristics and needs of senior tourists.

Qiao et al. (2026), in their study entitled "The Impact of Smart Tourism Technologies on Senior Tourists' Perceptions of Equity and Memorable Experiences," investigated how smart tourism technologies shape senior tourists' perceptions of equity and memorable tourism experiences. Using a mixed-methods approach, the study first identified four dimensions of

technology-mediated equity perceptions among senior tourists and subsequently developed and tested a model examining their effects on memorable tourism experiences. The findings provide evidence that perceived equity in interactions between senior tourists and smart tourism technologies is an important factor in understanding memorable tourism experiences in smart tourism contexts.

3. Research Methodology

3.1 Geographical Scope of the Research

The Khabr District in Baft County covers an area of approximately 16,920 hectares, of which 12,000 hectares are designated as Khabr National Park, while the remainder belongs to the Roghun Wildlife Refuge. This district is situated about 40 kilometers southwest of Baft city, located at the southern terminus of the Zagros mountain range. The confluence of springs on the eastern side of the village forms a permanent river known as the Khabr River.

In recent years, tourism has become a significant source of income for this rural district. On the eastern and southern outskirts of the village lies Khabr National Park, which is recognized as the eleventh national park registered in Iran. From a tourism perspective, visiting the stunning landscapes of the area—especially the majestic Khabr Mountains, deep valleys, and towering cliffs—leaves an enduring impression on visitors. Prominent natural attractions within the area include the high peaks of Chah Barf, Borj Shom, and Serito, as well as several notable springs such as Shah Velayat, Gharo, and Gerdu. The region also features caves like Shabpareh within the park and Dehsard on its periphery. Visitors can enjoy spectacular views of diverse vegetation, including both cold- and warm-climate species growing side by side, along with abundant and beautiful wildlife. These natural attributes contribute significantly to the area's appeal. From a cultural tourism standpoint, historical sites such as the stone fortress of Khabr, the earthen fortress of Kaht, and the Mil Tower, along with the presence of the Siyah Chador nomadic tribes and their traditional lifestyles, are among the region's most important attractions (Figure 1).

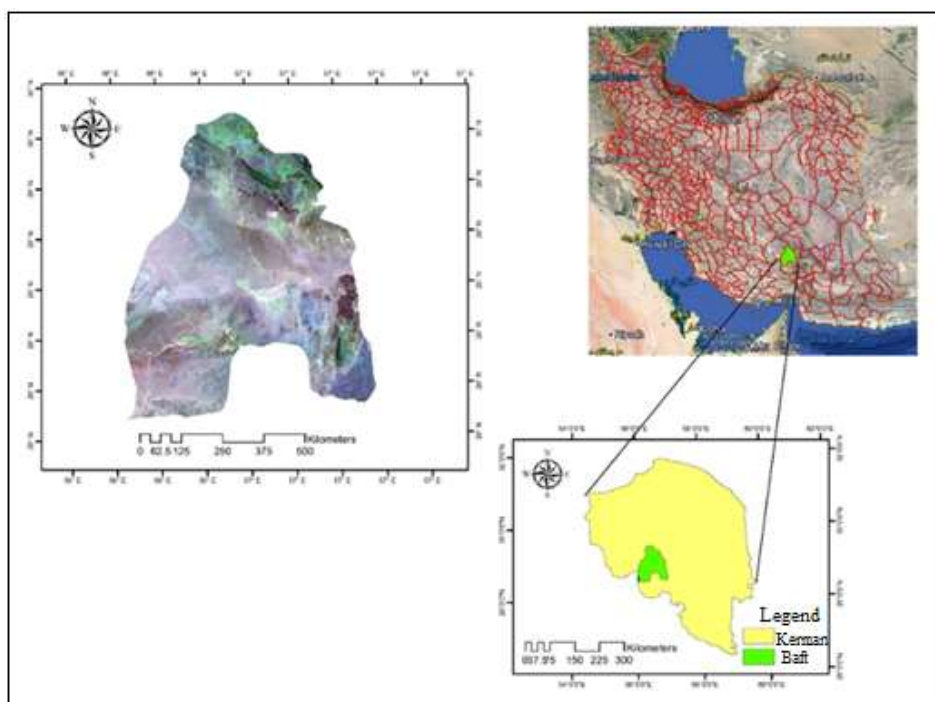


Figure 1. Geographical location of Baft County

3.2 Research Method

This study employed an applied, quantitative, descriptive-analytical research design to examine the factors associated with elderly tourists' satisfaction. The statistical population consisted of elderly tourists in the study area, and the individual elderly tourist constituted the unit of analysis. A total of 375 questionnaires were collected through random sampling. All 375 questionnaires were fully completed and considered suitable for subsequent analysis. Data were collected using a structured questionnaire developed based on the theoretical foundations and previous studies related to senior tourism and tourist satisfaction. The questionnaire was designed to measure the main constructs examined in the study (Table 1).

The measurement model included three main constructs: infrastructural, social, and environmental dimensions. Each construct was measured using three observed indicators, resulting in a total of nine observed indicators in the measurement model. The validity and reliability of the measurement instrument were assessed using standardized factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE). Standardized factor loadings of 0.50 or higher were considered acceptable. CR values above 0.70 were considered indicative of satisfactory construct reliability, whereas AVE values above 0.50 were

considered evidence of adequate convergent validity. Discriminant validity was also assessed to ensure that the constructs were empirically distinguishable from one another.

The collected data were analyzed using descriptive statistics and Structural Equation Modeling (SEM). First, descriptive statistics were used to summarize the characteristics of the respondents and the observed variables. Subsequently, Confirmatory Factor Analysis (CFA) was employed to assess the measurement model and examine the relationships between the observed indicators and their corresponding latent constructs. CFA was selected because the measurement structure was theoretically specified in advance based on the theoretical foundations and previous empirical studies on senior tourism and tourist satisfaction. Therefore, the purpose of CFA was to assess the adequacy of the theoretically specified measurement structure rather than to explore an unknown factor structure. SEM was employed because the research framework involves multiple latent constructs measured through several observed indicators and examines the structural relationships among these constructs and elderly tourists' satisfaction. SEM enables the simultaneous assessment of the measurement and structural models, thereby allowing the adequacy of the measurement

indicators and the hypothesized relationships among the constructs to be evaluated within a unified analytical framework. The reliability and convergent validity of the constructs were assessed using standardized factor loadings, CR, and AVE, while discriminant validity was subsequently examined. Finally, SEM was used to evaluate the structural relationships among the study constructs

and to test the proposed relationships in the conceptual model. The overall model fit was evaluated using commonly reported fit indices, including the chi-square-to-degrees-of-freedom ratio (χ^2/df), Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Root Mean Square Error of Approximation (RMSEA) (Table 1).

Table 1. Measurement indicators for the dimensions of senior tourists' satisfaction

Dimension	Component	Abbreviation	Items (Statements)
Infrastructural	Tourist Satisfaction (Structural Performance Dimension)	A1	- Satisfaction with facilities and quality of healthcare services tailored to senior tourists - Satisfaction with facilities and appropriate treatment of senior tourists - To what extent are you satisfied with accommodation facilities? - To what extent are you satisfied with restaurants and catering services? - To what extent are you satisfied with public transportation facilities? - To what extent are you satisfied with services offered in various shops? - To what extent are you satisfied with parking facilities in the city? - To what extent are you satisfied with mobile phone connectivity? - To what extent are you satisfied with internet access and its speed? - To what extent are you satisfied with healthcare and medical services? - To what extent are you satisfied with accessibility and proximity to gas stations? - To what extent are you satisfied with financial services (banks, ATMs)? - To what extent are you satisfied with access to green spaces and parks?
	Tourist Satisfaction (Access and Communication Networks)	A2	- To what extent are you satisfied with easy and appropriate access to attractions? - How satisfied are you with city streets, alleys, and lanes? - How satisfied are you with traffic signs along tourist routes and attractions? - How satisfied are you with the safety of urban pathways? - To what extent are you satisfied with the areas you visit? - To what extent are you satisfied with access to automotive services such as repair shops and tire services? - To what extent are you satisfied with access to public transportation services in the city?
	Infrastructure Development	A3	- Provision of welfare facilities tailored to senior tourists - Development of tourism programs - Security, comfort, and relaxation for tourists - Use of experienced specialists in senior tourism - Resolving problems and confusion among seniors - Attention to seniors' health (nutrition) - Creating infrastructure suitable for senior tourist welfare - Creating lively and enjoyable spaces to improve mood
Environmental	Tourist Satisfaction (Tourism Attractions)	H1	- To what extent are you satisfied with the beauty and diversity of attractions? - Satisfaction with authentic and traditional elements in the city - Satisfaction with guidance and introduction to attractions - Satisfaction with availability of nighttime tourism services - Satisfaction with tranquility and number of attractions - Satisfaction with quality of access to health and hygiene facilities - Level of interaction with tourists from other regions - Satisfaction with tourism planning in the area
	Tourist	H2	- Satisfaction with the beauty of the environment and urban fabric

Dimension	Component	Abbreviation	Items (Statements)
	Satisfaction (Visual Dimension)		- Satisfaction with harmony of constructions in the city - Satisfaction with nighttime lighting - Satisfaction with pleasantness of tourist environments and sites - Satisfaction with cleanliness of streets and recreational areas - Extent of calmness and rest opportunities in urban and attraction environments
	Tourist Satisfaction (Environmental Dimension)	H3	- Comfort level with local residents - Satisfaction with drinking water quality - Satisfaction with air quality - Satisfaction with quality of green spaces - Satisfaction with cleanliness, waste absence, and waste collection - Satisfaction with environmental beauty
Social	Tourist Satisfaction (Social Environment)	B1	- Satisfaction with local hospitality - Satisfaction with traditional customs and ceremonies - Satisfaction with cooperation of locals and guides - Level of mutual trust between locals and tourists - Satisfaction with cultural attractiveness - Satisfaction with urban security - Feeling of liveliness and joy in the city - Satisfaction with availability of social interaction spaces
	Tourist Satisfaction (Environmental Dynamism)	B2	- Satisfaction with peace and quiet in the city - Business prosperity and economic activity levels - Reasonableness of ticket and tour prices in relation to seniors' income - Volume of tourist presence in the city - Fairness and honesty of the host community - Hospitality and warmth of the host community - Politeness and friendliness of the host community - Level of cooperation and guidance from locals - Willingness to revisit the area
	Training and Information	B3	- Training and informing people on appropriate behavior towards senior tourists - Proper information dissemination about tourist sites and suitable tourism and sports activities for seniors

4. Research Findings

4.1. Descriptive Findings

In this study, data analysis was conducted using both descriptive and inferential statistics. Initially, descriptive statistics were employed to examine the demographic characteristics of the sample population in terms of gender, age, and educational level. Subsequently, hypothesis testing and further analysis were performed using inferential statistical methods. Out of the 375 respondents, 293 individuals (78%) were male, and 82 individuals (22%) were female. Regarding age distribution, 25 respondents (6.7%) were aged between 55 and 60 years, 173 respondents (46.1%) between 60 and 65 years, 123 respondents (32.8%) between 65 and 70 years, and 54 respondents (14.4%) were 70 years or older. In terms of educational attainment, 66 respondents (17.6%) were illiterate or had primary education, 92

respondents (24.5%) had completed middle school, 110 respondents (29.3%) had secondary education or diploma, 82 respondents (21.8%) held an associate degree, and 25 respondents (6.6%) had a bachelor's degree or higher.

4.2. Measurement Model and Confirmatory Factor Analysis

The measurement model was evaluated using Confirmatory Factor Analysis (CFA). The standardized factor loadings of the observed indicators ranged from 0.62 to 0.81, indicating acceptable relationships between the observed indicators and their corresponding latent constructs. For the infrastructural dimension, the standardized factor loadings were 0.78, 0.72, and 0.75. For the social dimension, the corresponding factor loadings were 0.79, 0.81, and 0.62. The factor loadings for the environmental dimension were 0.76, 0.68, and 0.74 (Figure 2).

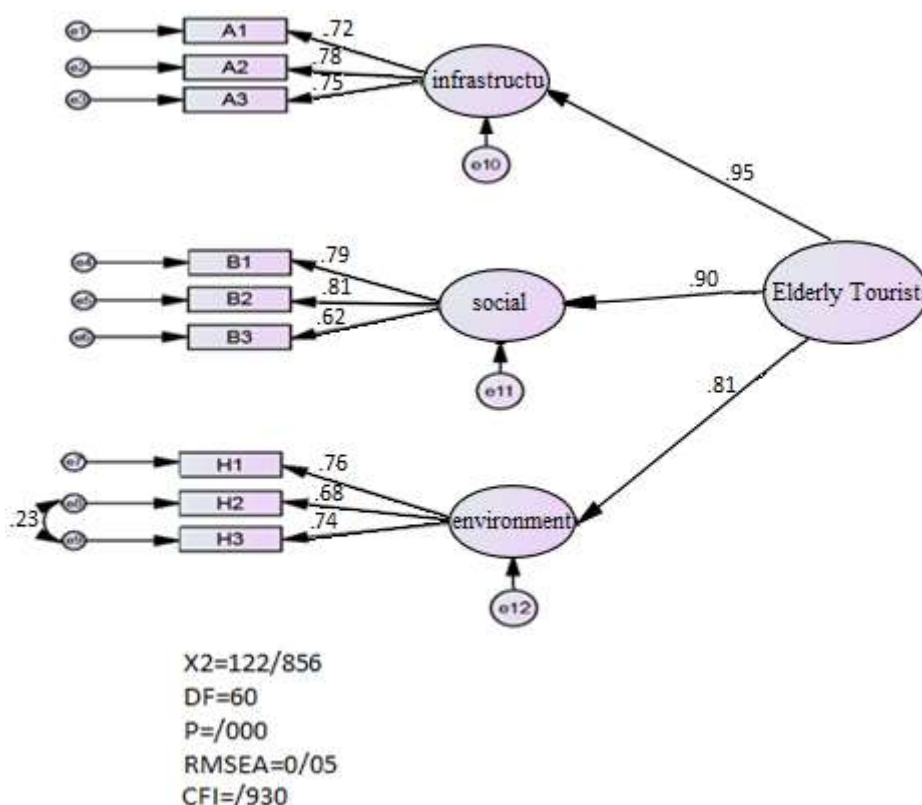


Figure 2. Final Model Explaining the Level of Satisfaction among Elderly Tourists

4.3. Composite Reliability and Convergent Validity

The reliability and convergent validity of the measurement model were assessed using Composite Reliability (CR) and Average Variance Extracted (AVE). As presented in (Table 2), The measurement model demonstrated satisfactory reliability and convergent validity. All standardized factor loadings exceeded the acceptable threshold of 0.50, ranging from 0.62 to

0.81. Composite Reliability (CR) values ranged from 0.771 to 0.794, exceeding the recommended threshold of 0.70. Moreover, the Average Variance Extracted (AVE) values ranged from 0.529 to 0.563, which were above the recommended minimum of 0.50. These results indicate satisfactory internal consistency and convergent validity for the infrastructural, social, and environmental constructs (Table 2).

Table 2. Reliability and Convergent Validity Assessment of the Measurement Model

Structure	Factor loadings	Standard coefficient	CR	AVE
Infrastructural	A1	0.794	0.794	0.563
	A2	0.78		
	A3	0.75		
Social	B1	0.79	0.787	0.555
	B2	0.81		
	B3	0.62		
Environment	H1	0.76	0.771	0.529

4.4. Discriminant Validity

Discriminant validity was assessed using the Heterotrait–Monotrait (HTMT) ratio. As presented in (Table 3), all HTMT values were below the

recommended threshold of 0.85, indicating satisfactory discriminant validity among the infrastructural, social, and environmental constructs (Table 3).

Table 3. HTMT Results for Discriminant Validity

Constructs	Infrastructural	Social	Environmental
Infrastructural	-	0.71	0.68
Social	0.71	-	0.74
Environment	0.68	0.74	-

4.5. Model Fit

The model fit indices indicate an acceptable overall fit between the proposed measurement model and the observed data. The chi-square to degrees-of-freedom ratio was 2.047, which is below the commonly recommended threshold of 3. The Comparative Fit Index (CFI) and Incremental Fit Index (IFI) were both 0.93, exceeding the

recommended value of 0.90. In addition, the RMSEA was 0.05, indicating a close and acceptable approximation of the model to the observed data. Taken together, these indices provide support for the adequacy of the proposed measurement model and allow the structural relationships among the latent dimensions to be interpreted (Table 4).

Table 4. Measurement Model Fit Results Based on Fit Indices

Fit Index	Recommended Criterion	Research Results
Chi-square / Degrees of Freedom (χ^2/df)	Less than 3.0	2.047
Comparative Fit Index (CFI)	Greater than or equal to 0.90	0.93
Incremental Fit Index (IFI)	Greater than or equal to 0.90	0.93
Root Mean Square Error of Approximation (RMSEA)	Less than 0.10	0.05

4.6. Structural Model and Hypothesis Testing

Following the assessment of the measurement model, the structural model was examined to test the hypothesized relationships among the study constructs. The standardized path coefficients (β), critical ratios (C.R.), and significance levels (P-values) were used to evaluate the proposed hypotheses. As shown in (Table 5), the infrastructural dimension had a positive and statistically significant effect on elderly tourists' satisfaction ($\beta = 0.31$, C.R. = 4.82, $P < 0.001$). This finding indicates that improvements in tourism-related infrastructure can contribute to higher levels of satisfaction among elderly tourists. The social dimension also showed a positive and statistically significant relationship with elderly tourists' satisfaction ($\beta = 0.38$, C.R. = 5.76, $P < 0.001$). Among the examined relationships, this

path showed a relatively stronger standardized coefficient, suggesting that social conditions and interactions may play an important role in shaping the tourism experience of elderly visitors. Furthermore, the environmental dimension had a positive and statistically significant effect on elderly tourists' satisfaction ($\beta = 0.24$, C.R. = 3.91, $P < 0.001$). Although the magnitude of this relationship was lower than those of the infrastructural and social dimensions, the statistically significant coefficient indicates that environmental conditions remain relevant to elderly tourists' satisfaction. Overall, the findings suggest that infrastructural, social, and environmental dimensions are positively associated with elderly tourists' satisfaction. Therefore, the proposed relationships in the structural model are supported (Table 5).

Table 5. Structural Model Results and Hypothesis Testing Hypothesis

Structure	Structural path	B	C.R	P-value	Decision
H1	Infrastructural $\rightarrow$ Satisfaction	0.31	4.82	<0.001	Supported
H2	Social $\rightarrow$ Satisfaction	0.38	5.76	<0.001	Supported
H3	Environmental $\rightarrow$ Satisfaction	0.24	3.91	<0.001	Supported

5. Discussion and conclusion

The findings of this study provide empirical evidence regarding the factors associated with elderly tourists' satisfaction and highlight the importance of

considering infrastructural, social, and environmental dimensions in senior tourism planning. The structural model indicates that all three dimensions have positive and statistically significant relationships with elderly

tourists' satisfaction, although the strength of these relationships varies. This finding suggests that the tourism experience of older adults is multidimensional and cannot be explained solely by the availability of tourism attractions. Rather, satisfaction is shaped by the interaction of destination infrastructure, social conditions, and environmental quality. The results showed that the infrastructural dimension had a positive and statistically significant effect on elderly tourists' satisfaction ($\beta = 0.31$, C.R. = 4.82, $P < 0.001$). This finding highlights the importance of providing appropriate and accessible infrastructure for older tourists. Elderly visitors may have greater accessibility and mobility requirements than other tourist groups; therefore, the availability of suitable transportation, safe pathways, rest areas, sanitation facilities, accommodation, and other supportive services can contribute to greater comfort and perceived safety. This finding is consistent with [Asadi et al. \(2017\)](#), who emphasized the importance of insurance, health standards, security, specialized services, and transportation in senior tourism development. It is also consistent with [Saeida Ardakani et al. \(2019\)](#), who identified cleanliness, location, security, and price as important considerations for Iranian senior tourists. Similarly, [Zieliska-Szczepkowska \(2021\)](#) highlighted convenient transportation and adequate facilities as important factors influencing the attractiveness of destinations for senior tourists. Thus, tourism infrastructure should be planned not only according to general tourism requirements but also according to the specific accessibility, safety, and comfort needs of older adults.

The social dimension demonstrated the strongest positive relationship with elderly tourists' satisfaction among the examined dimensions ($\beta = 0.38$, C.R. = 5.76, $P < 0.001$). This finding indicates that social interaction and supportive social environments are important components of the senior tourism experience. Tourism provides opportunities for communication, social participation, interpersonal interaction, and the strengthening of social relationships. This interpretation is consistent with [Zhang & Zhang \(2018\)](#), who found that leisure activities can strengthen interpersonal relationships and neighborhood connections among older adults. It is also consistent with [Hu et al. \(2023\)](#), who emphasized the contribution of social participation, recreational activities, and positive emotional experiences to maintaining the quality of life of older adults. In this regard, senior tourism should not be

conceptualized solely as a form of leisure consumption. It can also function as a mechanism for maintaining social engagement and supporting the well-being of older adults. Therefore, tourism planning for seniors should incorporate opportunities for social interaction, participation, and communication alongside physical tourism facilities.

The environmental dimension also had a positive and statistically significant effect on elderly tourists' satisfaction ($\beta = 0.24$, C.R. = 3.91, $P < 0.001$). Although its standardized effect was lower than those of the social and infrastructural dimensions, the significant relationship confirms that environmental conditions remain an important component of the senior tourism experience. Older tourists may attach particular importance to cleanliness, tranquility, safety, accessible natural and recreational spaces, and the overall environmental quality of destinations. This finding is consistent with [Zieliska-Szczepkowska \(2021\)](#), who identified tranquility, safety, natural environments, and historical attractions among important factors in the selection of destinations by senior tourists. It also supports the broader argument of [Liu, Wang & Li \(2021\)](#) that contemporary tourism development should move beyond purely economic considerations and incorporate social and environmental dimensions. Taken together, the findings indicate that elderly tourists' satisfaction is influenced by a combination of physical, social, and environmental conditions. The relatively stronger role of the social dimension in the present model suggests that creating opportunities for interaction and participation may be particularly important in developing senior-friendly destinations. However, the significant effects of the infrastructural and environmental dimensions demonstrate that social interventions alone are insufficient. Social participation must be supported by accessible infrastructure and a safe, comfortable, and attractive environment. This integrated perspective is consistent with [Tavangar & Hashemian \(2024\)](#), who emphasized the importance of specialized services, appropriate tourism facilities, quiet tourism environments, and health-oriented facilities in improving elderly well-being through tourism. From a planning and policymaking perspective, the findings suggest that senior tourism should be incorporated into destination planning as a distinct and age-sensitive tourism segment. Tourism planners should improve accessibility through safe and convenient transportation, appropriate pathways, adequate

signage, rest areas, sanitation facilities, and age-sensitive accommodation and recreational services. At the same time, destination managers should provide opportunities for social interaction and participation, including group activities, community-based tourism experiences, and spaces that facilitate communication between elderly tourists and local residents. Environmental management should also emphasize cleanliness, tranquility, safety, preservation of natural and cultural attractions, and easy access to recreational environments. Accordingly, senior tourism policies should move from a general approach toward a more integrated and needs-oriented planning framework that considers the specific physical, social, and environmental requirements of an aging tourist population.

Overall, this study demonstrates that the development of senior tourism requires more than the provision of tourism attractions and should be approached through an integrated framework combining accessibility, social participation, and environmental quality. The findings indicate that the social dimension had the strongest relationship with elderly tourists' satisfaction, followed by the infrastructural and environmental dimensions. These findings highlight the multidimensional nature of elderly tourists' satisfaction and provide empirical support for age-sensitive tourism planning. From a practical perspective, the findings can assist tourism planners and policymakers in prioritizing infrastructure, strengthening social opportunities, and improving

environmental conditions for older visitors. Nevertheless, this study has some limitations. The findings are based on data collected from the selected study area and should therefore be generalized to other destinations with caution. In addition, the study relies primarily on questionnaire-based responses and reflects the perceptions of participants during the study period. Future studies could examine senior tourism in different geographical contexts, compare the experiences of elderly tourists across destinations, and incorporate additional dimensions such as health services, economic accessibility, digital accessibility, and destination management. Overall, the findings emphasize that an integrated approach to infrastructure, social participation, and environmental quality can contribute to developing more accessible, comfortable, and satisfying tourism destinations for older adults.

Author Contributions

The authors contributed equally to the development and preparation of this research.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the authorship or publication of this article.

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ارزیابی رضایت گردشگران سالمند برپایه عوامل زیرساختی، اجتماعی و محیطی با استفاده از مدل سازی معادلات ساختاری (مطالعه موردی: بخش خبر، شهرستان بافت)

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چکیده مبسوط

۱. مقدمه

افزایش جمعیت سالمندان در ایران و جهان، گردشگری سالمندان را به یکی از حوزه‌های مهم و رو به رشد صنعت گردشگری تبدیل کرده است. افزایش امید به زندگی، بهبود وضعیت سلامت و افزایش زمان فراغت سالمندان موجب شده است این گروه به بخش مهمی از بازار گردشگری تبدیل شوند. گردشگری علاوه بر ایجاد فرصت‌های تفریحی، می‌تواند از طریق تقویت تعاملات اجتماعی، مشارکت و ارتباط با محیط‌های طبیعی و فرهنگی، به بهبود سلامت و کیفیت زندگی سالمندان کمک کند. باین‌حال، سالمندان به دلیل ویژگی‌های جسمانی، روان‌شناختی و اجتماعی خاص، در مقایسه با سایر گروه‌های سنی نیازهای متفاوتی در زمینه دسترسی، ایمنی، آسایش، خدمات و کیفیت محیطی دارند. از این‌رو، توجه به این نیازها در برنامه‌ریزی و سیاست‌گذاری گردشگری سالمندان اهمیت ویژه‌ای دارد. در ایران، روند فزاینده سالمندی جمعیت و ظرفیت‌های متنوع گردشگری، ضرورت توسعه مقاصد متناسب با نیازهای سالمندان را افزایش داده است. بخش خبر شهرستان بافت در استان کرمان با برخورداری از جاذبه‌های طبیعی و ظرفیت‌های گردشگری و طبیعت‌گردی، از قابلیت مناسبی برای توسعه گردشگری سالمندان برخوردار است. با وجود این ظرفیت‌ها، شناخت عواملی که رضایت گردشگران سالمند را شکل می‌دهند، برای برنامه‌ریزی مؤثر این نوع گردشگری ضروری است. بر این اساس، پژوهش حاضر با هدف بررسی رابطه این سه بعد با رضایت گردشگران سالمند و ارزیابی مدل اندازه‌گیری و ساختاری پیشنهادی انجام شد. پرسش اصلی پژوهش این است که ابعاد زیرساختی، اجتماعی و محیطی تا چه اندازه با رضایت گردشگران سالمند ارتباط دارند؟

۲. مبانی نظری

گردشگری سالمندان به‌عنوان یکی از حوزه‌های رو به رشد گردشگری، تحت تأثیر روند افزایش جمعیت سالمند و تغییر الگوهای زندگی و فراغت در جوامع مختلف اهمیت فزاینده‌ای یافته است. سالمندان به دلیل شرایط جسمی، روانی و اجتماعی متفاوت، در انتخاب مقصد و تجربه سفر نیازها و انتظارات خاصی دارند. عواملی مانند دسترسی مناسب، امنیت، امکانات بهداشتی، حمل‌ونقل، کیفیت خدمات، آرامش محیط، جاذبه‌های طبیعی و فرصت‌های تعامل اجتماعی می‌توانند بر کیفیت تجربه و رضایت آنان از مقصد تأثیرگذار باشند. بررسی مطالعات پیشین نشان می‌دهد که زیرساخت‌های گردشگری یکی از عناصر اساسی در توسعه گردشگری سالمندان است؛ زیرا دسترسی آسان، مسیرهای ایمن، امکانات استراحت، خدمات بهداشتی و اقامت مناسب می‌تواند احساس امنیت و آسایش سالمندان را افزایش دهد. همچنین، بعد اجتماعی از طریق فراهم کردن فرصت‌های ارتباط، مشارکت، تعامل با جامعه میزبان و فعالیت‌های گروهی می‌تواند به افزایش رضایت و بهزیستی سالمندان کمک کند. از سوی دیگر، کیفیت محیطی شامل پاکیزگی، آرامش، امنیت، زیبایی طبیعی و دسترسی به فضاهای تفریحی و طبیعی، از عوامل مؤثر بر تجربه گردشگری سالمندان محسوب می‌شود. در مجموع، ادبیات نظری نشان می‌دهد که رضایت گردشگران سالمند پدیده‌ای چندبعدی است و نمی‌توان آن را صرفاً بر اساس جذابیت‌های گردشگری یک مقصد توضیح داد.

۳. روش تحقیق

این پژوهش از نظر هدف، کاربردی و از نظر رویکرد، کمی و با طرح توصیفی-تحلیلی انجام شد. جامعه آماری پژوهش را گردشگران سالمند در منطقه مورد مطالعه تشکیل دادند و واحد تحلیل، گردشگر

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سالمنده بود. در مجموع، ۳۷۵ پرسشنامه از طریق نمونه‌گیری تصادفی جمع‌آوری شد که تمامی پرسشنامه‌ها به‌طور کامل تکمیل و برای تحلیل آماری مناسب تشخیص داده شدند. داده‌ها با استفاده از پرسشنامه ساختاریافته‌ای گردآوری شد که بر اساس مبانی نظری و مطالعات پیشین مرتبط با گردشگری سالمندان و رضایت گردشگران طراحی شده بود. مدل اندازه‌گیری پژوهش شامل سه سازه اصلی زیرساختی، اجتماعی و محیطی بود که هر یک با سه شاخص مشاهده‌شده اندازه‌گیری شدند. برای ارزیابی پایایی و روایی همگرایی سازه‌ها از بارهای عاملی استاندارد شده، پایایی ترکیبی (CR) و میانگین واریانس استخراج شده (AVE) استفاده شد و روایی واگرا نیز مورد بررسی قرار گرفت. داده‌ها با استفاده از آمار توصیفی و مدل‌سازی معادلات ساختاری (SEM) تحلیل شدند. ابتدا تحلیل عاملی تأییدی (CFA) برای ارزیابی مدل اندازه‌گیری و سپس SEM برای بررسی روابط ساختاری میان سازه‌های پژوهش و رضایت گردشگران سالمند به کار گرفته شد. برازش مدل نیز با استفاده از شاخص‌های χ^2/df , CFI, IFI و RMSEA ارزیابی شد.

۵. نتیجه‌گیری

در مجموع، نتایج نشان می‌دهد که توسعه گردشگری سالمندان در منطقه مورد مطالعه نیازمند توجه همزمان به مشارکت و تعامل اجتماعی، زیرساخت‌های مناسب و کیفیت محیطی است. بر این اساس، برنامه‌ریزی برای گردشگری سالمندان نباید صرفاً بر توسعه جاذبه‌های گردشگری متمرکز باشد، بلکه باید شرایطی فراهم کند که سالمندان بتوانند با امنیت، آسایش و امکان مشارکت اجتماعی از مقصد استفاده کنند. از منظر برنامه‌ریزی و سیاست‌گذاری، بهبود دسترسی و حمل‌ونقل، توسعه امکانات و خدمات متناسب با سالمندان، ایجاد فضاهای مناسب برای تعامل اجتماعی و ارتقای کیفیت محیطی می‌تواند در افزایش رضایت آنان و توسعه مقاصد سالمندپسند مؤثر باشد. بنابراین، یافته‌های پژوهش بر ضرورت اتخاذ رویکردی یکپارچه و نیازمحور در برنامه‌ریزی و توسعه گردشگری سالمندان تأکید دارد.

کلیدواژه‌ها: گردشگری سالمندان، اوقات فراغت، رضایتمندی، توسعه گردشگری، بخش خبر

تشکر و قدردانی

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۴. یافته‌های تحقیق

نتایج مدل ساختاری نشان داد که هر سه بعد مورد بررسی، رابطه‌ای مثبت و معنادار با رضایت گردشگران سالمند دارند. بعد اجتماعی با ضریب مسیر استاندارد $\beta = 0.38$ ، مقدار $C.R. = 5.76$ و سطح معناداری $P < 0.001$ ، قوی‌ترین رابطه را با رضایت گردشگران سالمند نشان داد. این یافته بیانگر اهمیت تعاملات اجتماعی، مشارکت، ارتباط با دیگران و وجود محیط‌های اجتماعی حمایت‌کننده در شکل‌گیری تجربه گردشگری سالمندان است. بعد زیرساختی نیز رابطه‌ای مثبت و معنادار با رضایت گردشگران سالمند داشت ($\beta = 0.31$ ، $C.R. = 4.82$ و $P < 0.001$). این نتیجه نشان می‌دهد که دسترسی مناسب، حمل‌ونقل ایمن و راحت، مسیرهای مناسب، امکانات استراحت، خدمات بهداشتی و سایر زیرساخت‌های متناسب با نیازهای سالمندان، نقش مهمی در افزایش آسایش، امنیت و رضایت آنان ایفا می‌کنند. همچنین، بعد محیطی با ضریب مسیر $\beta = 0.24$ ، مقدار $C.R. = 3.91$ و

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