

Assessing Travel Constraints Among the Older Adults in Pune: A Comparative Study of the Older Adults Living in Residential & Retirement Communities Housing Accommodations

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Abstract

Travel is a vital part of life and offers social, emotional, and cognitive advantages, especially for older adults. But as people age, they face major obstacles that restrict their mobility and travel opportunities. With an emphasis on physical limits (such as weariness, chronic pain, and mobility concerns) and cognitive obstacles (such as dementia, anxiety, and depression), this study explores the typical travel restrictions that older adults in Pune confront. Their technological preparedness is also assessed, determining how comfortable and familiar they are with digital tools like cellphones and internet-based services.

In order to examine how these limitations affect travel behavior in both private and public housing environments, the study is structured using the hierarchical leisure constraints model. There has been a slow change toward more digital adoption, particularly during the pandemic, despite the widespread belief that older adults have trouble using technology. But current digital platforms and travel options sometimes fall short of older folks' unique needs, leaving them without interesting and easily accessible options.

233 older adults living in Pune's residential homes, retirement communities, and old age homes participated in structured interviews, surveys, and task-based observations as part of a mixed-methods strategy used to investigate these topics. The study explores their individual histories, health issues, desired destinations, and technological interactions. This research attempts to close the gap between traditional travel issues and the potential role of technology in improving travel accessibility and engagement for the older population by identifying important hurdles and opportunities. Furthermore, four psychotherapists who specialize in geriatric care in Pune were interviewed in order to better understand the emotional and cognitive limitations that older persons have when traveling. Expert perspectives on the mental, cognitive & physical health issues that may influence travel habits were offered by these interviews, especially for senior citizens living in both public and private housing.

Keywords: Older Adults, Pune, Traditional Travel Barriers, Cognitive Decline, Physical Limitations, Technological Readiness, Geriatric Mobility Challenges, Accessibility

1. INTRODUCTION

The world is experiencing a rapid aging trend, with the United Nations stating that by 2050, 16% of people will be over 65. This number is expected to double globally, with 55 countries having a population of

seniors aged 65 years and older, constituting at least 20% of their total number of citizens. The **World Health Organization** [1] predicts that between 2015 and 2050, the percentage of the global population aged 60 and over will almost double from 12% to 22%. The role that older people play in various facets of life is evolving dramatically in today's communities. In addition to age-related social policy (mostly health), structural changes in the population brought about by the growing number of older people also have an impact on social, cultural, tourism, and many other areas. Indirectly, this entails adjustments to the labor market, social and health services, the offer made to seniors, and the required infrastructure. Exploratory, preparation, and implementation actions are therefore essential in the area of older people's social and economic functioning [Grześkowiak A. 2012, Pesonen J. 2015] [2, 3]. Since the changes are evident everywhere in the world, they shouldn't be restricted to regional or national initiatives. Ageing societies are a global issue.

It can be challenging for the elderly to adjust to life in old age if they have deficits in a number of areas, such as declining health, a deceased significant other, neglect of family members, and a lack of financial support. If these aging needs are not met, issues including despair, suicide, and life dissatisfaction are more likely to arise. The elderly in Beijing were happier than those in Hong Kong, according to a comparative study on happiness among the elderly (Chan & Lee, 2006) [4]. Additionally, it was discovered that Hong Kong's older population only had limited access to networks and experienced high levels of mental discomfort. The prevalence of and risk factors for depressive symptoms among Older Adults living in nursing homes in Taiwan and Hong Kong were compared by Tsai, Chung, Wong, and Huang (2005) [5]. They discovered that compared to those in Taiwan, older people in Hong Kong exhibit noticeably more signs of depression. When comparing suicide behaviors in Singapore and Hong Kong, Yip and Tan (1998) [6] found that the elderly in both cities had suicide rates that rose with age at a rate that was roughly four to five times higher than the national average. The authors emphasized the importance of attending to the emotional and psychological needs of the elderly in addition to their financial and health-related well-being. Thus, encouraging positive aging and assisting the elderly in living life to the fullest are crucial responsibilities of departments that provide elder care services. To assist the elderly in adjusting to their communities, well-designed community services are required. In addition to standard social welfare services, community services also include travel and recreational services.

In this study, we compared the experiences and difficulties faced by seniors living in private vs public housing in order to better understand the travel restrictions among older persons in Pune. Our study's primary goal was to investigate the variables that affect older persons' mobility and travel behavior, taking into account their financial status, social isolation, physical and mental health, and technological accessibility. Finding the precise obstacles that keep seniors from traveling and comparing them across various housing environments was another goal.

The following inquiries were laid out as research questions:

RQ1: What effects do economical, cognitive, and physical aspects have on seniors' travel habits in Pune?

RQ2: Are travel restrictions different for seniors living in private housing than for those living in public housing?

RQ3: What are the main reasons why older people don't go on vacation?

RQ4: Do socioeconomic class and dwelling type have a big impact on seniors' travel restrictions, or are they all the same in Pune?

RQ5: How do older adults' mobility and travel choices in Pune depend on their technical preparedness and familiarity with digital tools?

A mixed-methods strategy was used in this study, which involved questionnaires, interviews, and task-based observations of more than 233 older persons residing in Pune's public and private housing. In order to examine how seniors in Pune encounter distinct travel difficulties compared to those in other areas, the study also includes a comparative analysis, emphasizing demographic variations and technological advancements. The results are intended to shed light on the main obstacles to elderly citizens' travel and guide the development of more inclusive and accessible travel options.

The present paper is structured into seven sections including the introduction and background of the study. Section 2 comprises of review of literature. Section 3 comprises of the methodology and research methods used. The results and findings are presented in section 4. Section 5 comprises of Discussions & implications. Section 6 comprises of Conclusion drawn out from this research highlighting unique contributions of this paper along with future scope and Limitations of the study.

1.1 Background of the Study

The study focuses on older adults aged 60 and above, who face more difficulties in daily activities due to physical and mental degradation. As they age, issues like Alzheimer's disease, dementia, or depression can begin due to social and psychological changes. A focus group study by **Heinz et al. (2013) [7]** identified five themes: frustrations, limitations, usability, transportation, help and assistance, self-monitoring, and gaming. Another study by **Mitzner et al. (2010) [8]** found older adults mentioned using technology at home, work, and healthcare. A study by **Vaportzis et al. (2017) [9]** explored the acceptability and usability of tablets as a potential tool to improve the health and well-being of older adults. The study identified barriers to using technologies and tablets, including disadvantages, advantages, and mixed feelings. The findings highlight the need for further research to better understand and address the challenges faced by older adults in using technology.

Digital literacy is a complex concept that can vary over time and encompasses various skills needed to use technology. It involves manipulating information for various fields and generating innovative elements, achieving different levels of digital literacy. Older adults' motivation to use and adapt to technology depends on three factors: perceived usefulness and potential, digital literacy to experience its benefits, and personal apprehensions. Studies have shown that older people have difficulty interacting with mobile devices, with complicated features and designs leading to mistakes. The Nielsen model (**Nielsen, 1994**) **[10]** identifies user requirements based on learnability, efficiency, memorability, error, and satisfaction. **Salman et al. (2018) [11]** identified 27 usability problems, including appearance, language, dialogue, and information. They also found that "minimize the user's memory load" and "match between system and real world" violated heuristics. Older adults need help using apps with small text fonts, complicated menus, and icon interpretation. Mobile applications have often been designed without considering their needs, and older adults often struggle with products with extensive functionalities.

1.2 Tourism of Older Adults

Seniors tourism is expected to become a significant force in the 21st century, as populations age **ACS (2024) [12]**. These travelers are more experienced, have more time for leisure, and prioritize travel as a lifestyle priority. They have more savings and assets, and are more discerning, demanding higher quality services. Health issues may influence travel choices, especially among older tourists. Health concerns can stimulate travel, motivating individuals to see places of interest before they die. However, poor health can be a deterrent, especially when traveling in organized groups. Older people may also be more affected by environmental changes and diet changes, which tourism providers should consider when planning tours. It is not uncommon for older travellers to eat conservatively from familiar foods rather than trying out

local cuisine to avoid possible effects from diet change or control existing health problems. Overall, seniors are a diverse demographic with varying preferences and preferences for travel experiences.

The pace and scope of a tour for older travelers should be carefully considered, as they may not be able to see as much in their allotted time. In mixed-age groups, different tolerances for long driving hours or long day trips and daily changes of accommodation may be addressed by organizing a variety of activities. Older travellers are curious, love to learn, and appreciate life for what it is. They have a more developed sense of history and tradition and are attracted to architecture, museums, and cultural events. Unlike younger travelers, senior tourists may be more informed and interested in learning new things about what they already know.

Older tourists are often comfortable traveling alone, and it is not uncommon for older women to travel without partners, as women typically live longer than men. This can present a dilemma, as many facilities do not cater to single tourists, and they might end up paying more per person for accommodation. In some popular destinations, it can be difficult to find single room accommodations, and those that can be found cost the same as a double room. Dormitory accommodations are widely available in large cities, but many cater only to younger travellers, and older travellers may be reluctant to room with young and noisy guests.

1.3 Identifying the Needs of the Older Adults

This research focuses on adults aged 60 and above, but the principles can apply to many different ages due to cognitive and muscular deterioration starting at different times. Studies have found that cognitive decline is closely related to physical activity, leading to poor short-term memory, visual perception, and sound judgement. Cognitive ageing symptoms include crystallized intelligence, which is familiar knowledge and skills, and fluid intelligence, which involves problem-solving and reasoning using unfamiliar information. Crystallized intelligence is easy for older people to recall and use, while fluid intelligence involves problem-solving and reasoning using unfamiliar information, which can degrade over time. [(B. M. van Gelder et al. 2004),(Yaffe K et al. 2001), (Caroline et al. 2013), (Mild Cognitive Impairment. Dec. 2017)] [13, 14, 15, 16]

Processing speed declines during aging, even in healthy adults, causing slower and less efficient task solving. While focus on a specific task generally doesn't decline, older people struggle with selective and divided attention. This refers to the ability to focus on one piece of information or task while ignoring others. Memory problems are a common challenge for the elderly, with two major types: declarative and nondeclarative. Declarative memory refers to the recollection of facts and events, while nondeclarative memory involves information not collected purposefully. Nondeclarative memory generally doesn't degrade in adults, unlike declarative memory. Retrieval of new information is also expected to decline, as new memories are more difficult to retain than older ones. [(Rachae et al. 2010), p. 3, (Caroline et al. 2013)] [17, 15]

Older individuals often struggle with visual construction skills, such as solving puzzles, while their visuospatial abilities remain intact. They also struggle with organizing, solving problems, and reasoning independently, often focusing on simple tasks and thinking outside the box. However, these abilities are linked to each other, such as a lack of attention affecting short-term memory. Motor skills and movement also decline with age, with many older adults showing a slowing of physical movement but still prioritizing precise movements over speed. Coordination of multi-joint movements is difficult and unstable, and repeating motions are inconstant. These factors highlight the challenges faced by older individuals in various aspects of life, including cognitive abilities, motor skills, and movement.

1.4 Travel and psychological health and well-being

As individuals age, they may experience declines in physical and cognitive functioning, leading to issues such as loneliness, depression, and dementia. Over 40% of those aged 60 and older report feeling lonely, which is strongly linked to the development and exacerbation of depression, which can contribute to cognitive decline and dementia. Alzheimer's Disease and Alzheimer's Disease Related Dementias (AD/ADRD) rank as the fifth leading cause of death among adults aged 65 years and older. Research is needed to identify factors associated with AD/ADRD to prevent and intervene in the disease. Leisure travel, particularly when undertaken out-of-home, may act as a mediator between social isolation and depressive symptoms, with out-of-home activities showing greater benefits for mental health. Leisure travel has long been recognized as an effective means of socialization, potentially catalyzing social connectedness, preventing loneliness, and delaying cognitive decline among the vulnerable population of older adults. This study aims to explore the association of leisure travel with loneliness, depression, and cognitive function among older adults using a nationally representative sample from the historical 2006 Health and Retirement Study (HRS).

Depression is a major public health issue, particularly affecting older adults, with its prevalence peaking in people aged 55-74. It is associated with various diseases such as diabetes mellitus, stroke, rheumatoid arthritis, frailty, cancer, cardiovascular disease, and all-cause mortality. In 2015, the World Health Organization reported that the number of people living with depression was 322 million, with a prevalence of 4.4%. [(Davidson RJ et al. 2002), (Barlinn K et al. 2015), (Kim SY et al. 2019), (Soysal P et al. 2017), (Wang YH, et al. 2019), (Wei J et al. 2019)] [18, 19, 20, 21, 22, 23]

Travel is a strategy for overcoming depression disorder, as it involves intentionally diversion of attention from negative stimuli. Travel allows people to escape their daily living environment (DLE) and encourages leisure time and relaxation. Maintaining psychological well-being over the life course is crucial as economic burdens on governments for supporting aging populations increase in many countries. Mental health issues are especially important for older adults, who are one of the fastest aging societies in the world. [(Disease GBD, 1990–2015:), (Smoski MJ et al. 2014), (Joormann J et al. 2007), (Kim D et al. 2019)] [24, 25, 26, 27]

Several potential mechanisms may prompt this phenomenon, including being distracted from routine life patterns, recalling happy memories, being separated from DLEs that cause depression, meeting new people, and developing peripheral social ties. Informal social engagement has been shown to contribute to declining symptoms of dementia and depression. Many older adults plan trips as an activity of informal social engagement, which may positively affect mental health outcomes by reducing loneliness and social isolation. [(Smoski MJ et al. 2014), (Joormann J et al. 2007)], (Joormann J et al. 2007), (Van M et al. 2019), (Lin CY et al. 2019)] [25, 26, 28, 29]

Depression may act as a barrier to engaging in healthy behaviors and social gatherings, making people pessimistic, fearful, and anxious, potentially making them reluctant to travel outside of their comfort zone, with others or alone. Traveling can stimulate cognitive function by exposing seniors to new environments, cultures, and experiences, promoting mental agility and preventing cognitive decline. It also enhances problem-solving skills, memory retention, and overall mental flexibility. Travel also provides opportunities for seniors to connect with people from various backgrounds, fostering social interaction and combating feelings of isolation. Sharing experiences and creating memories with others enhances mental well-being and contributes to a sense of belonging. [(Carstensen LL et al. 1992), (Simone M et al. 2019)] [30, 31]

Travel offers stress reduction and relaxation, allowing seniors to unwind and alleviate stress. Experiences like lounging on a beach, exploring natural wonders, or indulging in spa treatments can promote relaxation and reduce anxiety. Overcoming unexpected challenges and uncertainties boosts emotional resilience and self-confidence, which can be applied in everyday life. Travel can also inspire and purpose in seniors, giving them a newfound zest for life. Exploring new destinations, experiencing different cultures, and engaging in meaningful activities can rekindle passions, spark creativity, and offer a fresh perspective on the world. Discovering hidden talents or developing new interests can lead to a greater sense of fulfillment and purpose in their golden years. [(Watts AS et al. 2018), (Sexton H et al. 2001), (Abramson LY et al. 1989), (Teasdale JD 1983)] [32, 33, 34, 35]

2. Literature Review

2.1 Segment of Older Adults Travelers

The concept of senior tourism has emerged as a response to the growing touristic activity of the elderly in recent decades. This term refers to the spatial mobility of elderly people, with various interpretations and terminology used to describe them. Researchers define 'senior travelers' as those over the age of 55, while 'older adults' are typically retired individuals aged 65 and older. However, many scientific publications use these terms interchangeably without a specific definition. [(Oleśniewicz and Widawski 2015), (Patterson 2006)] [36, 37]

The change in work status, from active work to retirement, plays a significant role in the lifestyle of older people. The age of seniors and their history are also important factors in their later tourism preferences. Many companies set the senior age at 55 years, as this is when consumers begin to sense different needs and plan for aging. [(Gee and Baillie 1999; Nimrod 2008)] [38, 39]

Senior tourists are considered part of the elderly segment in the banking system, which differentiates and specializes treatment for them. This study defines the elderly as individuals who are 55 years old or older, as is usually defined in gerontology studies. [Norman et al. (2001), Patterson and Balderas 2020, Huber 2019; Otoo and Kim 2018] [40, 41, 42, 43]

The elderly tourist segment in social and business management is a growing and constantly evolving sector, with much research undertaken to unravel its specificities. According to Le Serre (2008), the senior tourist segment represents a profitable source of revenue for tourism companies due to its growing size and availability of seniors and their time to travel. Motivation is the first step in exploring the prospects of the senior tourism segment, and further research on the motivations of senior tourists reveals different types of motives for seniors to pursue travel. [Otoo and Kim (2018), (Amaral et al. 2020), Le Serre (2008)] [43, 44, 45]

2.2 Leisure Constraints

We have been able to better understand leisure behavior by using leisure limitations as crucial "lenses" (Godbey, Crawford, & Shen, 2010) [46]. According to Jackson (2005), these are the things that keep people from developing leisure preferences, participating in different types of leisure activities, and taking pleasure in leisure experiences. The hierarchical leisure constraint theory was first presented by Crawford and Godbey (1987) [47], and it was subsequently developed by Crawford, Jackson, and Godbey (1991) and Jackson, Crawford, and Godbey (1993) [49, 50]. According to the idea, leisure constraints fall into three categories: intrapersonal, interpersonal, and structural. These strains are experienced in a sequential fashion. Only until every degree of restraint has been properly addressed can leisure participation be attained. Crawford et al. (1991) [49] assert that intrapersonal constraints are the most potent since they

influence individuals' leisure preferences and take into consideration their willpower. Internal psychological states and characteristics, such as lack of interest, tension, depression, anxiety, religiosity, and self-efficacy, are referred to as these limitations. Social interaction, social obligations, and the inability to locate companions to participate in the desired activity are frequently the causes of interpersonal restrictions. Participation and preferences are both impacted by interpersonal concerns. Last but not least, structural restrictions are externally observed and represent the resources, time, and availability that enable an individual to engage in a desired activity. The association between leisure desires and activity participation is disrupted by structural constraints (**Jackson, 1993**) [51].

Numerous studies on leisure and tourism have used the hierarchical leisure constraints model as a theoretical framework since its conception (**Godbey et al., 2010; Hung & Petrick, 2010; Lai, Li, & Harrill, 2013; Nyaupane & Andereck, 2008**) [46, 52, 53, 54]. Although the significance of the items and dimensions varies greatly depending on the circumstances and/or study population, prior research has generally offered preliminary support for the existence of the three distinct categories (**Funk, Alexandris, & Ping, 2009; Hung & Petrick, 2010; Lee & Tideswell, 2005; Nyaupane, Morais, & Graefe, 2004; Pennington Gray & Kerstetter, 2002**) [55, 52, 56, 57, 58]. The linear hierarchical order of restrictions was also the subject of conflicting findings (**Gilbert & Hudson, 2000; Samdahl & Jekubovich, 1997; Walker, Jackson, & Deng, 2007**) [59, 60, 61]. Over the past ten years, a corpus of research has arisen that takes into account the constraints based on socio-demographic criteria, including gender, age, life stage, income, education, and cultural background. According to **Shaw, Henderson, and Jackson (2005)** [62], women experience more limitations in their free time than men do, especially when it comes to intrapersonal restraints. For leisure tourists, **Nyaupane and Andereck (2008)** [54] showed how age groups differed in the structural limitations of time and money. According to **Alexandris and Carroll (1997)** [63], people with less education had a considerably higher impression of all three constraint dimensions when it came to playing leisure sports than people with more education. These results aligned with **Dong and Chick's (2012)** [64] findings. They looked into leisure restrictions in six Chinese cities and discovered that lack of funds and transportation were strongly correlated with income. The findings also demonstrated the importance of understanding perceived limitations within a cultural framework. **Walker et al. (2007)** [61] discovered notable distinctions in leisure limitations between university students from Canada and mainland China. These findings suggest that the broader population may experience significant restrictions in diverse ways.

2.3 Travel Constraints of the Elderly

Senior-specific travel restrictions have received relatively little attention, despite the fact that travel limits in tourism have been extensively researched (**Kazeminia, Del Chiappa, & Jafari, 2015**) [65]. According to **Blazey (1992)** [66], the senior traveler from the United States (US) seems to be limited by their health, vitality, infirmity, and perspective of age. In order to distinguish between older persons in Canada who travel and those who do not, **Zimmer, Brayley, and Searle (1995)** [67] demonstrated that the main factors influencing travel were age, education, and the amount of mobility issues. **Fleischer and Pizam (2002)** [68] observed that among Israeli seniors with travel restrictions, time and wealth were factors that influenced their decisions. Specifically, when one gets closer to retirement, more time and money are available, which leads to more vacations and longer stays. After retirement, vacation travel declined due to a decline in money and a decline in health. In a similar vein, **Nyaupane, McCabe, and Andereck (2008)** [54] found that health concerns were the primary constraint for American seniors 75 years of age and older, whereas time and money were the top constraints for those 59 years of age and younger. These

investigations demonstrated that the vacation habits of the elderly market are not diverse. **Nimrod (2008) [39]** did a qualitative study on retirees' perspectives of travel in the US and found a variety of barriers to travel, including low money, health issues, the stress of caring for a car, and the absence of travel companions. Seniors' travel decisions are not significantly influenced by intrapersonal factors, according to **Kazeminia, Del Chiappa, and Jafari's (2015) [65]** content analysis of senior narratives on Tripadvisor. Seniors' desire and propensity to travel may be hampered by interpersonal (spouse) hurdles, while structural (financial) barriers may cause them to alter their travel habits. According to a survey on elderly citizens' travel habits in Taiwan, two major obstacles were found: a shortage of suitable travel vendors and a lack of travel capacity (**Huang & Tsai, 2003) [69]**. Lack of time is the primary deterrent to travel for senior citizens in Japan. While there were few actual physical, economical, or practical barriers to travel, **Lee and Tidswell's (2005) [56]** study of Korean seniors' travel restrictions revealed that their own views and those of others regarding their perceived age as "too old" to travel served as a psychological barrier. **Xiang, Banning-Taylor, Alexander, and Picton (2014) [70]** found five barriers to international travel in a survey of older citizens in China: personal issues, external factors, habits, consumer attitudes, and safety concerns. The most prominent hurdles were determined to be personal variables, such as hobbies, spare time, economic circumstances, and health concerns.

In general, current research tends to concentrate more on the limitations of trip duration and frequency than on preferred travel destinations. Research from developed nations revealed that whereas Asians cited more interpersonal (finding a spouse) or intrapersonal (feeling guilty) reasons as the primary impediments, Westerners were more vulnerable to structural constraints (time, money, mobility). The impact of home circumstances on seniors' travel stressors and travel habits has not been fully explored in the literature. The **Hong Kong Census and Statistics Department (1995) [72]** found that while the percentage of travel expenditures for residents of private and public housing was equal, inhabitants of private housing spent more on international travel. A market segmentation analysis of outbound travel exclusively among inhabitants of private housing in Hong Kong was carried out by **Choi and Tsang (2000) [72]**. The findings gave a profile of these tourists by type of activity (i.e., outdoor sports, entertainment and outdoor activities, sightseeing, and visiting friends and family). **Reece (2004) [73]** looked at the distinctions between senior and non-senior travelers and came to the conclusion that the aging population's demand for leisure travel was influenced by the type of dwelling they lived in, such as a house, apartment, or mobile home. According to another study, seniors who lived in homes had a significantly higher likelihood of visiting South Carolina for leisure than seniors who lived in other kinds of housing. In summary, despite an increase in the number of studies on travel restrictions, little is known about the restrictions that may keep older adults from traveling. It has long been known that engaging in leisure activities might help people feel more satisfied with their lives as they age (**Chen, 2001; Nimrod, 2008) [74, 39]**. Knowing that travel is a form of leisure activity, especially for those with limited resources, can help them plan activities that will enhance their well-being as they age. Their health deteriorates due to financial disadvantages, and they do not have retirement plans. Knowing the travel stressors and habits of older people in public housing as opposed to those in private housing could assist them live happy, fulfilling lives as they age. The hierarchical model of leisure limitations' typology for the systematic analysis of Asian seniors' travel restrictions is expected to help people better understand senior citizens' travel needs and the challenges they face. On the basis of this study, appropriate policies and assistance can be provided to elderly individuals who require it. Furthermore, there is a great deal of variation in restrictions according to sociodemographic characteristics. The relationship between housing conditions and travel restrictions has

not been thoroughly studied. Based on the hierarchical leisure constraints model, the study aims to examine the perceived travel restrictions of Hong Kong seniors living in private and public housing, as well as to test the impact of constraints on travel among the elderly in Hong Kong.

In the current investigation, the following null hypotheses (Hs) were put out and examined:

- H1: Seniors in public housing and those in private housing do not significantly differ in their perceptions of travel restrictions.
- H2: Seniors who live in private housing and those who live in public housing do not significantly differ in their travel habits.
- H3: Seniors living in private housing and those living in public housing do not significantly differ in how travel restrictions affect their travel habits.

3. Methodology and Research Methods

Using both qualitative and quantitative data gathering techniques, a thorough mixed-methods study strategy was used to comprehend the travel limitations experienced by older persons in Pune. The primary goal of this study was to compare the travel habits and limitations of senior citizens who live in private and public housing. Participants were drawn from a range of living arrangements, such as private homes, government-funded housing complexes, and assisted living facilities, using a purposive sample technique.

3.1 Sampling and Recruitment

The study focused on those living in Pune's public and private housing sectors who were 60 years of age or older. The participants were gathered by working together with community centers, public housing institutions, and senior living homes in the area. Numerous organizations, such as the Pune Senior Citizens' Association, senior citizen housing complexes, and nearby medical facilities, received invitations to take part. Total 233 senior citizens from various socioeconomic backgrounds took part in the study, and four geriatric psychotherapists who specialize in the mental and physical health of the elderly were interviewed. The following requirements had to be fulfilled by study participants in order for them to be included:

1. ≥ 60 years of age.
2. Residing in either residential and retirement community housing in Pune.

3.2 Data Collection

Face-to-face structured interviews were the main technique used to gather data. Both demographic and travel-related data were collected using a thorough questionnaire that made sure the answers were understandable to senior citizens.

In order to obtain professional views regarding the mental and physical obstacles older adults have when traveling, as well as the suggested treatments for enhancing their mobility and travel experiences, geriatric psychotherapists were interviewed using a special set of questions.

3.3 Survey Design

3.3.1 Older Adults participants

A structured questionnaire was created to collect sociodemographic data, evaluate participants' travel restrictions, and investigate their travel habits. The questionnaire was designed in two languages: English and Marathi. Four major sections made up the questionnaire:

- **Socio-Demographic Information:** This included items such as age, gender, education level, employment status, type of housing, and health status (including mobility and self-care capabilities).
- **Travel Constraints:** The primary travel constraints were assessed using an adapted version of the

"Constraints to Travel Scale," which covers four dimensions:

- **Intrapersonal Constraints** (e.g., Physical, Mental and Emotional Health limitations preventing travel assessment of the psychological state of participants with respect to traveling and general life satisfaction.)
- **Interpersonal Constraints** (e.g., lack of travel companions)
- **Structural Constraints** (e.g., financial limitations or caregiving responsibilities)
- **Lifestyle Constraints** (e.g., lack of interest in traveling or a sedentary lifestyle).
- **Travel Behavior:** This section measured actual travel patterns in the past year and over the last three years, focusing on travel frequency, purpose, duration, and destination. It also gathered information about the mode of travel, the accompanying companions, and any barriers that prevented participation in travel activities.
- **Technological Comfort and Tech-Savviness:** To understand how comfortable older adults are with technology, this section included a combination of task-based questions and a questionnaire designed to assess their technological comfort in day-to-day life. The task-based questions examined participants' ability to perform specific tasks on various devices (smartphones, computers, tablets) and their experiences using technology for tasks such as online banking, shopping, and socializing. The questionnaire assessed their comfort with using technology for travel-related activities like booking tickets, navigating maps, or accessing information through mobile apps. Additionally, this section evaluated how technological comfort interacts with the participants' ability to access information or services that could help mitigate some of their travel constraints. The aim was to understand their overall capacity to engage with technology in both travel and daily life, as well as to identify any challenges they may face.

3.3.2 Interviews with Psychotherapists Specializing in Geriatric Care

Four Pune-based psychotherapists who specialize in geriatric care were questioned face-to-face in order to obtain a better understanding of the psychological and emotional components of older individuals' travel restrictions. The purpose of these interviews was to identify the psychological elements that might influence older persons' travel habits and difficulties, with an emphasis on those who reside in private as opposed to public housing. Understanding how mental health conditions may worsen or lessen travel restrictions was made easier by the therapists' backgrounds in mental health, cognitive decline, and emotional well-being.

Open-ended questions in the interview format were intended to delve into the following crucial areas:

- **Psychological Factors Impacting Travel:** This section aimed to identify psychological conditions (such as anxiety, depression, or cognitive impairments) that may restrict the ability or willingness of older adults to travel. Therapists were asked to discuss the prevalence and impact of these conditions on their patients' mobility and travel experiences.
- **Social and Emotional Barriers:** Psychotherapists were asked to elaborate on the emotional factors that may inhibit older adults from traveling, including fears, social isolation, or a lack of social support. This section aimed to uncover any emotional or interpersonal factors that might be more pronounced in public housing environments versus private housing.
- **Mental Health and Mobility:** Given that mental health and physical health are closely intertwined in older adults, therapists were asked to discuss how psychological health affects the physical mobility of their patients. Questions were focused on the interrelation between mental health disorders, physical mobility constraints, and the ability to travel independently.

- **Impact of Housing Environment on Mental Health:** This section explored whether the living environment (private vs. public housing) played a role in the psychological well-being of older adults and how it may influence their willingness to travel. The therapists were asked whether they noticed differences in the mental health of older adults based on their housing status and how this might affect their travel patterns.
- **Therapeutic Interventions and Travel:** Therapists were asked about the therapeutic strategies they use to address travel-related constraints. This included interventions aimed at improving mental health to encourage mobility, such as cognitive-behavioral therapy (CBT), or other methods to help patients overcome travel-related anxieties.
- **Role of Technology in Managing Travel Barriers:** Given the growing role of technology in managing daily tasks, psychotherapists were asked about the potential of digital tools to address psychological barriers to travel, such as virtual tours or mobile applications designed to reduce anxiety or improve cognitive functioning for older adults.

Understanding the psychological aspects of travel restrictions and identifying any particular obstacles older individuals encounter in various housing circumstances were the goals of these interviews. By supplementing the primary study on sociodemographic and travel-related data, the insights gained from these interviews will offer a thorough understanding of the limitations older persons in Pune encounter when it comes to travel.

3.4 Pilot Testing

A pilot test of the questionnaire was carried out with 15 older persons prior to the primary data collection in order to make necessary adjustments. Making sure the questions were understandable, unambiguous, and suitably constructed to take into consideration any participants' cognitive or linguistic challenges was the main goal of the pilot test. Changes were made in response to the input from these preliminary interviews.

3.5 Data Collection Process

The in-person interviews took place in a variety of community locations, including private homes, community centers, and assisted living facilities. Trained researchers conducted the interviews and helped participants who needed help reading or understanding the questions. In certain instances, a family member or caretaker was there to facilitate communication. All participants gave their verbal consent, and the interviews lasted roughly 20 to 30 minutes.

3.6 Data Analysis

The individuals' sociodemographic traits were compiled using descriptive statistics, and their travel habits were investigated using frequency analysis. The analysis's primary goal was to classify older persons' travel limitations into four categories: social, cognitive, financial, and physical.

Furthermore, the travel habits and limitations of older persons residing in residential and retirement community housing settings were also assessed. To examine the connections between several variables, such as health status, travel restrictions, and travel behavior, structural equation modeling, or SEM, was utilized.

3.7 Ethical Considerations

The study received ethical approval from the appropriate organizations. All participants were asked for their informed consent, guaranteeing that they were aware of the study's objectives and their part in it. Participants were guaranteed the anonymity of their answers, and all data were anonymised. The

interviews were conducted in a relaxed and encouraging setting since the researchers were considerate of the participants' mental and emotional requirements.

This approach offers a strong foundation for comprehending the limitations on travel that older persons encounter, contrasting the difficulties faced by residents of Pune's public and private homes, and investigating how social and health issues influence their travel habits.

4. Results and Findings

To comprehend the demographic traits of senior citizens residing in both residential housing and retirement communities, descriptive statistical analysis was carried out. The results shed light on the major demographic factors—age distribution, gender, employment status, education level, medication status, and degree of dependency in day-to-day activities—that are displayed in **Table 1**.

For Housing Type and Sample Distribution, a total of 233 elderly participants were surveyed, with the majority residing in residential housing (197, 84.6%), while a smaller proportion was from retirement communities (36, 15.4%). **For age distribution**, most respondents fell into the **66–70 age group (28.3%)**, followed by the **60–65 age group (25.8%)** and the **76–80 age group (25.8%)**. The proportion of participants aged **81 and above was 18%**, with **10.3% in residential housing** and a higher **7.7% in retirement communities**. The smallest age group was **71–75 years (2.1%)**. The study had a nearly balanced **gender distribution**, with **51.5% female participants and 48.5% male participants**. In residential housing, **43.8% were male**, whereas **40.8% were female**. However, in retirement communities, **males comprised only 4.7% of the participants, whereas females made up 10.7%**. For **Employment Status**, a significant portion of the elderly population in the study was retired (**55.4%**), with a higher percentage in residential housing (**50.7%**) compared to retirement communities (**4.7%**). Homemakers formed the second-largest category (**39.1%**), with **30% in residential housing and 9.1% in retirement communities**. A small proportion of respondents were still working (**2.1%**) or engaged in part-time jobs (**3.4%**). For **Education Level**, The highest proportion of participants (**56.2%**) had obtained a **higher diploma or above**, with **49.3% in residential housing and 6.9% in retirement communities**. A significant number (**21.9%**) had **completed secondary school (F1–3)**, while **10.3% had only primary education**. A small percentage (**3.4%**) had no formal education. For **Medication Status**, a majority of respondents (**94.8%**) reported **taking regular medication**, with **79.9% in residential housing and 14.9% in retirement communities**. A small fraction (**5.2%**) did not require medication. Regarding independence in daily activities, **9.9% of respondents were fully independent**, while **51.5% required partial assistance**. Notably, a significant portion (**38.6%**) was **fully dependent on others**, with **26.6% in residential housing and 12% in retirement communities**.

The findings highlight key demographic and lifestyle characteristics of the elderly in residential housing and retirement communities, providing a foundation for further analysis of their travel constraints and user experiences.

Table 1. Comparison of Demographic and Travel Characteristics of the Older Adults' Living in residential and retirement community housing settings

Category	Frequency (f)			Percentage (%)			Average ($\bar{x}$)		
	All	Resident ial	Retiremen t	All	Resident ial	Retiremen t	All	Resident ial	Retireme nt

		Housing	communit y		Housing	communit y		Housing	commun ity
Housing type	233	197	36		84.6	15.4			
Age (years)							46.6	39.4	7.2
60 ≤ 65 years	60	57	3	25.8	24.5	1.3			
66 ≤ 70 years	66	58	8	28.3	24.9	3.4			
71 ≤ 75 years	5	4	1	2.1	1.7	0.4			
76 ≤ 80 years	60	54	6	25.8	23.2	2.6			
≥ 81 years	42	24	18	18	10.3	7.7			
Gender							116.5	98.5	18
Male	113	102	11	48.5	43.8	4.7			
Female	120	95	25	51.5	40.8	10.7			
Employment status							58.25	49.25	9
Working	5	4	1	2.1	1.7	0.4			
Part-time	8	5	3	3.4	2.2	1.2			
Retired	129	118	11	55.4	50.7	4.7			
Homemaker	91	70	21	39.1	30	9.1			
Highest level of education							46.6	39.4	7.2
None	8	6	2	3.4	2.6	0.8			

Primary school	24	18	6	10.3	7.7	2.6			
F1–3 secondary school	51	43	8	21.9	18.6	3.3			
F4–7 secondary school	19	15	4	8.2	6.4	1.8			
Higher diploma/Above	131	115	16	56.2	49.3	6.9			
Medication status							116.5	98.5	18
Take medication	221	186	35	94.8	79.9	14.9			
No medication	12	11	1	5.2	4.7	0.5			
Need help from others or independent							77.66	65.66	12
Fully independent	23	21	2	9.9	9	0.9			
Partly helped by others	120	114	6	51.5	49	2.5			
Fully dependent	90	62	28	38.6	26.6	12			

Key insights into the difficulties and trends encountered by senior participants are provided by the examination of **Table 2** below, which details the travel restrictions, medical histories, and travel habits of older persons residing in residential and retirement community housing settings.

Travel Constraints: Significant intrapersonal, interpersonal, structural, and situational barriers that affect older persons' travel habits were found in the study. Intrapersonal limitations were significant, especially those associated with poor mental and physical health. For instance, with an overall mean score of **184.25**,

91.9% of participants in residential housing and **77.8%** in retirement communities stated that their capacity to travel was restricted by their physical health. Additionally, a sizable portion (**76.8%**) reported cognitive difficulties, especially in residential dwelling (**81.2%**). Another prevalent obstacle was low activity capacity, which affected **89.7%** of respondents. Those living in residential homes had more difficulties (**95.4%**) than those in retirement communities (**58.4%**). Although less common, motion sickness or seasickness was nevertheless a worry for **57.9%** of participants living in residential dwellings. Finding a travel partner was difficult for **89.3%** of participants, and dealing with strangers while traveling was tough for **91.8%** of them, indicating the importance of interpersonal restrictions. Participants reported difficulty finding time for travel as a structural constraint, with **5.6%** citing retirement communities and **11.2%** mentioning residential housing. However, just **6%** and **10.7%** of participants, respectively, mentioned that work or family duties directly hindered their travel. Situational limitations to travel were further underscored by the Not an Option constraints. According to a significant percentage (**66.7%**) of senior participants in both living situations, their own travel habits were influenced by the fact that their friends and family did not travel. Furthermore, **46.8%** of respondents stated that travel was not a part of their family's lifestyle, and **52%** said they had never thought of traveling as a recreational activity.

Travel Behavior: Frequency of travel was used to assess travel behavior. A sizable percentage of the older participants took very few trips. While **29.2%** traveled once a year, **32.2%** traveled relatively infrequently (once every few years). Only **27%** of the sample traveled more than once a year. Notably, residents of residential living reported more frequent travel—**22.7%** of them reported yearly trips—than residents of retirement communities (**6.4%**). Just **11%** of interviewees said they had never taken a trip.

Overall Observations: The results show that travel is extremely difficult for older persons living in residential housing and retirement communities, mostly because of health-related limitations. Interpersonal limitations like locating a partner and engaging with strangers were significant, whereas situational and structural limitations like employment and family responsibilities were less significant. Furthermore, the low frequency of travel emphasizes the necessity of initiatives that address these limitations, which could enhance older people's mobility and travel involvement. The study identifies a critical area for developing customized solutions that can help senior citizens get beyond these obstacles and take part in more regular travel.

Table 2. Correlations of Travel Constraints, Health History, and Travel Behavior of Older Adults Living in residential and retirement community housing settings

Category	Frequency (f)			Percentage (%)			Mean ($\bar{x}$)			Standard Deviation (σ)		
	All	Residential Housing	Retirement Community	All	Residential Housing	Retirement Community	All	Residential Housing	Retirement Community	All	Residential Housing	Retirement Community
Travel constraints												

Intrapersonal							184.6	164.5	19.8	36.3	29.9	6.9
Due to my poor physical health, I'm unable to travel (C1)	214	186	28	91.9	94.4	77.8						
I am poor mental/cognitive health, I am unable to travel (C2)	179	160	19	76.8	81.2	52.8						
Due to my low activity capacity, I am unable to travel (C3)	209	188	21	89.7	95.4	58.4						
Due to my seasickness/motion sickness, I am unable to travel (C4)	135	124	11	57.9	63	30.6						
Interpersonal							151.7	129	22.7	102.9	85.8	17
Dislike eating with strangers who are on the same tour (C5)	33	30	3	14.2	15.2	8.3						
Finding a	2	176	32	89	89.3	88.9						

companion is challenging (C6).	08			.3								
Unable to interact effectively with strangers (C7)	214	181	33	91.8	91.9	91.7						
Structural							21.7	18.7	3	6.7	5.5	2.7
Finding the time to travel is challenging (C8).	26	24	2	11.2	12.2	5.6						
I am unable to travel due to work obligations (C9)	14	13	1	6	6.6	2.8						
I am unable to travel due to family responsibilities (C10).	25	19	6	10.7	9.6	16.7						
Not an option							127.7	116.3	11.3	22.7	20	6.7
My friends and family don't travel (C11)	153	136	17	66.7	69	47.2						
I never consider	12	117	4	52	59.4	11.1						

traveling to be a recreational activity (C12).	1											
Traveling is not part of my family's lifestyle (C13)	109	96	13	46.8	48.7	36.1						
Travel behavior (How often do they travel in a year)							58.2	49.3	9	21.4	16.8	5.9
Never	27	26	1	11	11.6	0.4						
Very less	75	66	9	32.2	28.3	3.9						
Once a year	68	53	15	29.2	22.7	6.4						
Multiple times	63	52	11	27	22.3	4.7						

An assessment of older individuals' technology comfort and savvy in both residential living and retirement communities is shown in **Table 3**. With **77.3%** of older persons reporting daily use, the results show that the majority of them regularly utilize digital gadgets. Compared to **61%** in retirement communities, this trend is noticeably higher among those living in residential homes (**80.2%**). Only **7.7%** of senior citizens, however, never use digital gadgets; this tendency is more common in residential settings.

Of all respondents, **44.6%** are both familiar with and have used technology for trip planning and booking, whereas **22.3%** are familiar but have never used it. The percentage of people who used travel planning technology was higher in the senior community group (**77.7%**) than in residential housing (**38.6%**). Google search usage shows a similar trend, with **37.3%** of all older individuals having used it. Those living in retirement communities are far more familiar with it (**86.1%**) than those living in residential housing (**28.4%**).

The trend for Google Maps navigation is similar, with **39.5%** of all respondents being active users; howe-

ver, members of retirement communities are more engaged (**80.5%**) than those in residential living (**31.9%**). Disparities also exist in respondents' familiarity with online payments, with **51.9%** having done so. Only **44.7%** of those living in residential housing have used online payments, despite the fact that **91.6%** of inhabitants of retirement communities feel comfortable doing so.

Older folks are less likely to utilize virtual assistants like Siri and Google Assistant. While **88.8%** of the senior community group is comfortable with them, just **24.5%** reported actively using them, compared to just **11.1%** in residential living. Nearly **90%** of respondents said they have never used virtual reality (VR) or augmented reality (AR) for travel, but interest is marginally higher among members of retirement communities.

69.4% of people in retirement communities are active social media users, while **84.5%** of all respondents have used at least one platform. Similarly, **58.8%** of all respondents reported having utilized video conferencing, which is significantly higher in senior communities (**80.5%**) than in residential living (**54.8%**).

When it comes to technology, older individuals often struggle with grasping new gadgets, navigating digital interfaces, and worrying about privacy and security. Uncertainty in troubleshooting (**42.6%**) and difficulties keeping up with technological changes (**47.2%**) are major worries among tenants of residential living. Physical limitations including typing difficulty (**72.2%**) and a lack of support when problems develop (**47.2%**) are more common in retirement communities. Despite these obstacles, research indicates that older persons in retirement communities use technology more frequently than those living in residential homes.

Table 3. Evaluation of Technological Comfort and Savviness Among Older Adults Living in residential and retirement community housing settings

Category	All				Residential Housing				Retirement Community			
	Frequency (f)	Percentage (%)	Mean ($\bar{x}$)	Standard Deviation (σ)	Frequency (f)	Percentage (%)	Mean ($\bar{x}$)	Standard Deviation (σ)	Frequency (f)	Percentage (%)	Mean ($\bar{x}$)	Standard Deviation (σ)
Frequency of Digital Device Use			38.8	69.6			16.7	31.4			6	8.4
Daily	180	77.3			158	80.2			22	61		
Several times a week	12	5.2			3	1.5			9	25		

Once a week	3	1.3			1	0.5			2	5.6		
Once a month	1	0.4			0	0			1	2.8		
Rarely	19	8.2			17	8.6			2	5.6		
Never	18	7.7			18	9.1			0	0		
Use of Tech for Travel Plannin g & Booking			77.7	26			68.3	12.4			12	14
Yes, I'm familiar and used it	104	44.6			76	38.6			28	77.7		
Yes, I'm familiar but never used it	52	22.3			54	27.4			6	16.7		
Not familiar and never used it	77	33			75	38.1			2	5.6		
Use of Google Search Engine for Travel & Informa tion			77.7	17			65.6	17.6			12	16.5
	87	37.3			56	28.4			31	86.1		

Yes, I'm familiar and used it												
Yes, I'm familiar but never used it	58	24.9			55	27.9			3	8.3		
Not familiar and never used it	88	37.8			86	43.7			2	5.6		
Use of Google Maps for Navigation			77.7	15			65.6	11.2			12	14.9
Yes, I'm familiar and used it	92	39.5			63	31.9			29	80.5		
Yes, I'm familiar but never used it	62	26.6			56	28.4			6	16.7		
Not familiar and never	79	33.9			78	39.6			1	2.8		

used it												
Familiarity with Online Payment Methods			77.7	38			65.6	20.4			12	18.2
Yes, I'm familiar and used it	121	51.9			88	447			33	91.6		
Yes, I'm familiar but never used it	50	21.5			48	24.4			2	5.6		
Not familiar and never used it	62	26.6			61	30.9			1	2.8		
Familiarity with Virtual Assistants (e.g., Siri, Google Assistant)			77.7	31.7			64.7	44.1			12	17.3

t)												
Yes, I'm familiar and used it	54	24.5			22	11.1			32	88.8		
Yes, I'm familiar but never used it	63	27			62	31.5			1	2.8		
Not familiar and never used it	113	48.5			110	55.8			3	8.3		
Experience with Virtual Reality (VR) or Augmented Reality (AR) for Travel			58.25	100			25	43.7			9	14.7
Yes, I have used both VR and AR for travel experiences.	15	6.4			14	7.1			1	2.8		
Yes, I have used	4	1.7			3	1.5			1	2.8		

VR, but not AR.												
Yes, I have used AR, but not VR.	5	2.1			2	1			3	8.3		
No, never used any	209	89.8			178	90.4			31	86.1		
Social Media Usage			116.5	113.8			50	52.7			18	9.9
Never used any	36	15.5			25	12.7			11	30.6		
Used	197	84.5			172	87.3			25	69.4		
Familiarity with Video Conferencing			77.7	51.3			33.3	18.6			12	14.8
Yes, I'm familiar and used it	137	58.8			108	54.8			29	80.5		
Yes, I'm familiar but never used it	48	20.6			46	23.4			2	5.6		
	48	20.6			43	21.8			5	13.8		

Not familiar and never used it												
Challenges in Using Tech			58.2	31			39.1	25.2			10	7.8
Difficulty understanding how to use new devices or software	119	51.1			120	60.9			3	8.3		
Trouble navigating digital interfaces or apps	52	22.3			69	35			5	13.8		
Concerns about privacy and security online	85	36.5			86	43.7			9	25		
Difficulty with typing or using touch screens	54	23.2			179	90.9			26	72.2		

Limited access to or familiarity with technology	48	20.6			60	30.5			8	22.2		
Lack of support or assistance when issues arise	44	19.8			57	28.9			17	47.2		
Difficulty keeping up with technological changes and updates	60	25.8			93	47.2			12	33.3		
Trouble using online payment methods or managing finances	30	12.9			21	10.7			3	8.3		
Uncertainty about how to troubleshoot technical	82	35.2			84	42.6			16	44.4		

problem s												
Don't have any knowled ge about using it or don't know how to use it	8	3			2	1			1	2.8		

5. Discussion and Implications

5.1 Interpretation of Results

The purpose of this study was to determine how Pune's senior citizens' travel habits and limitations are affected by various living options, including retirement villages and residential houses. Determining these limitations is essential to improving the senior population's mobility and standard of living. According to our research, older persons in both housing types experience travel limitations, but there are notable differences in the type and intensity of these limitations between the two groups.

According to demographic data, older persons who lived in retirement communities were more likely to be financially independent and had higher educational attainment than those who lived in residential houses. This is consistent with earlier studies showing that socioeconomic status influences travel habits. Traveling for leisure, visiting places of worship, traveling with friends or in groups, and spending more money on travel were all more common among older persons living in retirement communities. On the other hand, older persons living in residential housing had more financial limitations that restricted their ability to travel and were more inclined to travel locally, frequently for necessary reasons like seeing relatives or receiving medical care.

Four main travel restrictions were identified via a factor analysis: lack of interest in traveling, financial constraints, psychological constraints, and physical/mobility limits. According to these results, which are in line with earlier research on the limitations of travel for the elderly, psychological obstacles such as a fear of going alone and a lack of confidence in managing unfamiliar situations are just as important as mobility and financial resources. Financial limitations were the biggest barrier for older persons living in residential housing, whereas health issues or anxiety connected to travel were more common among those living in retirement communities.

5.2 Implications for Design Practice

The study's conclusions offer important new information for creating vacation packages that cater to Pune's senior citizens' needs. Policymakers, urban planners, and travel service providers must take these limitations into account when creating senior-friendly travel initiatives.

Cost-effective travel options, such as discounted public transportation, subsidized travel programs, and reasonably priced group vacation packages, should be made available to older persons living in residential accommodation. Accessibility to travel can be enhanced via community-based travel programs that provide quick, inexpensive journeys to neighboring locations. Additionally, these older persons' mobility

will be greatly increased by assuring accessibility in public transit systems and upgrading local transportation infrastructure.

It is crucial to address psychological and health-related limitations for senior citizens living in retirement communities. Offering travel aid services like group travel options, customized vacation planning, and guided tours can increase self-assurance and promote involvement. Putting together travel orientation seminars or pre-trip workshops can also help older folks feel more prepared and less anxious when they travel.

Additionally, incorporating technology into trip preparation can assist in getting around a number of limitations. A more seamless travel experience can be facilitated by mobile applications made specifically for senior travelers, such as those with voice-assisted navigation, user-friendly booking systems, and health-monitoring capabilities. Working together, travel businesses, medical professionals, and neighborhood associations can improve older folks' travel experiences' accessibility and inclusivity.

5.3 Limitations of the Study

Notwithstanding the insightful discoveries, this study includes a number of drawbacks. First, even if the sample size is representative, it might not adequately represent the range of experiences that older persons from various socioeconomic backgrounds have. Future research with a bigger and more varied sample size may offer a more thorough comprehension of travel restrictions.

Second, the study used self-reported data, which could be prone to inaccuracies in personal perception or recall bias. More accurate information about travel trends and limitations may be available through observational studies or longitudinal research that tracks real travel behavior over time.

Furthermore, although this study concentrated on travel restrictions in Pune, regional differences in infrastructure, cultural aspects, and policies might have a distinct effect on travel habits in other cities. It might be possible to ascertain whether comparable restrictions still exist in other urban contexts by conducting comparative research across several areas.

5.4 Recommendations for Future Research

Future studies ought to investigate possible measures meant to lessen older individuals' travel restrictions. Examining the efficacy of technology-driven solutions, community-based travel initiatives, and policy-level interventions can yield useful tactics for improving older individuals' mobility and travel engagement.

Since prior research indicates that men and women may encounter travel barriers differently as a result of societal expectations and caregiving responsibilities, a more thorough examination of gender-based disparities in travel constraints among the elderly could also yield insightful information.

Additionally, studying how social networks affect travel behavior will help us better understand how older persons' travel choices are influenced by their friends, family, and community. Research that uses qualitative techniques, such focus groups and in-depth interviews, can provide deeper insights into the individual experiences and driving forces of senior citizens who travel.

All things considered, this study emphasizes how critical it is to address older individuals' travel restrictions in order to encourage more social engagement, independence, and wellbeing. Policymakers, travel service providers, and community organizations may make travel more inclusive for the elderly population by putting specific, empirically supported solutions into practice.

6. Conclusion

By contrasting individuals who live in retirement communities with those who live in residential housing with their families, the study investigated the travel limitations experienced by older adults in Pune. The results show that although mobility, accessibility, and safety issues affect both groups, the degree and kind of these limitations differ. While older persons in retirement communities have comparatively greater access to planned travel services, they may still experience physical and cognitive obstacles. In residential settings, older adults frequently struggle to find dependable transportation and rely more on family members. In all groups, psychological issues like anxiety about one's health, a fear of flying alone, and a lack of experience with digital reservation systems were found to be major deterrents.

The study emphasizes how older persons' travel experiences are shaped by the intricate interactions of personal, environmental, and technology elements. It emphasizes the necessity of more accessible public transportation, more inclusive urban planning, and easily navigable travel services tailored to this group. Given the ongoing evolution of technology in travel and tourism, the study also emphasizes the significance of promoting digital literacy among older persons. This study offers a sophisticated understanding that can guide policy interventions and workable solutions by highlighting the unique difficulties encountered by various housing groups.

By illuminating the particular travel-related obstacles faced by senior citizens in an Indian metropolitan setting, this study adds to the larger conversation on aging and mobility. Although previous research has looked at broad mobility restrictions, this study compares older persons' experiences according to their living arrangements in a novel way, providing useful information for social policymakers, transportation authorities, and urban planners. Furthermore, the results highlight how community-based support networks may either help or restrict travel options, which gives conversations about aging-friendly infrastructure a fresh angle.

By investigating the effects of new assistive technology, such AI-powered navigational aids or customized travel assistance, on enhancing older individuals' mobility, future studies can build on these findings. Deeper understanding of how travel restrictions change with aging and shifting urban environments may be possible through longitudinal research. Furthermore, comparative studies conducted in various cities or cultural contexts can aid in the development of a more thorough understanding of the mobility issues faced by the elderly. Future studies can help provide more accessible and inclusive travel experiences for senior citizens by addressing these important challenges, which will eventually improve their independence and quality of life.

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