ASLI QoL2026
Annual Serial Landmark International Conference on QoL2026
Indexed in Clarivate Analytics WoS

E-B Environment - Behaviour Proceedings Journal

AicQoL2026Jakarta

e-IPH e-International Publishing House Ltd., United Kingdom

https://www.amerabra.org/
14th AMER International Conference on Quality of Life
Sunlake Waterfront Resort & Convention, Jakarta, Indonesia, 02-03 Jan 2026

Multi-Generational Housing Environment Preferences' Physical Features for Quality of Life and Active Ageing Community in Malaysia

Hafiszah Ismail[1*], Kushairi Rashid[2], Nor Rima Muhamad Ariff[1], Elisabet Siahaan[3]
**Corresponding Author*

[1] Faculty of Built Environment, Universiti Teknologi MARA (UiTM), 40450 Shah Alam, Selangor, Malaysia
[2] Faculty of Built Environment, Universiti Teknologi MARA (UiTM), 32610 Seri Iskandar, Perak, Malaysia
[3] Faculty of Economics and Business, Universitas Sumatera Utara, 20155, Medan City, North Sumatra, Indonesia

hafiszah@uitm.edu.my, kusha575@uitm.edu.my, norri550@uitm.edu.my, elisabet@usu.ac.id
Tel: +60 17 208 7667

Abstract
Malaysia's rapidly ageing population highlights the need for housing environments that promote well-being. This study aims to develop a conceptual framework of Multi-Generational Housing Environment Preferences' physical features for the quality of life of an active ageing community. Using a mixed-method approach, this paper reports quantitative findings from 398 respondents in Shah Alam representing Baby Boomers, Generation X, Generation Y, and Generation Z. Four key physical features were identified: (1) Accessibility and Walkability, (2) Communal Areas, (3) Personal Privacy, and (4) Assisted Technology Integration. These findings guide future housing developments to support inclusivity, independence, and well-being in the Malaysian context.

Keywords: Multi-Generational Housing; Quality of Life; Active Ageing; Physical features

DOI: https://doi.org/10.21834/e-bpj.v11i35.7661

1.0 Introduction

Malaysia is undergoing a demographic transition, evidenced by an expanding ageing population and a substantial proportion of young adults, creating increasing demand for housing environments that support varied generational needs. Due to each distinct characteristic, diverse needs and preferences accompany each generation (Ismail et. al., 2025). Research has suggested that older adults are more susceptible to loneliness and isolation compared to other age groups (Van Gasse & Wyninckx, 2024). While existing ageing frameworks emphasise well-being, the interdependence between generations is overlooked (Heinonen et. al., 2025).

Multi-generational living arrangements have become more common and have gained interest as a potential solution due to economic pressures, cultural expectations, and the need for caregiving support, making the design of age-friendly housing more essential than ever (Yap & Tan, 2021; Adianto et al., 2023). Within such living arrangements, physical features play a significant role in shaping autonomy, comfort, safety, and social interaction for residents across all age groups (Kim et al., 2025). Given Malaysia's demographic realities, understanding how physical housing features influence quality of life and active ageing is essential for advancing inclusive planning and design practices (Wil & Ismail, 2025).

This study aims to develop a conceptual framework of Multi-Generational Housing Environment Preferences' Physical Features for the Quality of Life of an Active Ageing community. Specifically, the study seeks to identify and validate the physical across different

DOI: https://doi.org/10.21834/e-bpj.v11i35.7661

generations. By adopting a multi-generational opinion, the findings provide an inclusive housing design and planning strategies that respond to Malaysia's demographic transition.

2.0 Literature Review

2.1 The Multi-Generational Preferences

Generations are population cohorts classified according to their birth year (Ismail et al., 2020). Understanding the perceptions and attitudes of each generation is essential, as these insights reveal societal trends and behaviours. This study adopts the generational classification proposed by Ismail et al. (2020), which categorises Malaysia's population into four cohorts: Baby Boomers (1946–1961), Generation X (1962–1976), Millennials/Generation Y (1977–1991), and Generation Z (1992–2006).

The generational differences deepen the complexity of housing needs. Older adults prioritise safety, accessibility, and social participation to support ageing-in-place (Nguyen & Levasseur, 2023). Generation X tends to prioritise flexible living arrangements that accommodate work responsibilities and caregiving roles (Maříková et al., 2025). Younger generations, including Millennials and Generation Z, emphasise privacy, flexibility, affordability, and technology integration in housing environments (Adianto et al., 2023). These generational distinctions suggest that multi-generational housing must effectively respond to the diverse needs and expectations of all generations to accommodate diverse family structures.

2.2 Quality of Life (QoL)

Quality of Life (QoL) is strongly influenced by the physical, social, and psychological dimensions of the housing environment (WHO, 2002). Housing that enhances QoL typically incorporates supportive features such as adaptable layouts, safe circulation paths, and fit-for-purpose communal spaces. This concept has recently been used to guide policy for ageing in many Southeast Asian communities, including the Malaysian government, which has actively supported several initiatives for healthy living, especially in the health sector (Loke et al., 2020). QoL reflects a person's ability to engage in daily activities and achieve satisfaction across multiple dimensions (Rashid et al., 2025).

2.3 Active Ageing

Active ageing promotes well-being through environments that support mobility, participation, and safety. Walkable neighbourhoods, accessible areas, and safe outdoor environments encourage physical activity and social connection among older adults (Yue et al., 2025). Active ageing is a holistic approach that encourages older individuals to remain physically active, socially engaged, and economically productive. As people age, relocation and housing transition have become significant issues in consideration of Ageing in Place, AIP (Chou & Kröger, 2022).

2.4 Multi-Generational Housing Environment Preferences' Physical Features for Quality of Life and Active Ageing Community

Multi-generational households reflect a living model where older adults, working-age adults, and younger residents live together in the same home, making the design of age-friendly environments more crucial than ever (Maříková et al., 2025). The development of the Multi-Generational Housing Environment Preferences of Physical Features framework was created and derived using Arksey and O'Malley's (2005) scoping review methodology (Fig.1). These physical features focus on design that can enhance the activities generated within daily living, while social features are characterised by the ability to afford and facilitate daily life in the community, which is the ability to conduct day-to-day activities in place, diversity in keeping a habitual lifestyle, and connectivity with a social network (Ling et al., 2023). Many Malaysians remain insufficiently aware of the implications of population ageing for physical planning, particularly in relation to housing design, community engagement, and the provision of environments that support health and well-being (Rashid et al., 2022)

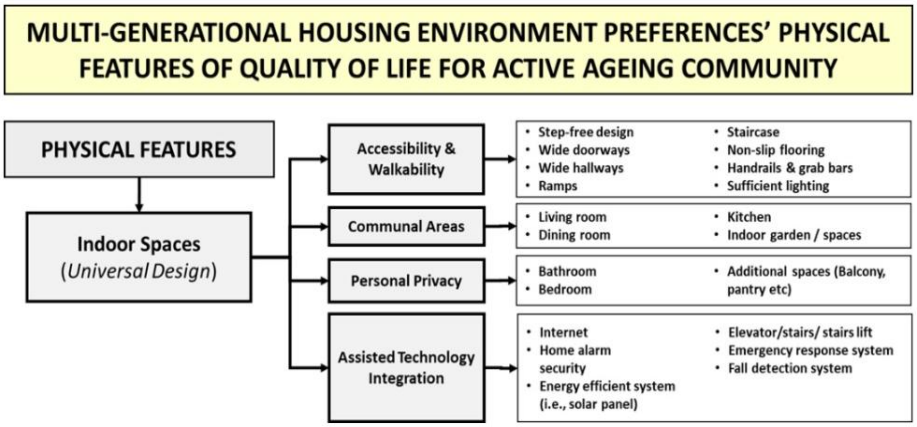

Fig. 1: Multi-Generational Housing Environment Preferences of Quality of Life for Active Ageing Community – Physical Features

3.0 Methodology

This study employed a mixed-methods approach with an exploratory sequential research design. This method design can integrate and synergise the depth of qualitative insights with the generalisability of the quantitative findings, increasing the reliability and validity of the study, which can help to solve a complex problem (Poth & Munce, 2020, as cited in Dawadi et al, 2021; Creswell & Creswell, 2021). Thus, this method aligned with the aim of the study, as it integrates exploratory qualitative insights with quantitative validation to comprehensively capture the complexity in multi-generational housing environments. This study began with a qualitative method, involving a semi-structured interview session with the expert from the industry (i.e., public, private and academia sectors) to explore and identify relevant physical housing environment features. This was followed by a pilot study to assess the reliability of the questionnaire survey. Finally, the quantitative method was adopted to validate and measure the importance of the identified physical features across different generational groups (Baby Boomers, Generation X, Generation Y and Generation Z), thereby providing empirical support for the proposed framework. Survey questionnaires were distributed from 1st June 2025 to 30th October 2025 via Google Forms and a printed questionnaire survey. A total of 398 valid responses across different generational cohorts (Table 1) were collected and analysed using SPSS Version 30. Shah Alam city was chosen as a case study due to the multi-generational population structure with emerging trends in ageing patterns. However, this paper will only discuss on the main quantitative findings of this study.

4.0 Findings

The findings (Table 1) by generations (age cohorts), the sample was composed of younger generations, particularly Generation Z (43.5%) and Generation Y (37.2%), followed by Generation X (13.6%) and a smaller proportion of Baby Boomers (5.8%). The generational composition reflects the demographic reality of Malaysia's increasingly young-adult-centric population structure while also highlighting emerging transitions in ageing dynamics. Overall, the demographic background reveals a varied and balanced sample, enabling comprehensive analysis of multi-generational housing environment preferences. Table 2 presents the current Quality of Life (QoL) Level Satisfaction among generations. Baby Boomers reported the highest QoL mean score (M = 3.83), followed by Generation Y (M = 3.79) and Generation X (M = 3.72), while Generation Z recorded the lowest (M = 3.60), reflecting age-related differences in the current overall QoL and well-being. Table 3 shows the Multi-Generational Housing Environment Preferences' Physical Features by Generations.

Table 1. Respondents' Demographic Background

Gender	**Frequency (*f*)**	**Percentage (%)**
Male	177	44.50
Female	221	55.50
Total	398	100
Generations		
Baby Boomer (1946 – 1961)	23	5.80
Generation X (1962-1976)	54	13.60
Generation Y (1977-1991)	148	37.20
Generation Z (1992-2006)	173	43.50
Total	398	100
Marital Status		
Never Married	175	44.00
Married	202	50.80
Divorced	20	5.00
Widowed	1	0.30
Total	398	100
Employment Status		
Self-employed	28	7.00
Government employee	155	38.90
Private employee	60	15.10
Unemployed	4	1.00
Retired	18	4.50
Students	133	33.40
Total	398	100
Household Income		
Category 1 (RM5,250 and below)	140	35.20
Category 2 (RM5,251 – RM11,819)	177	44.50
Category 3 (RM11,820 – above)	81	20.40
Total	398	100

Table 2. Quality of Life (QoL) Level Satisfaction of Respondents

Quality of Life (QoL) Level Satisfaction			
Generations	**N**	**Mean**	**Standard Deviation**
Baby Boomer (1946 – 1961)	23	3.83	0.80
Generation X (1962-1976)	54	3.72	0.89
Generation Y (1977-1991)	148	3.78	0.90
Generation Z (1992-2006)	173	3.60	0.87

4.1 Accessibility and Walkability

Across all four generations, Accessibility and Walkability emerged as one of the most important sub-features for future multi-generational housing. Baby Boomers placed particularly strong emphasis on this aspect (Mean = 3.89, Rank = 2), reflecting their need for mobility support and age-friendly design. Generation X rated it slightly lower (Mean = 3.58, Rank = 1), yet still identified it as their highest priority, indicating the relevance of safe and accessible circulation to support both ageing parents and young children. Generation Y also ranked Accessibility and Walkability as their top preference (Mean = 3.84, Rank = 1), demonstrating increased awareness of safety and movement efficiency within the home environment. Generation Z similarly highlight this feature as their primary concern (Mean = 3.61, Rank = 1), suggesting a growing expectation among younger cohorts for universally accessible housing layouts. These findings highlight that safety-oriented accessibility features are universally valued, though older generations express higher levels of urgency. Similarly, Dash & Thilagam (2022) stressed that the physical features of the residential development need to consider the universal design concept to encourage the mobility of the residents, particularly the elderly.

Table 3. The Multi-Generational Housing Environment Preferences' Physical Features by Generations

Generations	Baby Boomers			Generation X			Generation Y			Generation Z		
Physical Features (Indoor Spaces)	**Mean**	**Std. Deviation**	**Rank**	**Mean**	**Std. Deviation**	**Rank**	**Mean**	**Std. Deviation**	**Rank**	**Mean**	**Std. Deviation**	**Rank**
Accessibility and Walkability	3.89	0.88	**2**	3.58	0.90	**1**	3.84	0.87	**1**	3.61	0.84	**1**
Communal Areas	3.67	0.87	**3**	3.32	1.01	**4**	3.75	0.84	**3**	3.60	0.85	**2**
Personal Privacy	3.42	1.05	**4**	3.48	0.94	**3**	3.69	0.91	**4**	3.51	0.95	**3**
Assisted Technology Integration	4.06	0.90	**1**	3.54	1.03	**2**	3.76	1.10	**2**	3.61	1.06	**1**

4.2 Communal Areas

Communal Areas were regarded as an important but secondary priority. Baby Boomers showed moderate preference for communal spaces (Mean = 3.67, Rank = 3), likely due to the value they place on shared activities, family bonding, and social engagement. Generation X rated communal areas the lowest among the four features (Mean = 3.32, Rank = 4), indicating that although social spaces are appreciated, they are less urgent than accessibility, privacy, and technology needs for this age group. Generation Y demonstrated a stronger interest in communal environments (Mean = 3.75, Rank = 2), suggesting that they value shared living spaces that facilitate social interaction. Generation Z also rated communal areas relatively high (Mean = 3.60, Rank = 2), reflecting the growing importance of social connectivity and shared spaces among the youngest cohort. This result underlines the cultural significance of family cohesion and social engagement within Malaysian households, supporting the need for future housing designs to integrate flexible and comfortable communal areas. A living environment should not only encourage resident participation but also provide enhanced and well-maintained communal facilities to increase opportunities for social gathering to support active ageing and overall well-being (Miyazaki and Ando, 2020).

4.3 Personal Privacy

Personal Privacy received the lowest rank from Baby Boomers (Mean = 3.42, Rank = 4), suggesting that although privacy is valued, older adults prioritise communal interaction and accessible environments more strongly in future housing. In contrast, Generation X rated Personal Privacy higher (Mean = 3.48, Rank = 3), reflecting their life stage needs for balancing caregiving roles with personal autonomy. Generation Y showed the strongest preference for privacy among all generations (Mean = 3.69, Rank = 3), highlighting their preferences for private, personalised, and quiet zones within multi-generational settings. Generation Z also placed moderate importance on privacy (Mean = 3.51, Rank = 3), indicating that even the youngest cohort values the need for individual space in shared living arrangements. Overall, this suggests that residents still place considerable value on having access to individual spaces that allow for personal time, autonomy, and emotional regulation. This is supported by Ismail et al. (2023), who highlight that privacy is a crucial architectural consideration, together with social interaction, security, and comfort.

4.4 Assisted Technology Integration

The Assisted Technology Integration emerged as the highest priority for Baby Boomers (Mean = 4.06, Rank = 1), indicating strong future demand for technologies that enhance safety, monitoring, and independence. Generation X also valued technology highly (Mean = 3.54, Rank = 2), reflecting a generation that is digitally adaptive and increasingly reliant on smart home systems. Similarly, Generation Y ranked technology as their second-highest priority (Mean = 3.76, Rank = 2), demonstrating acceptance of digital integration as a standard component for future housing environments. Generation Z, as the most digitally native group, also ranked technology integration as their top preference (Mean = 3.61, Rank = 1), reinforcing their expectation that smart features, automation, and connectivity should be embedded in modern living spaces. Technology-enabled safety features were highly valued across all generations, particularly where they reduce caregiving burdens and enhance independence for older adults. The integration of technology with disciplines like ergonomics and architecture is leading to novelties in smart ageing, increasingly incorporated into age-friendly housing design and planning (Xu et al., 2024).

5.0 Discussions

The findings reveal that Accessibility and Walkability features received the highest overall importance, followed by Communal Area, Personal Privacy, and finally Assisted Technology Integration. This hierarchy of preferences corresponds closely with the previous study by Salih et al. (2023), who identified a strong emphasis on accessibility and walkability, which reflects the physical housing as an essential component of active ageing in the Malaysian context. Together, these preferences on physical features reflect evolving potentials for future housing development that support both active ageing and multi-generational living arrangements.

Accessibility and walkability emerged as a top priority among respondents across all generations. Both younger and older participants emphasised that accessibility and walkable environments can enhance daily convenience. Features such as ramps, handrails, and barrier-free were consistently rated as essential for supporting mobility and independence. Installing age-friendly design features—such as grab bars, non-slip flooring, sufficient lighting, and the removal of steps and thresholds is crucial for preventing falls and ensuring safer movement for older adults (Kwon & Oh, 2023). The consistently high ratings indicate respondents' awareness of mobility needs and safety considerations for elderly and physically challenged household members. This highlights widespread recognition of the need for universally accessible home design in supporting future multi-generational living arrangements. These findings echo previous studies linking universal design with improved autonomy and healthy ageing to promote physical activity, cognitive health, and emotional stability (Zhang et al., 2023).

Communal spaces were highlighted as crucial for fostering social connectivity within multi-generational households. Across all generations, communal dining and relaxation spaces consistently ranked within the top three, demonstrating that multi-generational households place strong value on shared environments that facilitate family cohesion and multi-generational bonding. This is supported by Nayak et al. (2023), who found that communal housing models with private living units and shared spaces not only reduce living costs but also encourage social interaction among residents. Respondents noted that shared areas such as gardens, seating zones, and multifunctional halls promote interaction, reduce loneliness, and support intergenerational engagement. The significance of the communal areas (shared areas) aligns with Van Gasse & Wyninckx (2024), who highlight that communal facilities enhance social participation and strengthen family bonds.

Personal privacy was strongly prioritised across generational groups, with particular emphasis on private bedrooms, quiet spaces, and opportunities for personalisation. Respondents place equal importance on balancing shared living with personal space, an essential consideration for future multi-generational housing layouts. Both the private realm of the home and the social realm of the neighbourhood are essential components of place attachment, which is strongly linked with the ageing-in-place concept (Ismail et al., 2023). Personal privacy supports psychological well-being and autonomy, particularly in dense multi-generational settings. Culturally, adaptive personalisation enhances satisfaction and supports sustainable ageing-in-place (Al-Homoud, 2025).

The rising importance of assisted technology integration across generations also suggests the need for digital infrastructure with smart-home readiness as one of the standard housing requirements. This aligns with Pani-Harreman et al. (2020), who argue that technology use can enable older adults to live independently at home while enhancing their sense of safety and security. Assisted technologies, including emergency alert systems, sensor-based monitoring, and smart home controls, were identified as valuable features for improving safety and convenience. Younger residents emphasised digital integration for ease of use, while older adults valued technologies that enhance independence and reduce caregiving burdens. These results reflect broader evidence showing that smart home systems contribute to sustainable and supportive living for older adults (Shi et al., 2025).

6.0 Conclusion & Recommendations

This study identified four (4) key physical features for a multi-generational housing environment, such as: (1) Accessibility and Walkability; (2) Communal Areas; (3) Personal Privacy, and (4) Assisted Technology Integration, that significantly influence the quality of life and active ageing of residents in multi-generational households. The prioritisation of accessibility elements such as adequate lighting, non-slip flooring, barrier-free circulation, and ramps reflects a strong awareness across generations of the need for universal design to enhance mobility, safety, and autonomy, particularly for older adults (Dash & Thilagam, 2022; Kwon & Oh, 2023). At the same time, communal spaces such as living rooms, dining areas, and gardens remain vital in fostering social interaction, supporting findings that shared environments enhance well-being and strengthen family cohesion (Miyazaki & Ando, 2020; Van Gasse & Wyninckx, 2024). Despite shared spaces, respondents also emphasised personal privacy, highlighting its importance for emotional regulation, dignity, and overall satisfaction in dense multi-generational settings (Ismail et al., 2023; Al-Homoud, 2025). Meanwhile, the rising significance of assisted technology integration demonstrates growing acceptance of digitally enabled living environments that support independence and reduce caregiving pressures across age groups (Pani-Harreman et al., 2020; Kim et al., 2023).

As Malaysia transitions toward an ageing society, integrating these physical features into the design for the Multi-generational housing environment framework will be significant for the planning policies in fostering resilient, inclusive, and health-promoting living environments, which align with global evidence emphasising inclusive design, flexible layouts, and technology-enabled environments as essential elements in creating supportive, age-friendly homes (WHO, 2002; Lak et al., 2020). Future housing developments should adopt a holistic approach that combines physical design features with social features to foster meaningful interaction, independence, and ageing-in-place in multi-generational housing environment settings. The combination of physical housing features with socially supportive functions in multi-generational housing environments supports the emotional well-being, reduces isolation, and enhances quality of life among generations, particularly older adults ageing-in-place (Miyazaki & Ando, 2020; Ling et al., 2023; Ismail et al., 2023).

This paper highlights the physical features, such as accessibility, walkability, communal areas, and adaptable layouts, that directly influence well-being and daily functioning while supporting residents' personal autonomy. The findings on the physical features of the

multi-generational housing environment provide evidence-based guidance in enhancing the quality of life and well-being of the population. The developed framework from this study contributes to more inclusive, resilient, and age-friendly housing environments aligned with global healthy ageing frameworks. This study limits its scope only to the physical features (indoor spaces) of the multi-generational housing environment. Therefore, future studies can be conducted to focus on the social features (outdoor spaces) for further enhancement of the developed multi-generational housing environment framework. In-depth studies can be expanded to explore the application of accessible smart-home features in the multi-generational housing framework to facilitate the independent living of the elderly family members in the same housing settings.

Ethical Consideration

This study was conducted with ethical standards that have been approved by the UiTM Research Ethics Committee under reference number REC/04/2025 (PG/MR/202). All respondents were fully briefed, and informed consent was taken. Participation was entirely voluntary. Confidentiality protocols were maintained to ensure the privacy and anonymity of all respondents throughout the study.

Acknowledgements

The authors wish to express their heartfelt gratitude to the Ministry of Higher Education for funding this research under the Fundamental Research Grant Scheme (FRGS) Grant No. FRGS/1/2023/SS10/UITM/02/24 (RMI File No. 600-RMC/FRGS 5/3 (052/2023). Appreciation is also extended to the Research Management Centre (RMC) of Universiti Teknologi MARA (UiTM) for their support in the administration of the grant.

Paper Contribution to the Related Field of Study

This paper offers a comprehensive overview of the multi-generational housing preferences features among the generations to enhance their quality of life and active ageing in Malaysia.

References

Adianto, J., Gabe, R. T., & Farraz, M. A. (2021). The influence of family relations on the housing preferences of Millennials in Depok, Indonesia. Journal of Urbanism International Research on Placemaking and Urban Sustainability, 16(1), 84–100. https://doi.org/10.1080/17549175.2021.1944282

Al-Homoud, M. (2025). Space personalization as a catalyst for sustainable aging in place: Enhancing elderly autonomy through culturally adaptive housing in Jordan. Sustainability, 17(10), 4693. https://doi.org/10.3390/su17104693

Chou, Y., & Kröger, T. (2020). Ageing in place together: older parents and ageing offspring with intellectual disability. Ageing and Society, 42(2), 480–494. https://doi.org/10.1017/s0144686x20001038

Dash, S. P., & Thilagam, N. L. (2022). A Systematic Review on Inter-Relationship of Residential Neighborhood Characteristics on Quality of Life of Elderly. Pertanika Journal of Social Science & Humanities, 30(4), 1533–1566. https://doi.org/10.47836/pjssh.30.4.05

Heinonen, K., Kurtmollaiev, S., Lervik-Olsen, L., Mele, C., Streukens, S., & Andreassen, T. W. (2025). Responsible aging: integrating individual and intergenerational well-being. Journal of Service Management, 1–24. https://doi.org/10.1108/josm-12-2024-0529

Ismail, H., Abidin, A. W. Z., Ling, N. L. F. J., Afif, A. S., & Siahaan, E. (2023, October 31). Factors affecting place attachment and types of living arrangement Preferences for Ageing-In-Place of the Malaysian Generational Housing Consumers in Malaysia. https://publisher.uthm.edu.my/ojs/index.php/IJSCET/article/view/14343

Ismail, H., Johaimi Ling, N. L. F., Abdul Wahab, M., Mohd Fawzy, F. F., Mohamed Shaari, S., & Anthony Jiram, W. R. (2025). The elderly-friendly housing neighbourhood preferred features by generations in Malaysia. *Built Environment Journal*, *22*(SI), 15-25.

Ismail, H., Nordin, M. S. A., Halil, F. M., & Khalid, N. H. A. (2023). The elderly quality of life (E-QoL) and retirement village preferred features by Malaysian Generations. Planning Malaysia, 21.

Ismail, H., Nordin, M. S. A., & Zainan Abidin, A. W. (2020). The Elderly-Friendly Housing Design Features Preferences by Generations in Malaysia. Environment-Behaviour Proceedings Journal, 5(15), 141–148. https://doi.org/10.21834/ebpj.v5i15.2510

Kim, M., Jang, M., & Lee, Y. (2025). Relationship between indoor environmental quality levels in senior housing and perception of indoor environmental quality. Journal of Asian Architecture and Building Engineering, 1–18. https://doi.org/10.1080/13467581.2025.2553034

Kim, Y., Yeo, H., & Lim, L. (2023). Sustainable, walkable cities for the elderly: Identification of the built environment for walkability by activity purpose. Sustainable Cities and Society, 100, 105004. https://doi.org/10.1016/j.scs.2023.105004

Kwon, H. J., & Oh, J. (2023). Comparing older parents' and adult children's fear of falling and perceptions of Age-Friendly Home Modification: an integration of the theories of planned behavior and protection motivation. Behavioral Sciences, 13(5), 403. https://doi.org/10.3390/bs13050403

Lak, A., Rashidghalam, P., Myint, P. K., & Baradaran, H. R. (2020). Comprehensive 5P framework for active aging using the ecological approach: an iterative systematic review. BMC Public Health, 20(1). https://doi.org/10.1186/s12889-019-8136-8

Ling, T., Lu, H., Kao, Y., Chien, S., Chen, H., & Lin, L. (2023). Understanding the Meaningful Places for Aging-in-Place: A Human-Centric Approach toward Inter-Domain Design Criteria Consideration in Taiwan. International Journal of Environmental Research and Public Health, 20(2), 1373. https://doi.org/10.3390/ijerph20021373

Loke, Y.J., Lim, E.S. & Senadjki, A. 2020. Health promotion and active aging among seniors in Malaysia. Journal of Health Research 35(5): 444-456. https://doi.org/10.1108/ jhr-07-2019-0148

Maříková, M., Řehoř, P., Vrchota, J., & Klarner, L. (2025). Factors of work motivation in production engineering for baby boomers, generations X, Y and Z. Management Systems in Production Engineering, 33(3), 321–331. https://doi.org/10.2478/mspe-2025-0031

Miyazaki, E., & Ando, S. (2020). Hierarchical Structure Analysis on Health Determinants of living environment Defining social capital. IOP Conference Series Earth and Environmental Science, 588(3), 032077. https://doi.org/10.1088/1755-1315/588/3/032077

Nayak, S.R., Dash, S.P., Amin, P.S., & Priyashantha, K.G. (2023). A review on intergenerational cohousing: A possible living option for elderly and youth. New Design Ideas, 7(3), 535-556.

Nguyen, T. H. T., & Levasseur, M. (2022). How does Community-Based housing foster social participation in older adults: importance of Well-Designed Common Space, proximity to resources, flexible rules and policies, and benevolent communities. Journal of Gerontological Social Work, 66(1), 103–133. https://doi.org/10.1080/01634372.2022.2133199

Rashid, K., Mohamed, T., Azyze, S. N. a. E., & Ismail, H. (2022). DETERMINING ELDERLY-FRIENDLY FEATURES BASED ON AN AGE-FRIENDLY CITY APPROACH: AN EMPIRICAL ANALYSIS ON LOCAL PERSPECTIVE IN TAIPING AND IPOH, MALAYSIA. PLANNING MALAYSIA, 20. https://doi.org/10.21837/pm.v20i24.1212.

Rashid, K., Sha Bani, N. S. S., Ismail, H., Azman, M. A. A., Muhammad Soffian, N. S., & Ibrahim, R. (2025). The synergy model in elder care: Improving agency and institutional roles for aging in place. Pertanika Proceedings, 1(6). https://doi.org/10.47836/pp.1.6.022.

Salih, S., Hamid, T. A., Ibrahim, R., Ashari, A., Abdullah, S. F., & Chai, S. T. (2023). A scoping review on determinants of active ageing in Southeast Asian region. Sains Malaysiana, 52(5), 1523–1543. https://doi.org/10.17576/jsm-2023-5205-15

Shi, H., Qi, H., & Yang, K. (2025). Enhancing elderly care with smart homes: A comparative study of use and payment willingness. Digital Health, 11, 20552076251374223. https://doi.org/10.1177/20552076251374223

Van Gasse, D., & Wyninckx, B. (2024). Social support exchange in shared living arrangements with older adults—Exploring the benefits of intergenerational living for older adults. Journal of Population Ageing, 17(2), 277-295. https://doi.org/10.1007/S12062-023-09427-4

Wil, C. M. H. C., & Ismail, H. (2025). Integrating Biophilic Design in Multi-Generational Housing: A Conceptual Framework for Enhancing Well-Being and Quality of Life. Built Environment Journal, 22(SI). https://doi.org/10.24191/bej.v22isi.6498
World Health Organization. (2002). Active ageing: A policy framework. Geneva: WHO. https://apps.who.int/iris/handle/10665/67215

Xu, S., Zhang, T., Fukuda, H., He, J., & Bao, X. (2024). Comprehensive Study of Residential Environment Preferences and Characteristics among Older Adults: Empirical Evidence from China. Buildings, 14(7), 2175. https://doi.org/10.3390/buildings14072175

Yap, M. T., & Tan, J. (2021). Housing an ageing population: Lessons from Singapore's multi-generational housing model. Journal of Housing and the Built Environment, 36(4), 1187–1206. https://doi.org/10.1007/s10901-021-09846-5

Yue, Y., Yang, D., Owen, N., Zhou, S., & Van Dyck, D. (2025). Neighborhood environment and older adults' mental wellbeing and cognition: mediating role of activity variety. Journal of Transport & Health, 44, 102144. https://doi.org/10.1016/j.jth.2025.102144

Zhang, S., Wu, W., Xiao, Z., Wu, S., Zhao, Q., Ding, D., & Wang, L. (2023). Creating livable cities for healthy ageing: Cognitive health in older adults and their 15-minute walkable neighbourhoods. Cities, 137, 104312. https://doi.org/10.1016/j.cities.2023.104312