

RESEARCH ARTICLE | OCTOBER 03 2017

## Ageing in place, an overview for the elderly in Malaysia FREE

S. U. Mohd Tobi; M. S. Fathi; D. Amaratunga

*AIP Conf. Proc.* 1891, 020101 (2017)

<https://doi.org/10.1063/1.5005434>



View  
Online



Export  
Citation

### Articles You May Be Interested In

Does financial support improve the well-being of the elderly?

*AIP Conference Proceedings* (July 2021)

A review study for elderly fall and vital signs monitoring systems

*AIP Conf. Proc.* (December 2023)

A secure mobile crowdsensing (MCS) location tracker for elderly in smart city

*AIP Conference Proceedings* (October 2017)

# Ageing in Place, an Overview for the Elderly in Malaysia

S.U. Mohd Tobi<sup>1, a)</sup>, M.S Fathi<sup>1, b)</sup> and D. Amaratunga<sup>2, c)</sup>

<sup>1</sup>*UTM Razak School of Engineering and Advanced Technology, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia*

<sup>2</sup>*School of Art, Design and Architecture, University of Huddersfield, United Kingdom*

<sup>a)</sup>uzairiah.kl@utm.my

<sup>b)</sup>syazli@utm.my

<sup>c)</sup>D.Amaratunga@hud.ac.uk

**Abstract.** Population ageing is a worldwide phenomenon experienced by developed and developing countries. It occurs when the median age of a country rises and shifts the distribution of that country's population towards older ages. Malaysia is experiencing a dramatic increase in the number of elderly people. Recent medical advances and improvements in hygiene and food supply have led to the people of Malaysia having a longer life expectancy. This paper comprehensively reviews articles and journals to discover the concepts, definitions and issues regarding the ageing population globally and in Malaysia, particularly looking at how elderly people can age in place. The concern over ageing is not just about the size of the old age population but, more importantly, about their health, welfare, care and living arrangements as well as the implications for infrastructure, housing, income and economic growth. The built environment plays a role in defining the conditions for people to live healthy lives, and older people require high-quality built environments that suit their needs across the whole life course – a building stock and infrastructure that supports independent living and enhances quality of life for the ageing population. Lifetime houses which fulfil the desires and vital requirement of most households whilst considering the changing essentials of households with elderly and aged people require careful consideration. This paper will review the key areas of housing for elderly people to support the concept of ageing in place as an independent living lifestyle.

## INTRODUCTION

Population ageing is a global phenomenon which has major consequences and effects for all aspects of human life. Ageing is more obvious in the developed countries and less evident in the developing countries [1]. In 2050, the world population is estimated to rise to within the range of 8 to 9.6 billion [2]. Population ageing can certainly be perceived as a major demographic challenge in many European countries within the next fifty years. Its implications for socioeconomic systems, such as public pension programs, healthcare or kinship structures are likely to be substantial [3]. Indeed, the ageing population has increased quickly to become one of the major challenges worldwide. Globally, the total number of elderly people is anticipated to almost triple from 1980 (259 million) to 2025 (761 million). Significantly, 72% of this population (236.9 million) is located in developing countries [4]. The ageing population is continuously increasing which requires action by the responsible parties. For instance, in order to supply the tools and apparatus for undertaking daily activities in the garden and in the kitchen in a less strenuous manner, engineers should take the limitations of the ageing population into account during the design process. Ergonomic considerations, such as comfort and usability, should be further highlighted since the ageing population is more vulnerable to common injuries while using such equipment [5]. Moreover, ageing enhances the percentage of elderly with additional morbidities and functional infirmity. This challenge has major consequences for governments as they address the socio-economic and health issues of the elderly worldwide [6].

Looking at the Malaysia context, the ageing population reached 28.3 million in 2010 and is expected to increase to 38.6 million in the following 30 years. This demographic milestone is causing renewed attention to the challenges caused by population growth [7]. Data from Malaysia illustrates that 7% of the older population were aged 60 years and over during 2005 which is anticipated to double (14%) by 2028. Consequently, there is a vital necessity to increase public awareness, construct the required infrastructure and deliver and maintain various facilities in order to look after the aged population of Malaysians. Securing the way forward for all Malaysians will require a continuous and focused research effort [8]. Since an essential housing strategy for the aged population in Malaysia remains to be developed, major problems in meeting the need for suitable accommodation may arise [9].

## LITERATURE REVIEW

With the unprecedented increase of seniors worldwide, it has become more important to address the challenges and concerns related to meeting their needs. According to Pastalan [10], a higher percentage of the elderly population will result in major social and economic changes to many nations such as increased dependency ratios, an increased burden on the healthcare, welfare and pension systems and shrinking labor forces, among others. Thus, it is important to reassess the current services and facilities so that the needs of the elderly are more properly addressed for the current and future generations. It is also important to address the preferences of a majority of people who want to remain in their homes as they grow older, also known as *ageing in place*, as evidenced by findings from [11], [12]. Hence, this section will provide an overview of the concept of ageing in place, which includes the definition of an elderly person, the physical environment and how it is related to the elderly and current living arrangements that are available for the elderly. The section begins with the definition of ageing in place.

### The Definition of Ageing in Place

In recent years, there has been a steady increase in discussions regarding the ageing in place concept especially in developed nations where the ageing process is more pervasive, as indicated by studies from the World Health Organization, the United Nations Population Fund and Help Age International, [13], [11]. However, regardless of the increased discussions over the years there has been limited evidence on the evolution of the concept within the gerontological body of knowledge. However, from the 1990s to 2010 the ageing in place concept has been addressed by both policies and scientific research and has been stated directly and indirectly [14]. The definition of ageing in place as referred to by the Center for Disease Control and Prevention (2009) is;

“The ability to live in one’s own home and community safely, independently, and comfortably, regardless of age, income, or ability level.”

In different terms, ageing in place involves developing services and facilities that will allow a person to stay in their home or chosen environment for as long as they are able to as they grow older. Ageing in place is seen as a desirable concept for many as it provides an option other than institutional care where a person can remain independent even as their health conditions change over time [11]. Studies from [12], [13], [15] have all indicated that a majority of elderly people prefer to age in place rather than relocate to another place or a residential care facility. This is because ageing in place allows them to maintain their independence, social engagement and networks, and remain in a safe and comfortable environment [16]. Studies have also shown that the concept of ageing in place not only refers to the physical environment or living at home, but also focuses on the improvement of services and facilities that affect the wellbeing of elderly persons and other community members, including healthcare services, technology, social support and more [14], [2]. Thus, it can be concluded that ageing in place is a comprehensive concept which, if implemented correctly, can become a solid basis for developing sustainable communities for the present and future generations.

### Living Arrangements

Based on findings from the [17-19], there has been an increasing demand for long-term living arrangements for the elderly in countries like the United States, Australia, and the United Kingdom as a result of higher numbers of elderly persons within the population. Consequently, there is currently a diverse range of long-term care living arrangements for the elderly population in those countries which can be selected based on personal preferences and level of care needed either from home, within a chosen community or in a senior care facility. There are 5 main types of common living arrangements that are available for the elderly ranging from day care services to nursing homes [20].

According to Australian Local Government Association preferences such as retaining access to family and friends, preferred lifestyle habits, health conditions, financial costs and the need for companionship will determine the type of living arrangement that is most suited to the needs of the elderly person [13]. Most importantly, the availability of various living arrangements allows the elderly to continue living in their preferred environment with an appropriate level of care in a situation where ageing in place is no longer a feasible option. One of the five (5) types of living arrangement according to Ball is in alignment with the ageing in place concept. This is a type of ‘Independent Living’ which has the following criteria:

- Suitable for individuals 55 years and above with good health conditions, who are still independent, prefer the company of their peers and want to have basic services provided for them [20], [21].
- Focuses on promotion of active and healthy lifestyles and ranges from affordable senior apartments to luxury apartments.

Services provided include housekeeping, home maintenance, meals preparation, home health aides, transportation, and social and exercise activities.

## Housing for the Elderly

The process of ageing in place involves a dynamic relationship between a person and their environment; whereby a positive interaction occurs when a person is capable of meeting the demands of the environment or the demands of the environment are changed to match the person’s capabilities [21], [19]. A person’s abilities and limitations will change throughout their lives as they age, thus an elderly person will face more difficulties in meeting the demands of their environment [22]. Studies by [23], [2], [13], [24] have all indicated that a majority of people prefer to remain in their homes and communities for as long as possible as they grow older.

Thus, it is increasingly clear that changes and improvements are urgently needed in terms of providing adequate housing for a steadily ageing population and creating community environments that are supportive and livable for all. This paper will now briefly discuss four (4) key areas of housing for the elderly.

### *Age-friendly Housing*

Studies have revealed that many designers and developers still lack awareness regarding the concept of universal design and its implementation, as well as the unique housing requirements of the elderly population and persons with disabilities [25], [23]. To counter this issue, these studies have provided suggestions which will increase the awareness of universal design which includes providing financial support, offering incentive programs, improving the current education module, and promoting the benefits of proper implementation of universal design and accessibility features. On the other hand, another suggestion provided by [12] to increase knowledge and understanding of universal design and accessibility is to increase the number of programs and workshops that are offered for designers and developers. Hence, these findings suggest that many improvements are still necessary to create accessible environments for persons with weakened capabilities, which often include the elderly population.

Some of the initiatives that can be implemented to improve the awareness and adoption of universal design standards include the development of checklists and guidelines as a reference, providing training and education programs, promoting awareness of universal design and accessibility topics, and encouraging more professionals to provide consultation and expert services [18], [26], [27]. One example would be the United Kingdom’s Inclusive Home Design Act which was introduced in 2003 to maintain the application of minimum standards for the design of homes to improve their accessibility for persons with disabilities. These include accessible power outlets and switches, wider doorways, zero-step entrances, and a bathroom located at the entry level [28], [29]. Meanwhile, there are various guidelines that are available which provide guidance and better understanding of topics related to universal design and accessibility which include those by [8], [27], [30].

### *Healthcare Services*

Rantz reported that even though people now have a longer life expectancy, chronic illnesses have become more widespread and now form the leading cause of disability and functional dependency for middle-aged and elderly groups, which in turn requires services from various sectors to accommodate their needs [30]. In addition Alemayehu indicated that compared to other age groups, the largest consumers of healthcare expenditure in the United States are persons aged 65 and above [31].

For the past few decades, the healthcare industry in Malaysia has grown exponentially and is one of the biggest multipliers for the economy [28]. The healthcare system in Malaysia is divided into 2 categories which are the publicly funded healthcare system run by the government and the private healthcare system. Abdul Wahab reported that many Malaysians largely depend on the public healthcare system, which in 2013 was providing approximately 74% of hospital beds as well as providing employment opportunities in public hospitals and clinics for 68% of doctors [32]. According to the Ministry of Health, the Malaysian government had allocated 8.39% of the National Budget, which amounted to over RM22.16 billion, towards improving the public healthcare system. In addition, [33] reported that, based on a study by the American publication *International Living*, the healthcare system in Malaysia is listed as the third best out of 24 other countries.

However, Burton stated that due to improved standards within the healthcare system and the increase of minimum wage rates, the costs of healthcare services in Malaysia have increased [34]. Furthermore, the burden placed on the healthcare system in Malaysia is also larger due to the increasing number of elderly persons, while advances in the field of medical science using technology have resulted in better treatment procedures but increased medication costs [35]. Guerin also reported that there are several issues related to the delivery of healthcare services which include heavy workloads, an insufficient number of facilities, slow processing speed, and lengthy waiting times. Hence, from these findings, it can be concluded that, although the healthcare system in Malaysia is satisfactory, there are still issues with its affordability and quality which will likely worsen over time [29].

### *Facilities and Services*

Apart from having an age-friendly home environment, it is equally important to provide the necessary services and facilities within a community to enable more people to age in place. The quality and delivery of services to the community play an important role in allowing more elderly persons to remain in their homes and maintain their independence despite weakening physical and mental conditions. According to Hagen, home and community-based services should also be developed so that they are well-coordinated with each other while also providing different levels of care that can be adjusted according to the needs of the individual [11]. This sub-section provides a discussion on the facilities and services which require improvement and development to encourage better ageing in place efforts. They include improving the healthcare delivery system, developing a variety of long-term care services, encouraging the development of senior activity centers, improving transportation services and mobility options, and enhancing places of worship to accommodate elderly persons who wish to focus on their religious faith during the latter part of their lives.

### *Social*

In terms of the social need to age in place, the biggest issue which needs to be addressed by policy-makers and communities is related to the social engagement and involvement of the elderly population in Malaysia, which is backed by studies from the [36]. The health and wellbeing of elderly persons is positively impacted by the development of regular social engagement and contact with other members of the community. This is because elderly persons who are socially active and constantly engaged with other people have been shown to have a slower decline in their health compared to those who are less socially active over time [31]. This emphasizes the importance of elderly persons maintaining regular contact with other persons within the community as this lowers the risk of social isolation and depression and reduces the barriers to receiving appropriate services and facilities, which coincides with findings from the [15]. Thus, the provision of various social activities and programs that are suited to the needs of the elderly are required to allow them to maintain their sense of dignity and facilitate their access to available community services.

The [37] reported that in order to improve ageing in place and create an age-friendly community, it is necessary to improve social services and also provide good opportunities that encourage the participation of elderly people within their communities. There are several initiatives which can alleviate the social issues faced by the elderly population, which include developing safety awareness programs for the elderly, creating better opportunities for elderly individuals to join in community problem-solving groups and discussions, and promoting more physical activities and assisted exercise programs which encourage active ageing lifestyles [4], [36]. Apart from developing these programs and activities for the elderly population, it is also equally important for these programs to be accessible for elderly persons who might face problems in accessing them under normal circumstances.

## CONCLUSION AND THE WAY FORWARD

This paper aims to give a brief explanation and overview of the importance of identifying the key areas of housing for the elderly in Malaysia who want to age in their own home. Although the Malaysian government has carried out some steps towards ensuring the wellbeing of the elderly in Malaysia, there are still improvements that need to be made to improve their welfare. Family and friends still have a responsibility at a personal level to take care of their elders, but it is crucial that the government provides more services and facilities that meet the needs and priorities of the elderly, such as providing more social activities, improving the accessibility of healthcare from homes, and allocating better funding for elderly care needs.

The researchers feel that many Malaysians are not fully aware on the negative impacts of ageing, especially when we are not yet prepared for an ageing population in terms of infrastructure, services and facilities, as most respondents felt that they do not need to plan early for old age. However, many are starting to realize that being able to stay in their own home as they grow older will positively impact on both themselves as individuals and society. By being able to provide things like better accessibility to healthcare facilities and services and homes that are designed for all ages and abilities, the design and planning of the community will inevitably be improved.

## ACKNOWLEDGMENTS

The researcher would like to show her gratitude to the funder of this project, Valuation and Property Services Department, Malaysia (INSPEN) under NAPREC grant allocation. In addition special thanks must go to UTM Razak School of Engineering and Advanced Technology

## REFERENCES

1. Akil, S.M.S. and Abdullah, S., UNDERSTANDING LIFE AT THE OLD FOLK'S HOME.
2. Granger, M. and Asay, N., An Entrance for Healthful Living and Aging in Place.
3. Centers for Disease Control and Prevention, 2013. Home and Recreational Safety: Important Facts About Falls.
4. Livable Housing Australia. Livable Housing Design Guidelines: Second Edition. Retrieved 18 September 2016 from [http://livablehousingaustralia.org.au/library/help/Livable\\_Housing\\_Design\\_Guidelines\\_Web1.pdf](http://livablehousingaustralia.org.au/library/help/Livable_Housing_Design_Guidelines_Web1.pdf)
5. Thomas, P.A., 2011. Trajectories of social engagement and limitations in late life. *Journal of Health and Social Behavior*, 52(4), pp.430-443.
6. Imrie, R., 2003. Housing quality and the provision of accessible homes. *Housing Studies*, 18(3), pp.387-408.
7. Lee, H.H., Swanson, P.A., Idler, K.B., Rosenblatt, J.D., Chen, I.S., Golde, D.W., Robertson, E., Stephens, J.E., Chan, E.W., Buytendorp, M.H. and Johnson, J.E., 2002. Methods for the detection of HTLV-II antibodies employing novel HTLV-II NRA envelope peptides. U.S. Patent 6,406,841.
8. Lawton, M.P. and Nahemow, L., 1973. Ecology and the aging process.
9. Rashid, S.A., Ghani, P.A. and Daud, N., 2014, December. Population trends in Malaysia: 1970-2010. In *AIP Conference Proceedings* (Vol. 1635, No. 1, pp. 875-882). AIP.
10. Pastalan, L.A., 1990. Aging in place: The role of housing and social supports (Vol. 6, No. 1-2). Psychology Press.
11. Hagen, S.A., 2013. Rising demand for long-term services and supports for elderly people. Congressional Budget Office.
12. Hartje, S.C., 2004. Developing an incentive program for universal design in new, single-family housing. *Housing and Society*, 31(2), pp.195-212.
13. Australian Local Government Association, 2006. Age Friendly Built Environments: Opportunities for Local Government. Deakin: Australian Local Government Association.
14. Tan, Y.L. US Magazine: Malaysia's Healthcare Is No. 3 Worldwide. The Star Online newspaper. (2014) Retrieved 17 February 2017 from <http://www.thestar.com.my/news/nation/2014/02/10/malaysian-healthcare-third-best-worldwide-us-magazine/>
15. British Columbia Ministry of Health. (2004). Social Isolation among Seniors: An Emerging Issue. An investigation by the Children's, Women's and Seniors Health Branch, British Columbia Ministry of Health. March 2004

16. Lee, D.K.S., Ng, P.K., Jee, K.S., Tan, Y.H. and Leong, M.P., 2015. A Review of Ergonomic Tools and Apparatus for the Ageing Population. *Applied Mechanics and Materials*, 773, p.814.
17. Robinson, L., Saisan, J., and Russell, D. Independent Living for Seniors - Choosing a Retirement Home or Retirement Facility. Retrieved 17 February 2017 from <http://www.helpguide.org/articles/senior-housing/independent-living-for-seniors.htm>
18. AusAID. (2013). Accessibility Design Guide: Universal design principles for Australia's aid program. A companion volume to Development for All: Towards a disability-inclusive Australian aid program 2009–2014. Retrieved 18 September 2016 from <http://dfat.gov.au/about-us/publications/Documents/accessibility-design-guide.pdf>
19. Ball, M, Blanchette, R., Nanda, A. and Wyatt, P. (2011). Housing markets and independence in old age: expanding the opportunities. Henley Business School, University of Reading. Retrieved 11 October 2016 from <http://centaur.reading.ac.uk/24443/1/HousingMarketsinOldAge.pdf>
20. A Place for Mom. Guide to Senior Housing & Care. (Place for Mom Inc., Seattle, 2005) Retrieved 17 February 2017 from [http://web28.streamhoster.com/apfmdev/apfm\\_ebook\\_guide-to-senior-housing\\_final.pdf](http://web28.streamhoster.com/apfmdev/apfm_ebook_guide-to-senior-housing_final.pdf), pp. 22
21. Kumar, H.K. At what cost, healthcare in Malaysia? The Star online. Retrieved 17 February 2017 from <http://www.thestar.com.my/Lifestyle/Health/2014/11/16/At-what-cost-healthcare-in-Malaysia/>
22. Ramachandran, R., 2013. Health Status of Elderly: Evidence from India and Japan. *Indian Journal of Gerontology*, 27(2).
23. Beattie, Elizabeth R.A. (1999). Long-term Care for the Elderly in Australia. *Journal of Nursing Scholarship* 31(2): 134-135. <http://hdl.handle.net/2027.42/72939>
24. Ir M, D., Johari Dato Mohd Ghazali, R., Hazilah Abd Manaf, N., Hassan Asaari Abdullah, A., Abu Bakar, A., Salikin, F., Umaphy, M., Ali, R., Bidin, N. and Ismefariana Wan Ismail, W., 2011. Hospital waiting time: the forgotten premise of healthcare service delivery? *International journal of health care quality assurance*, 24(7), pp.506-522.
25. Fausset, C.B., Kelly, A.J., Rogers, W.A. and Fisk, A.D., 2011. Challenges to aging in place: Understanding home maintenance difficulties. *Journal of Housing for the Elderly*, 25(2), pp.125-141.
26. Sulaiman, N., Baldry, D. and Ruddock, L., 2006, April. Issues concerning housing for the elderly in Malaysia. In 6th International Postgraduate Research Conference.
27. Farber, N., Shinkle, D., Lynott, J., Fox-Grage, W. and Harrell, R., 2011. Aging in place: A state survey of livability policies and practices.
28. Greenberg, B.R. & Schwarz, J. Aging in Place...With A Little Help from Our Friends. Grant makers in Aging. (The Philanthropic Group, New York, 2009). Retrieved 17 February 2017 from <http://www.philanthropicgroup.com/giaaip050409v2.pdf> pp. 10
29. Guerin, B., Hoorens, S., Khodyakov, D. and Yaqub, O., 2015. A growing and ageing population. *Global societal trends to, 2030*.
30. Rantz, M.J., Marek, K.D., Aud, M.A., Johnson, R.A., Otto, D. and Porter, R., 2005. Tiger Place: A new future for older adults. *Journal of nursing care quality*, 20(1), pp.1-4.
31. Alemayehu, B. and Warner, K.E., 2004. The lifetime distribution of health care costs. *Health services research*, 39(3), pp.627-642.
32. Abdul Wahab, F. Healthcare in Malaysia. *HB Herald*. Issue 7, May/June (2013)
33. Lanzieri, G., 2011. The greying of the baby boomers. A century-long view of ageing in European populations. *Stat Focus*, 23, pp.1-12.
34. Burton, C. (2016). Livability for All: The 2016 AARP Age-friendly Community Survey of Tallahassee, Florida AARP Members and Residents Age 50-Plus. American Association of Retired Persons. Retrieved 16 September 2016 from [http://www.aarp.org/content/dam/aarp/research/surveys\\_statistics/liv-com/2016/2016-afc-tallahassee-report-rc-liv-com.pdf](http://www.aarp.org/content/dam/aarp/research/surveys_statistics/liv-com/2016/2016-afc-tallahassee-report-rc-liv-com.pdf)
35. Soon, S.Y. Public versus private on medical care. *Borneo Post* online. Retrieved 10 October 2015 from <http://www.theborneopost.com/2010/12/12/public-versus-private-on-medical-care/>
36. New Zealand Ministry of Social Policy (2001). The New Zealand positive ageing strategy. Senior Citizens Unit, Ministry of Social Policy, New Zealand
37. Alberta Health and Wellness. Continuing Care Strategy: Aging in the Right Place.(Alberta Health and Wellness, Edmonton, Alberta, 2008), pp. 20