

Elderly Independent Living in Elderly Care Homes

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The world is moving towards an aging society, elderly population and their average life span is on the rise. Malaysia is underprepared to face on the challenges of an aging society & nation. Current health and elderly care facility does not provide adequate and relevant care to the support the increasing ageing population. Hence there is a need to formulate design criteria for elderly homes environment that support independent living of elderly. This study will conduct questionnaire survey on aging population to identify spatial quality that enables independence and understand their daily activity. This research will identify the design criteria for elderly care homes. It will highlight spatial quality that enhance the ability of elderly and provide a list of daily activity of elderly. Nonetheless, future research can look on other variable that influence independence living of elderly who age in place or retirement villages.

Keywords: *Elderly, Independent Living, Elderly Care Homes, Spatial Quality*

1. INTRODUCTION

The world is moving towards an aging society, Malaysia is no exception in this matter. The elderly population will be doubled reaching 15% by 2040 as compared to 2017 (Department of Statistic, 2018). United Nation drafted both sustainable development goal (SDG) and principle for older people that included the rights and wellbeing of elderly. It accentuates the effort of maintaining wellbeing and providing elderly access to health and care service. Societies must adapt their policies and services to respond to the changing age structure of their populations if they are to deliver the promises of the SDGs. However, the question remains on how prepared is Malaysia in facing head on with challenges of an elderly society.

Current available option for old age living arrangement are divided into 3 typology. First option will be aging in place, most often elderly prefer to age in their residing homes as there is a stronger sense of familiarity and belonging to them. Second option would be retirement village.

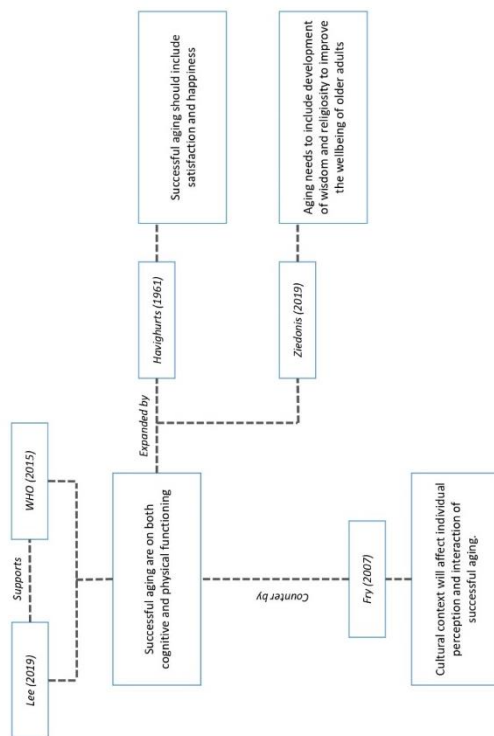
In fact, elderly facility provision in Malaysia is comparatively lower than other developed country (*Department of Statistic Malaysia, 2011*). In addition to that, the current health and elderly care facility does not provide adequate and relevant care to the support the increasing ageing population (Datuk Dr Lokman Hakim Sulaiman). Elderly care homes need to address more than health aspect but also help in expanding their capability and potential of elderly. The built environment is a crucial factor in defining the conditions for people to lead a healthy life, while the elderly requires well designed built environment that fulfil their needs across their

whole course of life (Tobi, Fathi & Amaratunga 2017). Residents of elderly homes experiences poor quality of life (Onunkwor, et. al., 2016). Current aged care facilities can deprive older people of access and support to achieve opportunities in fully developing their own potential and their entitlement to self-fulfilment (Brownie & Horstmanshof, 2012).

However, there is lack of studies on how elderly home environment can enable elderly to lead more independent living. Thus, it is crucial, to identify spatial quality that able to empower elderly yo lead independent living which ensure successful aging.

2. LITERATURE REVIEW

2.1 Definition of Healthy Aging



The journey of aging can be differentiate into phases according to the indepedece of the elderly, from the initial independent state to dependent state and lastly crisis management. Medical advancement have increased human life span over the century. However, it is stillll unclear that if people are aging successfully in both cognitive and physical functioning (Lee, 2019). Healthy aging is not merely the absence of illness or infirmity. It is also the complete state of physical, mental and social wellbeing. (World Health

Organisation, 2015). The notion is expanded by Havighurst (1961) that aging should be promoting maximum satisfaction and hapiness.

However cultural context affects the understanding and interaction towards promoting a good old age (Fry, 2007). Therefore, a study on the exact preference of the elderly in context in Malaysia is crucial in better promoting successful aging. Furthermore, aging needs to include development of wisdom and religiosity to improve the wellbeing of older adults (Ziedonis, 2019). But older adult lacks the platform and opportunity to pursue such development in their later stage. Thus, study will need to identify the preference of medium that elderly requires to develop their inner values.

2.2 Design Criteria

Elderly care homes needs to adopt a more wholistic approach in caring of the elderly. Brownie & Horstmanshof (2012), emphasieze on the need that aged care that encourages purueance of opportunities and development of potential of the elderly. In addition to that social activities are able to expand the potential of elderly to achieve self-actualization and self- value (Tobi, Fathi & Amarathunga, 2017). However, research lack in providing models that stimulate physical and emotional aspect of elderly. Thus, research need to investigate models that able to stimulate physical and emotional aspect of elderly.

The autonomy of the elderly over the elderly care home is also an important criterion to lead better aging. Older adults perceive home environment to be better fit them, when they yield higher control o ver it (Aiman, Alacron & Fernandez, 2021). Question remains on the method of application of that enhance internal control of elderly over their surroundings. Thus, the research will look into how elderly can provide higher internal control of surrounding to the elderly.

Gharveis (2020) expanded the idea of autonomy with the aspect of walkability. Enabling elderly to have obstacle free walkable space can increase the physical activity of elderly population. Studies has found out that spaces which lack of safe, age friendly pedestrian infrastructure are hindrance to health promotion in later life (Adlakha, wt. al., 2021). However, research lack in identifying design criteria for it to be age friendly for elderly in elderly care homes. Thus, this study will identify on the design criteria for which is age friendly walkability for elderly in an elderly care home.

The overall studies can be summarized that design criteria for elderly homes should center around empowerment and sense of security. It allows the elderly to pursue their potential and aspiration within their twilight years. Elderly will establish a stronger self-esteem and feel relevant with the society.

Document	Background Study	Problem Statement	Gap	POD	Methodology	Results
Brownie & Hosseini (2012)	United Nations General Assembly adopted the Principles for Older people, participation, care, self-fulfilment and dignity as legitimate entitlements of all older people.	residential aged facilities deprive older people of access and support to pursue opportunities for the full development of their potential, <u>life</u> to self-fulfilment	Research is needed to identify the most effective models of aged care practice that empower and enable older people in residential facilities to be all that they can be	Article explores the influence of institutional care on older people's ability to exercise their entitlement to self-fulfilment	Literature Review	Eden Alternative is presented as an exemplar of a humanistic approach to aged care that encourages to pursue opportunities for the full development of potential.
Gharavisa (2020)	Most elderly spend majority of their day inside or around their home, this lifestyle relates to low activity levels	Health problems associated with inactivity may lead to a higher level of health-care dependency	Research did no focus on other aspects of physical activity level including social, cultural and economic.	Incorporates understanding design strategies that associate with active living to inform evidence-based approach guidelines.	Literature Review	Increasing opportunities for walkable spaces and reducing physical barriers can result in higher levels of physical activity for the elderly population
Tobi, Fathi & Amarantunza (2017)	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	The concern over ageing is about their health, welfare, care and living arrangements as well as the implications for infrastructure, housing, income and economic growth	Providing better accessibility to healthcare facilities and services and homes that are designed for all ages are needed for all ages and abilities the design and planning of the community will be improved	Review the key areas of housing for elderly people to support the concept of ageing in place as an independent living lifestyle.	Literature Review	Research lack in design criteria of physical and emotional aspect of elderly.

Amian, Alarcon, Fernandez (2021)	Housing plays an important role in the aging process and health. The house and its nearby environment host most of the daily activities of older adults.	Although people are living longer, well-being and quality of life (QoL) are not guaranteed.	The research lack on highlighting method of application that promote internal control of elderly over their surrounding	This study analyzes the perceived home develops Residential Satisfaction in older adults	Survey	Perceptions of meaning, functionality and RS itself depend on internal housing-related control beliefs. Active older adults with higher internal control perceived their home fit better to the need of everyday life and improve RS.
Adlakha, et al. (2021)	The World Health Organization and the United Nations have increasingly acknowledged the importance of urban green space (UGS) for healthy ageing.	Low- and middle-income countries (LMICs) like India with exponential ageing populations have inadequate UGS.	Research only focuses on importance of UGS towards the elderly but lack in providing the design criteria for it to be age friendly for elderly.	Study examined the relationships between UGS and healthy ageing in two megacities in India	Interview	The findings highlight the benefits of UGS for older adults, particularly those living in socially disadvantaged or underserved communities

2.3 Home Care Environment

Lighting has been identified as a significant environmental attribute responsible for promoting physical and mental health of the elderly (Shikder, Mourshed & Prince, 2011). Lighting is important in aiding elderly whom are visually challenged and also setting the mood of the environment. However, study lacks in integration of lighting deployment in relevance of daily activity of elderly. Therefore, this study will identify the lighting quality according to daily activity of elderly.

Biophilia and indoor environmental quality is able to influence wellbeing of the elderly (engleen, Rahman& Jong, 2021). Burton & Sheehan (2010) expanded the notion by highlighting that providing vies of outside has high correlation to the elderly's wellbeing. However, study lack highlight on the spatial quality in an elderly care facility. Therefore, the study will identify the spatial quality for the elderly care facility.

Moreover, spatial relationship are significant determiner for the elderly experience in the elderly homes. Harison & Mclyntyre (2017) identifies that spatial legibility, interconnectedness, transferability, diversity and aesthetic. However, study did not exemplify how to upgrade elderly home in respects of the 5 stated spatial quality. Thus, this study will identify the elderly preference on the 5 aspect that makes the elderly care home to better fit them.

Lastly, it is encouraged to integrate elderly care home into the neighborhood and town by establishing a residential care network (Coomans & Heylighen, 2011). However, there is lack on how to assist elderly in interacting with the society. Therefore, the study will identify the spatial quality that encourage and support the elderly interaction with the society.

In short. home care environment is a medium to assist elderly in achieving higher level of wellbeing.

Document	Background Study	Problem Statement	Gap	POD	Methodology	Results
Shikder, Mourshed & Prince (2011)	The ageing population has already been recognized as one of the greatest challenges of the 21st century for housing	The design of the built environment needs to consider various physical and psychological attributes of the elderly, and those aged 65 and over.	Lack in integration of lighting in accordance to daily activity of elderly.	Document what is known of the physical and psychological aspects of lighting and their role in promoting a healthy and safe environment for the elderly	Literature Review	Lighting has been identified as a significant environmental attribute responsible for promoting physical and mental health of the elderly.
Harison & Mclyntyre (2017)	The built environment influences the wellbeing of older people in care homes	Uncovering this design information is key for the future improvement of environments for older people	Study did not exemplify how to upgrade elderly home in respect of the 5 elements.	Provide insight into the qualities of the built environment that have impact on the activity and potential wellbeing of older residents	Case Study	Spatial Legibility, Spatial Interconnectedness, Spatial Transferability, Spatial Diversity, and Spatial Aesthetic. Identified as 5 significant elements
Engelen, Rahmann & Jong (2021)	As China's aging trend intensifies and the proportion of empty nests increases, the health-related quality of life of the elderly is the focus of social attention.	Previous studies focused on the quality of life of the elderly, rather than empty nests, and lacked the discussion of the mechanism of influencing factors	Study lack highlight on the spatial quality in an elderly care facility.	To understand the current evidence of the relationship between design, healthy ageing and QoL.	Database, and reference list search.	Good evidence for the role of biophilia, and indoor environmental quality; emerging evidence for technology; way finding, and opportunities for social interaction, but limited evidence for safety/security and adaptability/fit.
Coomans & Heylighen (2011)	Housing for older people in Flanders evolves toward small-scale facilities and better quality of life	Ageing population strains the means to achieve this to the limit	Lack on how to assist elderly in interacting with society.	The authors investigate whether and how Flemish large-scale facilities can adapt to meet contemporary and future requirements of older people.	Case Study	Integrate elderly care home into the neighborhood and town by establishing a residential care network

2.4 Independent Living

Behavioural lifestyle has strong influence over quality of life among elderly (Zhang, et. al., 2012). However the study only focuses in the context of China. Therefore, this study will focus the behavioural lifestyle of elderly in Malaysia. Mohammad, Dom ,& Ahmad (2016),highlight that elderly craves for fulfilling social interaction with different age group. Social interaction is a factor in emabling independent livng. Elderly whom constantly engage in social interaction

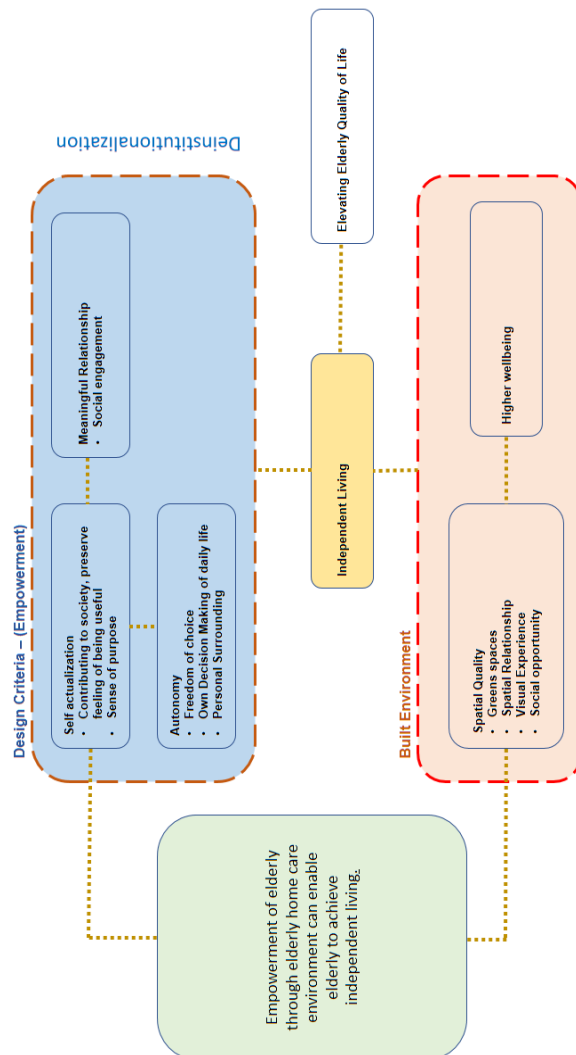
acquire better mental state of elderly. However, research lacks in proposing how to enable elderly to be independent within such social realms. Therefore, this research shall identify on the design that enables elderly to be independent in such social setting.

Furthermore, higher activity of daily living functioning and higher is proven to lead lower depression (Bozo, Toskaby & Kurum 2010). However research did not highlight how to enable elderly to be able to conduct daily activity longer. Therefore, this research will identify spatial quality that enable elderly to conduct daily activity longer in the elderly home care environment. Lastly, Greiner, Snowdon & Schmitt (1996) states that impaired cognitive function is associated with loss of independence in activities of daily living. However, study did not highlight the method to enable elderly to prolong their ability in conducting own daily activity independently. Therefore, this study will investigate on role of low normal cognitive function in the loss of independence in daily living activity.

In short, enabling elderly to perform daily living activity elevates their wellbeing

Document	Background Study	Problem Statement	Gap	POD	Methodology	Results
Zhang, et al. (2012)	As China's aging trend intensifies and the proportion of empty nests increases, the health-related quality of life of the elderly is the focus of social attention.	Previous studies focused on the quality of life of the elderly, rather than empty nesters, and lacked the discussion of the mechanism of influencing factors	Study only focuses in China context.	Study explores the influencing factors of the quality of life (QOL) and interaction mechanisms among empty nesters in Shanxi Province, China.	Survey	Maintaining a healthy lifestyle was important to improve the QOL of the empty nesters
Harrison & McIntyre (2017)	The built environment influences the wellbeing of older people in care homes	Uncovering this design information is key for the future improvement of environments for older people	Study did not exemplify how to upgrade elderly home in respect of the 5 elements.	Provide insight into the qualities of the built environment that have impact on the activity and potential wellbeing of older residents	Case Study	Spatial Legibility, Spatial Interconnectedness, Spatial Transatability Diversity, and Spatial Aesthetic identified as 5 significant elements
Greiner, Snowdon & Schmitt (1996)	Loss of independence in activities of daily living is a marker of decline and frailty in older adults and an indicator of health care use.	Decreased cognitive function is related to loss of independence in elderly people, particularly in the oldest old, where dementia is most prevalent	Study did not highlight the method to enable elderly to prolong their ability in conducting own daily activity independently.	Investigate role of low normal cognitive function in the loss of independent in daily living activity	Sample Assessment	Progression from low normal to impaired cognitive function was associated with loss of independence in activities of daily living.
Bozo, Toskabay & Kurum (2010)	As adult age, they encounter new challenges.	Dysfunction is likely to make a person feel sad, anxious, and worthless, which are also signs of major depress	Study did not highlight how to enable elderly to be able to conduct daily activity longer.	examined the effects of activities of daily living (ADL) and perceived social support on the level of depression among elderly Turkish people	Survey	Higher ADL functioning and higher perceived social support predicted lower depression.

3. CONCEPTUAL FRAMEWORK



4. CONCLUSION

Design criteria of future elderly care home should revolve around empowering the elderly. Elderly as a vulnerable group needs assistance in keeping themselves relevant and see themselves as useful. In order to foster dignity in aging. Moreover the elderly care homes environment is capable of assisting elderly in achieving higher overall wellbeing. The spatial quality of environment is required to support the elderly to be taking charge over their own residing environment. Last but not least an independent elderly that perform daily living activity can lead to better wellbeing of the elderly. Therefore

empowerment of elderly through home care environment can enable elderly to achieve independent living.

5. CONTRIBUTIONS AND BENEFIT OF RESEARCH.

The research will be able to draw out a design criteria on elderly homes in the future. The research will be able to identify the list of best practice of design criteria that support ageing society. Next, the research also identifies spatial quality that could assist and enhance the experience of elderly in their aging journey. Lastly the research will provide a list of daily living activity of elderly. The research will be able to benefit Department of Social Welfare to establish more empowerment-oriented care elderly facility. Future policy can also be developed based on the better understanding of elderly preference to better increase their wellbeing.

The study will also provide benefits to the construction industry, allowing better tailored homes and facility targeting elderly. Future elderly facility can also adopt the design guideline that provides another alternative of living arrangement for future elderly. The elderly facility will be able to empower them to lead them to have independent and dignified life.

6. LIMITATIONS OF RESEARCH / FUTURE RECOMMENDATIONS

The study is limited to the preference of elderly on a elderly homes. The research is restricted to the preference of elderly in Malaysia. Future study can explore more variable that affect the quality of life of elderly.

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