Conceptualization of cultural sustainability for elderly Pondok Village (EPV)

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Abstract. Elderly Pondok Village (EPV) is viewed as a feasible accommodation that provides religious teaching and learning with residential facilities for ageing communities. Currently, Muslim retirees seem to prefer pondok system as one of the choices to spend their time after retirement. With the growing interest in this system, a comprehensive EPV model is crucial to meet the needs and such model will provide a dynamic environment for aging population. Many debates and issues of EPV have taken place in which issues such as lack of energy efficiency, safety, comfort, design for flexibility and social sustainability requirements were highlighted. To provide adequate, good quality accommodation, there is an urgent need for EPV to provide a living environment that fully addresses the sustainable requirements including social needs. Therefore, the aim of this review is to identify the important facilities to be included in the EPV and to check the conformity of the facilities to cultural sustainability and Islamic guidelines. This paper presents the review of findings on sustainable requirements based on synthesising sustainable pondok/retirement village model across the globe. The discussions highlighted some important considerations to include in the facilities provided for Muslim retirees. The results of the study indicated a few significant factors to consider which will foster cultural sustainability. Implementation of the suggested facilities will support the cultural sustainability according to the stipulated Islamic perspectives.

1. Introduction

In Malaysia, the group aged 60 years old is projected to be at 15% in 2030 and expected will increase up to 23% in 2050. The circumstances might affect the social and health care services [1]. Consequently, there will be more pressures for government to provide such services since elderly is less healthy than the young. This predicament indicates that the local government must provide ample employment opportunities as well as awareness programmes and services for the young, while, providing necessary assistance of life options for the elderly. As mentioned by [2], older people require more care and attention than the general population. Fulfilling policies and lifelong learning opportunities for the elders should aim at improving their quality of life. In Malaysia, Ministry of Women, Family and Community Development is one of the government agencies that implements the Policy and Action Plan for Older Person under Objective 3 and Strategy 3 of the policy. The Strategy 3 stated “Ensuring enabling and supportive environments: Among the strategies that are planned to achieve enabling and supportive environment for older persons are to strengthen the human governance and the enforcement of law pertaining to older persons; accessibility and capacity-building of the organizations; and intergenerational interdependence” [3]. This objective is highlighted to ensure that elderly society are safe and live in a protected environment. In conjunction with Strategy 3, currently there are many promotions of different concepts of accommodation for retirees such as Second Home, Pondok Warga Emas and Retirement Village.

Religious education for the elderly in Pondok System (PS) in Malaysia has grown over the years. Now pondok institutions are moving forward into a modern rational institution [4] for Muslim to learn and study Islamic knowledge. Nowadays, we can see that pondok institutions are incorporated...
everywhere and become popular institutions of Islamic education in Malaysia [5]. To date, a new PS concept shares certain similar characteristics and practices with the concept of Retirement Village (RV) as practiced in few countries like Australia and United Kingdom [6]. In this research, the term Elderly Pondok Village (EPV) is applied by referring to the concept of retirement village and Pondok system as practiced by other countries. However, the majority of existing pondok was built without taking into consideration of the climate and environmental impact. Hence, these pondok establishments face the issue of lack of facilities management. Therefore, there is a need in Facilities Management transformation to take place to align the EPV with visions of a sustainable future. The key challenge of managing EPV to date is to ensure efficient and proper management practices to meet the society’s demand. Better facilities management practices will contribute to improvements in EPV performance: this is to ensure that EPV can move towards applying sustainability in their vicinity and break away from existing critical facilities issues. According to [5], pondok Institution in Malaysia is growing but there is no certain technique or tool to monitor and measure its sustainability and development of pondok education performance.

The development of EPV is normally based on very basic facilities. Moreover, there is a long process before an EPV can establish better facilities management. Today, the number of EPV keeps increasing even with different level of facilities and some are upgraded based on the need of the residents. Generally, EPV residents comprise of middle range income individuals that are single, widowed, or come in as couple. The drastic development of EPV system calls for immediate government involvement in monitoring the performance and operationalized. Therefore, the expectations and aspirations of the society in the urban and rural areas may differ depending on the phenomenon [7]. This paper is primarily based on review of literature, and it aims to propose a conceptualization for Sustainable Elderly Pondok Village by synthesising five model of similar concepts from Malaysia, United Kingdom, Indonesia, Australia, and New Zealand. According to general interpretation, sustainability factors are the concept of the Sustainable EPV Model; it considers environmental elements including social, facilities, design, recycle, management and maintenance. The factors are those that can influence active lifestyle for the ageing population in their housing environment. This is because the elderly will spent most of their time at home. Nevertheless, our national policy does not address the housing needs of the elderly and fail to address the need for active urban elderlies in the housing programmes including for the Muslim. All those factors can give high impact to ageing population lifestyle since most of the time will spent at home. Nevertheless, this matter was not emphasized in national policy and does not outline the basic requirements needed in design and operationalized of the elderly accommodation.

2. Literature review

2.1. Definition of pondok system and elderly
The word Pondok originates from the Arabic word al-funduq, which defines as a residential house, hostel or hotel. It also means a residential arrangement in the form of small houses for between three to four students [8]. In Indonesia, it is known as “pesantren” from the word “santri” meaning religious students. Whereas according to Kamus Dewan (a Malay dictionary) pondok means madrasah (school) and asrama (hostel) means a place for recitation and religious studies. When an elderly makes the decision to move, it is often centred around his reasons to choose congregated living arrangement, which is related to concepts like relocation, mobility, and transition: all these are taken into consideration. In addition, [9] and [10] defined pondok as an educational institution that provides religious teaching and learning with residential facilities to especially younger Muslim students from different backgrounds. It was viewed as an educational religious institution and a congregated home for the elders [10]. At the same time, studies on elder’s quality of life and well-being would always consider religion as an influential factor for the development of pondok. In Malaysia, religious activities are important to elders’ well-being to those who live in the community or in varied congregated living arrangements[11].
Therefore, it is found that the decision made by an elderly to move to a place like pondok is largely dependent on offers for future living arrangement. To improve the elders’ living condition in pondok, many facilities and assistance are needed [12].

Aging and being an elderly involves a whole process that is characterised by the occurrence of physical and spiritual. Conventionally, being an elderly has been defined as a being at a chronological age of 65 years old or older [13]. The global population of senior citizens is expected to reach 2.1 billion by 2050. Initially, Malaysia has been classified as an aging nation by 2030. In addition, retirement refers to the time of life when one chooses to permanently leave the workforce behind. The traditional retirement age is 65 in the United States and in most other developed countries. The growing number of elderly population around the world has prompted a transformation on the cultural lifestyle due to individuals’ higher education levels and the elderly’s desire after passing the retiring age. The situation in Malaysia is aligned with other countries such as Australia and United Kingdom where, the aging population nowadays is educated that spurs the marked increase in the desire for health care, wellness, and retirement homes.

2.2. Sustainability of pondok system

Many researchers stated that, there are three pillars of sustainability; firstly, economic pillar which is related to income; secondly, social pillar which is related to human relationship and finally environment pillar that is related to lifestyle [14]. Hence, all these three pillars must align with the development process to ensure the goals introduced by this model are achieved. The concept of sustainability was discussed in agenda 21, in which the Malaysian government has promoted holistic development. Sustainable development must be welcomed from an Islamic perspective in the sense that it seeks a balance between economy, society, and the environment, and measures economic performance by putting spiritual or non-material needs on the same footing as material needs [14]. A pondok system is a community for elderly people that offers comfortable accommodation, services, and facilities. In fact, it should have a conducive living arrangement that elders feel connected to. Undeniably, PS has evolved by applying similar concept to a retirement village in the developed nations. As mentioned by [15], the concept created in the retirement village is to have a well-maintained, current and age-friendly environment for the elderly. This aligns with research by [16], who identifies significant review of four types of social support of relevance to elderly care namely emotional social support, companionship support, instrumental support, and informational social support. In addition, a framework involving concepts of social capital, social support, and social safety net (3S) for elderly care, also was introduced as one of the most effective ways to understand the sustainability concept within religious communities.

Therefore, by creating a sustainable PS, the issues of unaffordability and social isolation could be addressed. A conducive PS should provide residents with an excellent living environment by giving basic essential including sustainable need, which includes physical environment, available facilities, and accessibility and addressed the ergonomic needs of elderly community. Research by [17], retrieved the criteria of retirement village which include factors such as it should be based on al Quran and Al-hadith to suit the needs of modern lifestyle for the elderly such as a resort -like environment, well equipped with modern knowledge resources, sustainable green and easy medical accessibility. The proposed resort concept of PS can be achieved through the facilities provided and the atmosphere that is evoked by the building design as well as the architecture style applied. Facilities like ample parks, lakes, and garden with sport and recreational facilities should be provided to encourage healthy lifestyle among the residents. A conducive retirement village is based on five elements: the basic needs sustainability agenda, affordability, social activities, and location of the RV [15]. According to [18], the features of sustainability should be added in the concept of retirement village. The housing design may support their therapeutic needs like green landscapes, natural soothing view, good quality of air, energy efficiency, security and ease to access to accommodations.

2.3. Pondok system in Malaysia
**Pondok System (PS) is not new in Malaysia. Generally, PS is a place that provides comfortable accommodation to anyone who are interested with the Islamic education. Furthermore, PS for the elderly refers to comfortable accommodation, efficient services and good facilities as well as a conducive living arrangement for elders. In fact, many researchers such as [10]-[9]-[6]-[11] and [17] mentioned the history, evolution, objectives, and function of PS in Malaysia. In the beginning, pondok was established to spread religious teachings to the local community. Later, the system quickly spread throughout Kelantan, Terengganu, Kedah, and Perlis. In general, there are two types of pondok retirement villages: Malay villages, which can be found in rural areas throughout the peninsula and the eastern states, and pondok spiritual communities, which can be found in the northern states of Kedah, Perak, Kelantan, and Terengganu. The former is a type of pondok that is funded by donors. For this type of pondok, the residents also contribute to the fund upon entering the village, and this donation is non-refundable. The second type is Resident funded villages. In Malaysian communities, pondok provides the basic forum for a complete life cycle of an individual’s religious education, and spiritual needs at different stages of life span, including when one goes through old age [16].**

### 3. Methodology
This conceptual model is a primary process that is part of a framework, that contains a set of possible conceptual alternatives that could be present in the empirical analysis in the next stage of this research. This paper is based on a thorough review of previous existing models that are related to the PS for the elderly and retirement village concept. Five existing models from the United Kingdom, Australia, New Zealand, Indonesia and Malaysia are reviewed and synthesised to develop the conceptual model of sustainable EPV from the Malaysian perspective.

### 4. An analysis of current pondok system across the globe

#### 4.1. Conceptualising sustainable retirement village in Australia and New Zealand

In Australia and New Zealand, [18] drew a conceptual framework for a sustainable retirement town. The senior oriented basic setting is based on operation: management of village should be resident-oriented which try to avoid creating pressure for residents, and the staff behaviour should also be age-friendly. For financial affordability issues, this refers to living affordability and capital gains sharing due to different socio-economic background of the residents. The third domain is age friendly social environment where the old adults’ activities participation is impacted by personal and health factors. In terms of physical environment factors, aesthetic value, fewer physical barrier within neighbourhood and facilities provision must be considered.

#### 4.2. Sustainability concept in a cohesive retirement village for muslim in Malaysia

Currently, the concept of a retirement village is not very popular among Muslim retirees in Malaysia. At the moment, there is a growing trend among Muslim retirees to choose the Pondok system as a way to spend their time after retirement. Pondok is a place where Muslims can spend their golden years deepening their understanding of Islam. It is an example of an Islamic way of life being implemented for a racial group. A study by [21], outlined the important factors to be included in the retirement village for Muslims: that it should include both independent and assisted living to cater for the needs of the retirees physical abilities. The concept of a Muslim-friendly facility is inclusive of the environment design; community and leisure facilities are required to support the mental capacity of retirees.

#### 4.3. Sustainable pondok system in Indonesia

The development of pondok institution in Indonesia was inspired by the growing number of students receiving zakat or tithe for the Islamic education in Indonesia [22]. Generally there are various factors that need to be considered in the early stages in the development of a Pondok as an educational centre.
Namely, clean and freshwater, comprehensive waste management system, reducing the pollution and providing fresh air and sunshine. A Muslim accommodation in certain area in Indonesia is yet in the conventional condition in both physical and social aspects. For instance, a Pesantren development is based on Vernacular architecture with refer to local needs and construction materials which reflecting to local traditions influenced by local culture and climate. It also reflects the environmental, cultural, technological, and historical context. Sustainable Construction Assessment Tools (SCAT) was used to assess the sustainable factor to indicate the level of community’s sustainability. This tool incorporated the qualitative and quantitative assessment. SCAT can measure the quality of settlement and identify some bad effects on its surroundings caused by a building. This will help to figure out the improvement on the negative assessment by applying two steps: Firstly, its transformation by improving its physical building and environmental elements such as water, waste, and energy efficiency. These issues will be resolved through efficient management maintenance, using local and green materials. Secondly, together with local government, a masterplan of settlements can formulate which can contribute to attainable sustainable criteria. Their prominent role and influence in Muslim Settlement communities enables them to control the implementation of this masterplan.

4.4. Sustainability of retirement village in UK
Cliveden village is a residential area for the elderly built with a very conducive atmosphere and was designed to be eco-friendly as possible. The development of this area consists of 135 houses and apartments which are highly insulated and almost airtight. Accommodation is equipped with natural ventilation and green elements. The power load is further reduced by large, south-facing windows to capture heat from the sun during the day for release at night. To combat overheating in the summer, slats are positioned over some windows to provide shade from the high sun, and large ventilation panels can be opened to allow hot air out. They look alarmingly like doors opening on to a nine-foot drop into the garden. High-efficiency condensing gas boilers provide hot water, topped up by solar panels that should provide as much as a third of the homes’ hot water. As is becoming standard, the development has a recycling scheme: rainwater butts store water for the gardens and every home has a bike store. One of the methods for water efficiency is that all the showerheads on the development are 50 per cent aerated so they tingle on an individual’s skin like a power shower but use half the amount of water. Cliveden village has been laid out in such a way that emerging technologies may be fitted later. The houses are accessible from both sides, so it might be possible to install heat pipes from a community combined heat and power system (CHP), for example. CHP is currently expensive, especially for relatively small developments like Cliveden village, but prices are coming down. Ideally, wood chips or other biomass from the estate would fire the CHP system, but that falls foul of another aspect of conservation - as a listed park, the estate cannot be used for forestry.

5. Discussion
Based on the review of four models, the retirement village concept is aptly defined as an age segregated community that provide diverse services and facilities to meet the residents’ unique needs in later life [18]. While [20] added a novel living option and ergonomic needs in the definition of retirement village and suggested embracing sustainable concept living environment in their definition. However, there are some critical issues to consider in implementing the sustainable village. These four main issues are as follows: First, energy consumption during construction and use; second, energy efficiency measures; third, use of renewable energy and fourth, issues on environmental sustainability of building issues including materials, indoor environmental quality, and waste management system. The sustainability concepts have been well-received in Australia, New Zealand, and United Kingdom. PS is seen to be a new concept of accommodation, which provides for in-house religious education and becoming popular groups of elderly around the world including Indonesia, Thailand, India, and Malaysia. In the EPV models, the operators are incorporating educational and spiritual elements into the residential activities and facilities for the elderly. The EPV shares a certain similar concept with the Retirement Village as
practiced by few countries such as Australia, New Zealand, United Kingdom, and United States. However, the basis for the establishment of PS and retirement village differs where the earlier concept is based on accommodation/housing that is attached with religious orientation while the latter is based on housing with care support or accommodation with facilities suitable for elderly. According to [21], the spiritual fulfilment such as participation in religious activity and worship should be made available.

The inclusion of religion is perennially important because PS is viewed as an educational religious institution and congregated home. In Malaysia, religion and religious activities are important to elderly’s well-being as well as to those who live in the community. PS in Malaysia resembles cohousing and retirement village in other countries like Australia and United States. Universally, cohousing elements are based on six criteria namely: Firstly, participatory process, by involvement of community manage in the development process; secondly, physical design fosters social interaction; thirdly, common facilities; fourthly, resident management, fifthly, hierarchy or organisation chart and finally on economic factors.

6. A conceptual model of sustainable pondok system

The conceptual model of EPV presented here (see Figure 1) is intended to capture the essence of the core requirements for sustainability. The model represents multiple dimensions and dynamics in the development of EPV for new or existing pondok in Malaysia. Therefore, the model is illustrative of the way the EPV management could possibly run its system such as by considering the sustainable issues, and the criteria of sustainable lifestyle as well as changing the issues identified to strategies in achieving the sustainable improvement. The model of EPV is presented to portray the sustainability issues related to environmental issues and strategy. At the first stage, the management should brainstorm all the issues such as materials used for construction, ways to ensure the quality of indoor environment, water efficiency issues, waste management issues, and recycling facilities. All these are relevant matters to consider to an elderly who will potentially stay alone and tend to experience anxiety, insecurity and isolation. By considering all the issues, the management team can better support the elderly to secure their lives at EPV.

![Figure 1. Model of sustainable Pondok system.](image-url)
Next stage refers to measuring the criteria in relation to sustainability. From the measuring the criteria such as environmental, social, financial, design and facilities, the researcher could have identified the performance of existing management system for EPV. Environmental criteria involve implementation of energy efficiency, reduction in negative impacts, introduction to recycle efforts and development of high-quality environment. For social criteria, the elements are age-friendly establishment, security, safety, and health related facilities. The criteria of economy or financial issue, takes into consideration factors such as financial resources that are available for the elderly living in EPV. In term of design, the management should ensure the designer produces an elderly-oriented design and reduces unwanted physical barriers. In addition, for facilities in EPV, the building must have elderly-friendly facilities like religion-based, outdoor, facilities, health, security and recycling facilities. At the last stage of this proposed model is the performance that would lead the management to propose the environmental strategy to achieve the sustainability criteria. The best method to achieve sustainability requirement for EPV is by referring to solving the identified issues in first stage of this proposed model.

Overall, this proposed model integrates the significance requirements related to issues, criteria to fit with sustainable EPV and the strategy to sustain the criteria. Moreover, the proposed model is supported by [23] who suggested that it could be achieved by engaging the community especially with an increase in the number of Malaysian ageing population. If an active elderly can part of a community, a better understanding and appreciation of healthy lifestyle can be achieved.

7. Conclusions
To summarize, the aim of this paper is achieved through a thorough review of literature and the establishment of an EPV concept. The sustainable development of EPV will not only beneficial to economic prosperity but it also advocates a sustainable environment and high quality of life for the elderly. The concept of green EPV is about design sustainably and designing neighbourhoods that have the smallest possible ecological footprint for the residents. All parties, such as architects, planner and authority need to be involved in designing the comprehensive sustainability guideline for development of EPV. The practice of green element initiative will enhance the sustainability of natural resources and give a healthy living lifestyle for elderly.

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