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## **PARTICIPATORY ACTION RESEARCH ON THE HEALTH AND WELL-BEING BENEFITS OF COMMUNITY GARDENING: A STUDY OF RESIDENTS IN AN ISLAMIC ELDERLY HOME**

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### **Abstract**

This study employs a Participatory Action Research (PAR) approach in finding practical solutions to promote sustainable active ageing living environment for the elderly in a Muslim based elderly home – the Baitul Maab, Temerloh. The study was conducted in three sequential phases: initialization, action and reflection utilizing multiple data collection methods which included visual assessment, Focus Group Discussion, collaborative mapping and survey. During the Focus Group Discussion, several proposals were put forward by the residents. One of the proposals by the FGD participants were to have a community garden as an outlet for the residents to engage in healthy activities collectively. Based on this, a community garden called Laman Herba and Sayuran was then created by the researchers and the residents through gotong royong activities. A survey was carried out a year later to determine the usage of the garden and how it helped the community in achieving a healthy lifestyle. The findings suggest that the community garden is perceived to be able to help the residents to be healthier and that it improved their well-being. The study also suggested that elderly below 65 years old were in the age group who most benefited from having a community garden as they still have the energy and strength to do gardening activities. This study concludes that community gardening is perceived to yield many benefits to elderly's health and social well-being. However, for the garden to be efficient, it has to be equipped with the necessary infrastructure such as stools as resting place and easy-to-reach water supply.

**Keyword:** Garden, Gardening, Healthy, Active Ageing, ageing people

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## **INTRODUCTION**

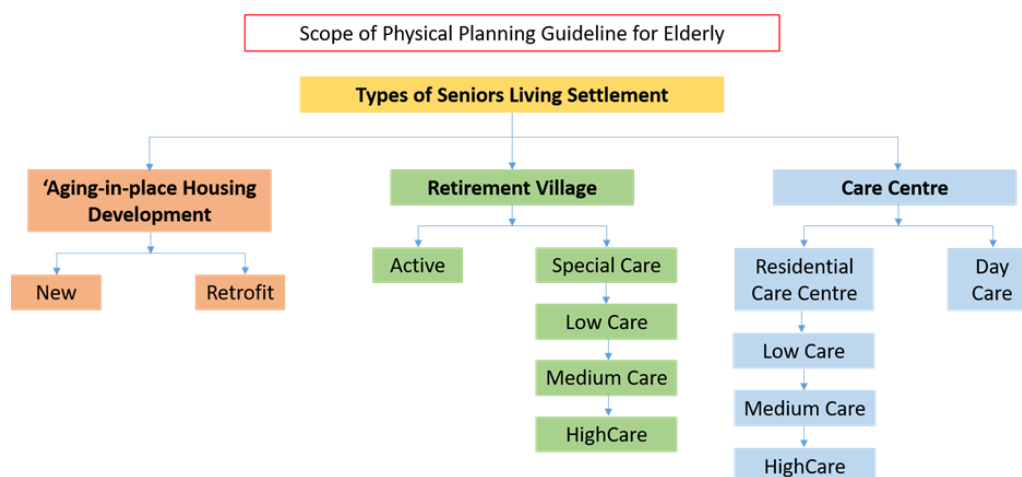
According to the World Health Organization (WHO), (2010), aged people are those who are 65 years of age or older. The United Nations World Assembly on Ageing in Vienna (1982) defined aged people as those who are 60 years of age or older. According to statistics released by the Department of Statistics Malaysia (DOSM), the proportion of elderly in Malaysia will double, from 7.2 percent in 2020 to 15 percent in 2030.

The demographic shift warrants a reform in terms of elderly care. In response to this global phenomenon, the World Health Organization (WHO) developed a policy framework to inform discussion and formulation of action plans to promote healthy and active ageing. Active ageing refers to the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age (WHO, 2002). The document by WHO (2002) further elaborates the word active as continuing participation in social, economic, cultural, spiritual and civic affairs, and not just the ability to be physically active or to participate in the labour force. The need to prepare for the ageing population necessitates actions on a number of factors, including accessibility to healthcare services, the elderly's economic contribution, social relationships, quality of life, and overall wellbeing.

Malaysia's National Policy for Old People, which was approved on January 5, 2011, is a policy that it was developed in accordance to the WHO's ageing guidelines (Jabatan Kebajikan Malaysia, JKM, 2016). The main goal of the National Policy for Old People is to maximise the well-being of the elderly population by focusing on five dimensions: health (healthy ageing), social (active ageing), spiritual (positive ageing), environment (supportive ageing), and economic (productive ageing) (Ramely, Ahmad, and Harith, 2016).

In line with the global and national commitment in promoting the well-being of the elderly, The Ministry of Housing and Local Government, under Plan Malaysia (formerly known as Department of Town and Country Planning) introduced the Physical Planning Guidelines for the Elderly. The guidelines were prepared as a guidance to government agencies, non-governmental organizations (developers, private companies, individuals, non-governmental organizations) and other parties in the provision of settlement that are elderly friendly and promote ageing in place which allow the elderly to remain in the same community with some level of independence rather than being in residential care. The main purpose of the guidelines is to plan for the types of settlements for senior citizens to age actively, such as retirement villages and care centres, the relevant supporting facilities and social programmes. The guidelines include planning principles, design standards, minimum requirement for elderly-friendly facilities and also related social activities such as community farming and lifelong

learning. The following Figure 1 shows the scope of physical planning guidelines for the elderly.



**Figure 1:** Scope of physical planning guidelines for the elderly

This research is in line with the objectives of the National Policy for Old People which is to provide the old people with healthy ageing, active ageing, and supportive ageing by proposing an ideal physical environment which is not only user friendly but also functioning as rehabilitation place for them. Funded by Universiti Malaya’s research grant under the flagship of Living Lab, this participatory action research allows the researchers and the researched, the residents of Baitul Maab, in coproducing an ideal living environment to promote active ageing. The selection Baitul Maab as a study area as the home itself is an exemplary case of an elderly home that promotes active ageing. Known as “Pondok Moden”, Baitul Maab offers residential facilities on “waqaf” basis for the elderly where their main activities revolves around religious activities such as reading the Quran, praying and other spiritual activities. The home is considered as “Active Retirement Village” as the residents in this home are able to take care of their own selves.

## METHODS

This study employs a participatory action research approach that requires the researchers and the stakeholders to work together in designing the research and act together in an effort to understand and improve the practices or situations in which they are engaged. The PAR approach starts with the collective inquiry of

what needs to be improved and the actions that need to be taken to improve the practice or situation (Kou, Zang. et al. 2021).

Based on PAR approach, the research was conducted in three phases: Initialization, Action, Reflection. During the initialization phase, several activities were conducted in order to establish a mutual understanding between the researchers and the stakeholders that include the home management and the residents on the intention of co-producing an active ageing environment for the residents. Site visit, visual assessment and Focus Group Discussion were conducted to understand the institutional, social and physical context of the home (Figure 2). The highlight of this phase was the Focus Group Discussion where the researchers guided the elderly to express their ideas verbally and visually using collaborative mapping technique that produced several concept plans that illustrated their ideas and proposals (Figure 3).



**Figure 2:** Focus Group Discussion (FGD) with Baitul Maab residents

From the FGD and after a series of discussions, the researchers, the home management and residents agreed to create an edible community garden. The main purpose of the garden is to provide an avenue for the residents to engage in physical activities with fellow residents and allows for outdoor social interactions.

The Action phase of this study refers to the action of creating the community garden. A site was identified for the purpose. Through *gotong royong* activities that involved the researchers and the residents, a community garden was created and given the name *Laman Herba dan Sayuran* (Figure 4). The plants chosen for the garden mostly were herbs and vegetables.

The final part of the study, the Reflection phase, refers to the phase where the researchers assessed to what extent the objective of the study was met. during this phase which happened one full year after the creation of the garden, a questionnaire survey was conducted to assess residents' perceptions on the benefits and impacts of the garden to their overall health and well-being. A total of 30 respondents answered the questionnaire survey.

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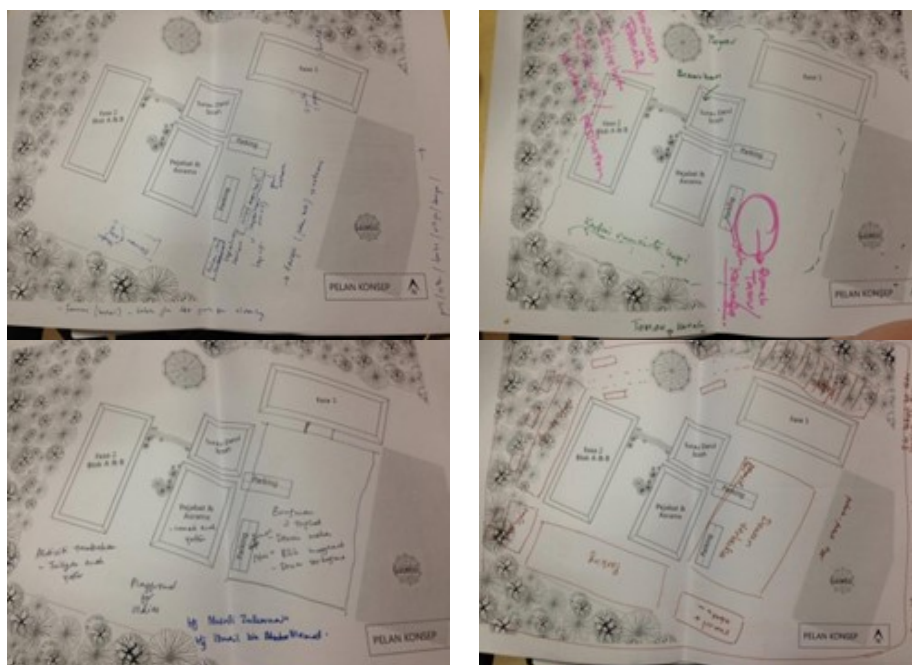


Figure 3: Concept plans of the proposals by the participants



Figure 4: Gotong royong activity to create the community garden in April 2017

## **FINDINGS AND DISCUSSIONS**

This section will focus on the findings from the survey that was conducted a year after the creation of the community garden. Majority of the respondents (87%) are women. About 53% aged 65-70 years old, 10% belongs to the group below 60 years old. Majority of them (63%) owned the units at Baitul Maab.

Based on the survey, it was found only 37% respondents actively gardening at *Laman Herba & Sayuran*. The main reason why many residents did not engage in gardening activities at the provided garden was that they already had a place where they could engage in small-scale gardening, such as planting herbs in pots outside their apartment units. Some respondents highlighted that it is easier to do gardening outside their units due to the availability of water source. They also mentioned about the difficulty of gardening at community garden as they had to carry buckets of water to the garden and this is quite challenging for them due to their age and physical limitations. It is observed that the challenge is more obvious for those who are 65 years and above. The exposed drains and the absent of proper walkway were also cited as the reason why they do not like to do gardening at the community garden.

This research aims to understand the perceived impacts of gardening activities to the residents' physical health, psychological state and social life. The physical health by gardening can be improved by active movements of the gardeners. The gardening activities include but not limited to watering, weeding, raking, tending shrubs, digging and cutting. These activities require energy and movements from the gardeners which may help the gardeners to feel more active and energized.

In terms of psychological state, gardening offers opportunities for reconnection with nature. Scott, Masser and Pachana (2020) mention that gardening provides opportunities for mental stimulation in older adults. Touching and smelling plants provide a good therapy for the elderly, stimulates calmness, and provides sense of restoration and rejuvenation.

Gardening, especially community gardening, also provides opportunities for social interactions. Through community gardening, it allows the elderly to connect with one another, receive mutual support, exchange positively and these are all important factors to combat the feeling of isolation and loneliness. This is important especially when one is experiencing a change in one's life such as from fully paid employment to retirement and having children moving away from home.

In the questionnaire, a 5-point Likert Scale was used to get the opinion or perception of the impacts and benefits of gardening at *Laman Herba and Sayuran* on their physical health, psychological state and social interactions with the fellow residents. The 5-point Likert Scale used consisted of 1-Strongly Disagree, 2-Disagree, 3-Not sure, 4-Agree and 5-Strongly Agree. A reliability

test was carried out for all items. Based on the reliability test, the Cronbach Alpha of the validity data is 0.984 shows that the validity data are good based on the rules of thumb of George and Mallery (2003).

**Table 1:** Descriptive Statistics on Respondents' Opinion on the Benefits of Community Gardening

Statements	Strongly agree to agree	Not sure	Disagree to strongly disagree	Standard deviation	Mean
<b>Benefits on Physical Health</b>					
I feel healthier with gardening activities	67	33	0	.699	3.83
Gardening improved my nerve system	64	30	0	.664	3.80
Gardening is considered as physiotherapy for me	73	27	0	.592	3.83
Gardening improved my movement and flexibility	73	27	0	.592	3.83
Gardening improved my balance	67	33	0	.626	3.77
Gardening reduced my weight	67	33	0	.626	3.77
<b>Benefits on Psychological State</b>					
I am more cheerful since involved with gardening activities	93	7	0	.531	4.17
Gardening is relaxing and calm	93	7	0	.531	4.17
I am more confident when gardening	87	13	0	.607	4.10
Gardening improved my spirit	87	13	0	.583	4.07
Gardening reduced my anxiety	90	10	0	.548	4.10
Gardening renewed my motivation in life	84	16	0	.521	4.07
Gardening reduced my loneliness	84	16	0	.521	4.07
<b>Benefits on Social Life</b>					
Gardening develop a sense of belonging	90	7	3	.615	4.03
Gardening activities develop friendship	97	3	0	.504	4.23
Gardening develop sense of sharing	97	3	0	.504	4.23
I am not feeling isolated when gardening	93	7	0	.507	4.13
Gardening makes me closed to the community	97	3	0	.481	4.10



In the physical health aspect, the top statements that received agreements from the respondents (73% respectively) were “Gardening is considered as physiotherapy for me” and “Gardening improved my movement and flexibility”, while 27% stated that they were not sure ( $SD=0.592$ ,  $\bar{x} = 3.83$ ).

In the psychological state aspect, the top two statements were that received agreements from the respondents (73% respectively) were “I am more cheerful since involved with gardening activities” and “Gardening is relaxing and calming”, while 7% stated that they were not sure for both statements ( $SD=0.531$ ,  $\bar{x} = 4.17$ ).

In terms of social benefits, 97% of respondents agree that “Gardening activities develop friendship”, “Gardening develop sense of sharing” and “Gardening makes me closed to the community”, while 3% were not sure for all the three statements ( $SD=0.531$ ,  $\bar{x} = 4.17$ ).

The general findings show that the residents feel that gardening brought many benefits in terms of physical health, psychological state and social life. The highest value of mean represents the highest perceived benefit of gardening. From the data it appears that gardening yields more benefits on social life as compared to psychological state and physical health. The top three highest mean score for benefits are “Gardening activities promote friendship” (4.23), “Gardening developed sense of sharing” (4.23) and “I am not feeling isolated when gardening” (4.13).

The least benefits could be seen from physical health aspects with “Gardening improved my balance” had the lowest mean score of 3.77. This suggested that while gardening activities are perceived to be able to yield many benefits to the elderly’s general well-being, quite a significant number of respondents were not sure on the benefits of gardening to their physical health. This can be seen from the data as all statements in the category on “Benefits on Physical Health” received less than 80% of agreements from the respondents.

## CONCLUSION

The respondents in this sample reported that they experienced many benefits from the community garden, *Laman Herba & Sayuran*, which was created collaboratively by the researchers and the residents as an effort to create an active ageing environment for the home. Several important points need to be observed in this study. From the survey, it was found that less than half of the residents here actively utilize the garden for active gardening. Most of the residents prefer to do gardening at small scale outside their unit as it was more convenient for them. For those who involved in gardening at the community garden provided, the respondents in the sample reported numerous benefits of the activities in the aspects of physical health, psychological state and social life. This survey, however, only focused on the community garden gardeners. This limitation can



be addressed in future research by including the elderly who prefer to engage in gardening at the compound of their own unit. Having an understanding of the roles that gardening plays in promoting physical, psychological and social benefits may shape more effective and well-informed policies and practice in relation to support active ageing.

This study here warrants important implications for planners to establish opportunities for gardening in elderly home or retirement centre. Planning and designing for community gardens for elderly need to take into considerations of the physical limitations of this group of people. A centralized garden for the elderly needs to be planned and designed in a way that is friendly to the elderly, for example near to water sources, plenty of seating as elderly get tired easily and plenty of shades. It is also important to ensure that the design of the garden allows easy movement by the elderly through the provision of suitable pavements and flat surfaces.

It is also important to note that gardening opportunities should not be limited to the provision of a centralized community garden. Gardening opportunities should also be provided at incidental or shared spaces that can be easily accessed by the elderly with physical limitations. However, gardening activities at these shared spaces need to be properly governed so that it will not obstruct public and shared spaces and pose a nuisance to public health and safety.

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