

A REVIEW ON THE BENEFITS OF HORTICULTURAL THERAPY FOR RETIREMENT COMMUNITY IN MALAYSIA

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ABSTRACT

By the year 2030, Malaysian population will experience the after effects of the rapid growth of ageing society. This paper investigates the impact of seamless integration of horticultural activity in the new residential typology of retirement community. It is believed that horticultural therapy is not only beneficial for physical and psychological but also promotes socialisation opportunities among the elderly. Comparative analysis method on selected precedent studies has been carried out and analysed in accordance with Malaysian context. Initial findings indicate that a retirement community with horticultural activity gives therapy for healthier well-being. This therapeutic activity can be a positive change in elderly lifestyle and essential towards the establishment of retirement community in Malaysia.

Keywords: *therapeutic, socialisation opportunity, quality of life*

INTRODUCTION

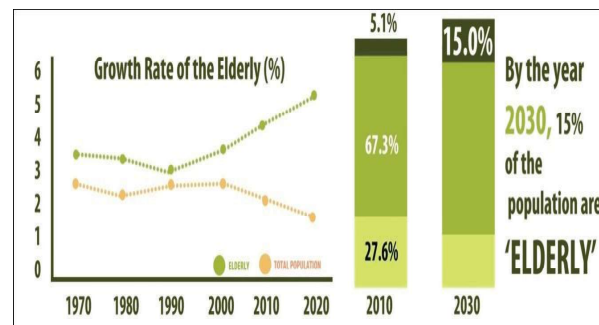
This paper aims to investigate the benefits of horticultural therapy as part of activities of daily living (ADLs) of retirement community. The elderly population is often associated with post-retirement-syndrome whereby it is a stage of adjusting life after a sudden change of daily routine. According to Minimum Retirement Age Act 2012 (2012), beginning on 1st July, 2013 the retirement age is extended from 55 to 60 years old. Saisan and Russell (2012) further explained that the residents of retirement community must be age qualified and they may be partially or fully retired. The retirement community is a new residential typology consist of housing complex designed for active living elderly who are healthy and able to take care of themselves. In some cases, medical assistance is also provided by the government or private agency. It is essential for the elderly's welfare been taken care of and to assist them in executing their activities of daily living (ADLs).

In Malaysia, there is still no design guidelines for the retirement community and most of the curriculum or suggestion of activities of daily living (ADLs) are not comprehensive. Therefore, it is believed that plant-based activity helps to fill the void and improve the physical and psychological wellbeing of the elderly. Hopefully, with seamless integration between relevant authorities and professionals will promote such residential community to improve the state of health of the elderly by means of horticultural therapy. The elderly can be divided into three main categories. The first category is active living whereby the elderly does not need assistance to perform activities of daily living (ADLs). The second category is assisted living by which they have a slight decline in health and need assistance performing one of two activities of daily living (ADLs) such as housework or preparing meals. The third category is skilled nursing care whereby the elderly needs assistance for activities of daily living (ADLs). It is hoped that the horticultural activity can be introduced as part of activities of daily living (ADLs) because of this activity is believed to be therapeutic and able to improve the elderly's state of health physically and psychologically.

LITERATURE REVIEW

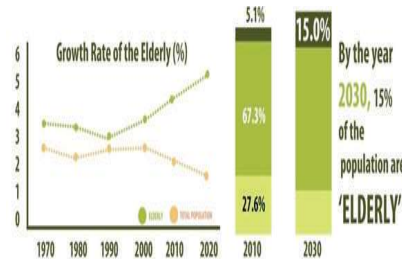
Rising Elderly Population in Malaysia and the Global Trending

Department of Statistics Malaysia (2010), instigated Malaysia is about to have an ageing population in 2030 when 15% of the total population are elderly as shown in Figure 1 and Figure 2 below. At present, the ageing population comprises of 5.1% of total population in Malaysia. However, due to an upsurge in life expectancy and the reduction of mortality and fertility rate in Malaysia, the ageing community in 2030 is expected to rise towards a staggering 15% of the total population. The Ministry of Women, Family and Community Development (2014) further revealed the life expectancy at birth rate in Malaysia has increased from 66.5 years in 1990 to 72.3 years in 2012 for a male, while for a female the figure increased from 71.0 years in 1990 to 77.2 years in 2012. This situation is not only experienced in Malaysia solely but becoming a global trending. Japan has also have experienced the exact situation in 1970 as asserted by Kose (2003) the ratio of elderly was initially a mere 7% of the total population during 1970 but now the figure stands astoundingly at 26.3%. It is more than a quarter of the total population in Japan. World Atlas (2016) affirmed that the United States has 14.5% of the elderly population. However, the greying of Europe phenomenon witnessed most of the European countries have significant elderly population such as Italy 22.4%, Germany 21.2% and Sweden 19.9%.



(Source: Department of Statistics Malaysia, 2010)

Figure 1: Growth Rate of Elderly in Malaysia from 1970 - 2020



(Source: Department of Statistics Malaysia, 2010)

Figure 2: Comparative Bar Chart of Elderly Population from 2010 - 2030

From the statistical point of view, the prediction of upsurge in elderly population in Malaysia will shape better preparation and planning. This may suggest that Malaysia needs to accommodate an appropriate living to accommodate this new emerging population of elderly. Such living condition should be elaborately well-planned and designed that suit with the elderly wellbeing. It serves as a true definition of home and also a testament of compassionate among the Malaysian society.

Dilemma Faced by the Elderly

Retirement-syndrome is common among elderly population due to a sudden change of their routine. *McGraw-Hill Concise Dictionary of Modern Medicine* (2002) defined retirement-syndrome as acute or chronic maladjustment to a nonworking state retirement. This circumstance struck to retiree particularly the individuals who had no activities to fill their time, as previously they have been engrossed with their work. Some of the elderly volunteer at charity or community work as a method of socialisation and engagement with the community or at some point they might come out of retirement and seek for a job again. Studies from Dave, Rashad and Spasojevic (2008) showed that a complete retirement leads 5% to 16% rise in difficulties associated with mobility and activities of daily living (ADLs). Furthermore, a complete retirement also contributes 5% to 6% growth in illness conditions, and 6% to 9% decrease in mental health for a period of six years after retirement. Medication and physical changes due to ageing are somewhat affecting the elderly. Their senses of smell and taste decreasing contribute to loss in interest in food due to changing taste buds, therefore

lead to loss of appetite. This will put them in a deep state of depression. Some may contend that retirement is inevitable and growing old is just a normal transitional phase in life. This matter must not be taken lightly as retirement-syndrome could affect the mental and physical health of elderly.

In retirement community establishment, social activity such as horticultural therapy or plant-based activity can be introduced as part of their daily routine as this will benefit them in terms of physical, psychological and social enhancement. Engaging in physical activities such as harvesting and gardening can create new enthusiasm for growing their own plants. Physical movement in plant-based activity can develop hand-eye bilateral coordination, gross and fine motor manipulation, and strength. On the psychological aspect, gardening is proven to be remedial as highlighted by Cochrane (2012) that it does not only reduce stress levels and promote relaxation but also improve their self-esteem. Apart from the physical and psychological wellbeing issues, the community garden in retirement community also provides socialisation opportunity that is medically proven as an alternative therapy method to avoid depression.



(Source: Ismail, 2012)

Figure 3: Integration of Retirement Community with Horticultural Therapy Aims to Accommodate the Lifestyle for the Elderly

As the elderly often conflicted with their decreasing wellbeing, this is where the horticultural therapy helps to stabilise their mental, physical and state of emotion. The importance of stability is paramount for them. It is because, at the pinnacle of their lives, everybody wants to enjoy life while it lasts. Therefore, by having a horticultural friendly space such as community garden can be the central space whereby the elderly can interact, socialise and ultimately lead to improvement in quality living. New residential

typology such as retirement community should aim to accommodate new demands and modern lifestyle. The incorporation of horticultural therapy as daily activity in the retirement community is expected to fill the void and most importantly providing a sense of community and companionship to them.

Horticultural Therapy as Revitalisation Agent for Elderly

Horticultural therapy is a remedial activity that empowers dynamic engagement in plant-based exercises. This activity can be supervised and facilitated by a trained therapist to achieve optimum benefits. The sensual fragrance of flowers will elevate the senses and invoke the old memories. Vegetables, fruits and herbs are able to raise visual and taste stimulation. While the active living elderly utilising horticultural therapy as a form of exercise, another elderly group with physical in capacities can use this activity as a medium to improve their gross and fine motor skills. Barnett, Ogilvie and Guell (2011) specified that elderly value the importance of health benefits by being physically active and the benefits of companionship by building opportunities to build new social support networks. Being active physically is not only beneficial to their body but more significantly, establish new daily structures and a sense of purpose to their life. Studies made by Shoemaker (2014) witnessed that horticultural therapy is an adaptable treatment tool and well received among the elderly from active living to skilled nursing care. While Simson and Straus (1998) further indicated that horticultural therapy is a revelation and a perfect fit for the retirement community setting as it caters for all elderly group and encourages cross-generation community engagement. It is not only beneficial to their overall wellbeing but also plays a vital role as a positive socialisation agent in the retirement community, thus improving the quality of life for the elderly.

METHODOLOGY

The retirement community is relatively a new residential typology in Malaysia and there are no specific design guidelines or activities of daily living (ADLs) curriculum for the establishment of retirement community in Malaysia. Therefore, the primary data collection was made via precedent studies and will look into three retirement communities. The retirement

communities are ranging from North America, Europe, and Asia continent as it is essential to observe and improve understanding of the operational and cultural diversity between the continents. By analysing these communities, perhaps there are various ways and options that are beneficial to create a healthier lifestyle among the elderly. Those three retirement communities are as follows:

1. Rockridge Retirement Community, Northampton, Massachusetts, United States.
2. Sølund Retirement Community, Copenhagen, Denmark.
3. Share Kanazawa, Ishikawa Prefecture, Kanazawa, Japan.

The secondary data collection is obtained through various reading materials. Japan currently has the highest elderly population of 26.3%, Sweden with 19.9% and the United States with 14.5% of elderly. The comparative analysis method is utilised based on the selected three retirement communities. Rockridge Retirement Community has established 46 years ago, while Share Kanazawa has established four years ago and Sølund Retirement Community is an award-winning proposal for elderly residential design. All three retirement communities are located in a different setting of the county town, traditional neighbourhood and urban area. The data collected will be analysed based on their participation with the local community, the horticulture type and garden usage. Last but not least the author investigates the trace of cross-generation in horticultural activity. The objective of the analysis is to identify the benefits of incorporation of horticultural therapy into activities of daily living (ADLs) of the elderly. It is crucial to observe and improve understanding on roles of horticultural therapy towards the betterment of the elderly in Malaysia.

RESULTS AND DISCUSSIONS

Selected Precedent Studies in the United States, Sweden, and Japan

Rockridge Retirement Community, Northampton, Massachusetts, United States

Established in 1971, this is one of the oldest retirement community in Northampton, neighbouring Fitzgerald Lake Conservation area. This retirement community utilises the community garden as horticultural therapy. The Elmo Young Garden Project is founded in 2012 through the anonymous source who stipulated that the money is used for an outdoor project. The residents proposed to have a community garden as part of their activities because they can connect socially through gardening. The garden consists of flowers, vegetables and herbs, and the employees use the vegetables on a daily basis in the meals provided in a retirement community. Moreover, about 105 elderly and staff in Rockridge participating in this activity. Active engagement with the local community such as Sustaining Agriculture helps to assist and maintain the garden project here. The active participation between the elderly and the younger worker will create a sense of purpose. The energetic young generation and the wise elderly will create vibrancy in socialisation and such interaction creates a positive feeling among the community. This positive socialisation interaction helps the elderly to share their feeling to avoid isolation and loneliness.



(Source: Rockridge retirement community, 2016)

Figure 4: Horticultural Activity Helps to Connect the Residents and Improved Well-being

Sølund Retirement Community, Copenhagen, Denmark

Located at the prestigious urban Copenhagen, Denmark, this award-winning retirement community has a contradictory opinion on the typical and cliché of the institutional look of a retirement community. This is done by having bountiful of green spaces, attractive residential unit and ample bright space. Henning Larsen Architect (2012) further explained the retirement community is designed in one elongated organisation comprised of dwelling units overlooking the garden, facilities for rehabilitation and therapy, information and counselling, small-scale commercial centre, dining, gatherings and club activities for the residents. The residential units are designed with large openings for ample daylighting and essentially glorious views towards the internal garden. High entrance will create a welcoming space, therefore avoid the typical of institutional look in a retirement community. The elderly from the local community are free to enter into the central courtyard will be the fundamental core of the activities. The three community gardens are strategically located at the centre to allow the residents to view both inside and outside of the building compound and provide socialisation opportunity for the residents. It is designed in this way to let the residents be creative and explore on flexibility through horticultural activity. For instance, some residents may choose to do active physical routines such as gardening or more laid back approach such as reading, knitting or even having a chat at the garden.



(Source: Henning Larsen Architect, 2012)

Figure 5: Horticultural Activity is Essential in Sølund Retirement Community and it is Shown by Located at the Centre of the Retirement Community

Share Kanazawa, Ishikawa Prefecture, Kanazawa, Japan.

Located in Kanazawa, this place is known as “Little Kyoto” because of preserved cultural tradition and traditional neighbourhood. Japan has the highest elderly population in the world with 26.3%, therefore the Japanese Government proposed a relocation program for continuing care retirement community (CCRCs) of elderly from metropolis Tokyo to Kanazawa. The land is scarce in Tokyo, therefore, the relocation to Kanazawa aim to have a sense of regional values and younger people can get together to share their experience. This retirement community promotes active lifestyle as job opportunities are also offered here ranging from farmers to restaurant staff according to their skills and ability. Administered by a social welfare organisation, Bussi-En Group, this multi-age community stress on the values of the relationship amongst the residents. The vegetables and fruits harvested are not only for daily meal consumption but also for selling purpose. The smell of fruits helps the elderly to energise their senses and gives them a sense of excitement. As a result, this activity is proven to increase their happiness level. The residents also arrange various activities such as management and cooking class to improve their array of skills. Horticultural activity in this retirement community helps to bond a strong relationship among the residents including the children. They believe horticultural is therapeutic activity and the joy to see the harvested vegetables and fruits is exceptionally satisfying. Maintaining active lifestyle give them a sense of purpose in life.



(Source: Share Kanazawa, 2013)

Figure 6: Cross-generation of Horticultural Activity in Share Kanazawa between Elderly and Children Helps Them to Maintain an Enjoyable Active Lifestyle

Rockridge Retirement Community is situated in the United States with beautiful county town neighbouring the Fitzgerald Lake Conservation area of Northampton, Massachusetts. Through The Elmo Young Project, the community garden and dementia specific garden become the forte of the retirement community. Such active lifestyle and involvement with the local NGO's will help the elderly to maintain a close relationship with the society through horticultural activity. Rockridge Retirement Community utilises the crop production of vegetables and herbs as part of their meal consumption while the dementia-specific garden is for healing and therapeutic purposes. Next, Sølund Retirement Community is located in the bustling city of Copenhagen, Denmark. This award winning proposal keen on changing the platitudes on institutional looks of a typical retirement community. Strategically located in the urban area of Copenhagen, this allows the designer to explore on the flexibility of the space planning by creating a welcoming space, which is a centralised community garden. The elderly and local community are free to enter into the central garden and this will increase the chances of positive socialisation through horticultural therapy. The residents can participate actively with the local community or just sit back and appreciate the therapeutic effect of horticulture. While Share Kanazawa, or known as "Little Kyoto" is located in preserved traditional neighbourhood of Ishikawa. Currently, one-fourth of the Japanese population is elderly. It holds the highest elderly percentage not only in Asia continent but also in the world. This retirement community also accept children as part of their dweller's group, anticipating the children will bring the energetic vibe and the elderly will offer wisdom to the retirement community. Share Kanazawa is more industrious because their vegetables and fruits plots are rental-based and the crop production will be used as consumption and selling purpose. Active involvement with the local community and NGO's making Share Kanazawa as one of the most progressive retirement community in Kanazawa. Table 1 below shows the comparison between the three retirement communities;

Table 1: Comparison of the Three Retirement Communities

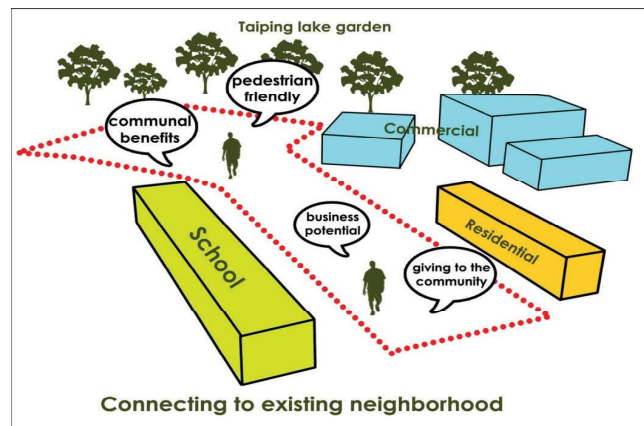
	Rockridge Retirement	Sølund Retirement	Share Kanazawa
Continent	North America	Europe	Asia
Setting	County town	Urban area	Traditional neighbourhood
Establishment type	Ageing communities	Ageing communities	Ageing and children community
Establishment	1971	Proposal Stage	2013
Horticulture Activity	Yes	Yes	Yes
Type	Vegetables & herbs and flowers	Multiple	Fruit & vegetables (rental based)
Usage	For consumption and therapy	For therapy and healing purpose	For consumption and selling
Other garden	Community Garden and Dementia-specific garden	Community garden	Community garden
Community Engagement	Active community	Active community	Active community

(Source: Ismail, 2016)

Based on Table 1 above, all three retirement communities adapting cross-generation or multi-generation engagement and recommending active participation with the local community and NGOs. It is because garden based activity i.e. horticultural therapy is proven to be a driving force in promoting socialisation regardless of the different setting of the county town, traditional neighbourhood and urban area. The tangible and smell sensation of nature helps to reduce the anxiety and stress level. This is further supported by Cochrane (2012), horticultural activity promotes a sense of tranquillity, spirituality and peace. This could lead to improved quality of life for the elderly.

The future proposition of retirement community should employ a friendlier approach of community garden thus will raise the awareness on the importance of retirement community in Malaysia. This will allow active engagement with the local community hence will strengthen the bond between the elderly community and society. Non-governmental

organisations (NGOs) and volunteers can participate and actively involved for this cause. A community garden can be the central space whereby the elderly can interact and socialise. The accessible garden will be an excellent proposition to cater all different elderly group. A well-planned garden ensures accessibility of elderly as they will experience diminished strength, limited mobility and other unforeseen circumstances relating to ageing. Integration of retirement community with plant-based activity is hoped to bring a positive measure towards the betterment of overall quality of life for them. It is a form of therapy will bring positive impact on the physical, psychological and social wellbeing of the elderly. The horticultural activity helps the residents to actively participate in communal based activities. Gardening contributes to active living for the elderly both in physical and psychological aspect. It is proven to have remedial after effects as it does not only reduce stress levels and promote relaxation but also improve their self-esteem. Moreover, setting up a community garden in a retirement community will provide socialisation opportunities for the elderly. Promoting socialisation opportunity can be achieved through effective circulation and selection of communal facilities.

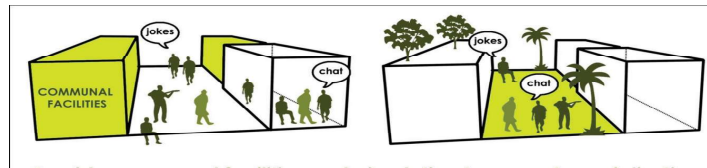


(Source: Ismail, 2012)

Figure 7: Active Engagement with the Local Community and NGOs can be Initiated through Horticultural Activity

Providing communal facilities will increase socialisation opportunities and it is proven as active measures to maintain the resident's physical and

spiritual well-being. This activity will act as a bonding agent that was medically proven as an alternative therapy method to avoid depression. Brawley (2007) further emphasised on the needs to develop activities such as community garden to provide them with a sense of worth and subsequently, a life structure. The community garden is preferable to be located at the centre of the retirement community to ensure equal distance and effective circulation thus will make more accessible for the elderly. Promoting socialisation opportunities can be achieved through effective circulation of the retirement community. Effective circulation will increase the probability and chances of socialisation opportunity among the elderly. By having a centralised community garden also will improve the good view of the residential unit. The centralised community garden will increase socialisation opportunities and it is also proven as active measures to maintain the residents' physical and spiritual well-being. The centrally located community garden also demonstrates the value and importance in terms of visual hierarchy and at the heart of social interaction. While enjoying this healthy activity, it also inculcates the values of working together in community, provides socialisation opportunities between generations and ultimately improves their self-esteem.



(Source: Ismail, 2012)

Figure 8: The Creation of Community Garden will Promote Effective Circulation and Increase Socialisation Opportunities among Elderly

CONCLUSIONS AND RECOMMENDATIONS

The elderly population is growing fast in Malaysia. Such increasing rate requires the nation to create strategic planning in order to accommodate the growing elderly population and accept that Malaysia is growing as now experienced by Japan, United States and Europe. Therefore, an active countermeasure is needed such as restoring the balance in population equilibrium. This is essential in order to sustain the state of good health of the

Malaysian society in terms of social and economic stability. Maintaining an active lifestyle and proper engagement with the local community and NGOs will help the elderly to enjoy their lives. Horticultural therapy is a therapeutic activity that can be introduced as part of daily activities or curriculum for the establishment of a retirement community in Malaysia. From the three precedent studies, it is proven that there are various benefits and options that horticultural therapy can offer. Therefore, several recommendations and adjustments can be considered to tailor-fit with Malaysia scenario. For instance, the garden must be accessible to be enjoyed by all elderly group regardless their condition whether active living or having difficulties mentally or physically. Then, the garden should incorporate our climate selected vegetations should be able to withstand the local climate pattern to ensure the maximum utilisation of community garden throughout the year. The crop production must be suitable for our climate and can be a variety of plants such as herbs, flowers, fruits, or even vegetables. The garden also must be personalised according to Malaysian context, for instance, multi-racial integration, and local climate. The vegetation must be in accordance to our climate to achieve maximum yield. Horticulture activity is a universal activity that inculcates strong bonds among the community. Horticultural therapy is not only gardening but it is also an activity aims to enhance the physical, psychological and social wellbeing of the elderly. They could improve their endurance and motor skills by active participation in the plant-based activity. Meanwhile, stimulation through senses can decrease the stress level hence will promote happiness and relaxation. Horticultural therapy is communal based activities that embrace on positive socialisation opportunities, consequently, will improve their self-esteem. The positive impact of this therapy can be the stepping stone in residential care for the elderly community in Malaysia. This remedial activity has the tools to improve the senior citizens' physical, psychological and social wellbeing. It is a testament to a holistic approach to residential design and compassionate Malaysian community, thus benefit them to improve their quality of living at the pinnacle of their life.

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