

A Cross Sectional Study to Evaluate Tree Plantation and Gardening as an Intergenerational Bonding Activity amongst Geriatric Population

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Abstract

Background: Life expectancy among the elderly has been improving for many decades all over world, the emotional and mental wellbeing of the geriatric people is at stake because of the younger people migrating to the urban areas or even abroad for work, and older people staying alone at their homes.

Few days can be spent by older – younger people together to plant trees. And this intergenerational bonding activity can give a sense of satisfaction and mental wellbeing to the older adults.

Objectives:

1. To find out how older people spend time with younger generations
2. To evaluate if older people are interested in gardening and planting trees as an intergenerational activity.

Methods: We conducted a survey on 120 older people in the community attached to our college, we enquired about the different means by which the older people spend time with the younger generations and if they will be interested in gardening or planting trees together with the younger generations.

Results: There were a total of 120 participants, 60 males and 60 females. Mean age was 68.49 ± 6.83 years. Majority of them interacted with the younger generations daily (55.83%). Chit chatting, managing business and telling stories to children were the common things done together. Majority (70%) felt that they spent enough time with the younger people, while few were not spending time at all with their younger generations (5.83%). 79 participants never planted a single tree (65.83%). 107 participants felt that planting trees is necessary (89.17%) while 104 participants (86.67%) would like to do gardening or planting trees with their younger generations.

Keywords: Intergenerational Activities, Geriatric Mental Health, Tree Plantation

Introduction

Life expectancy among the elderly has been improving for many decades the reason being

advancement of health sector and overall improvement in per capita income of the people all over world,^[1] and there is evidence that the physical health of the elderly has also been improving with these advancement.^[2-4]

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The emotional and mental wellbeing of the geriatric people is at stake because of the increasing urbanization, and younger people migrating to the urban areas or even abroad for work, and older people staying alone at their hometowns.

In the global Sustainable Development Goals [5], goal 13 is Climate Action, “take urgent action to combat climate change and its impacts”. It’s a responsibility which is equally shared by the governments and all the people living on the earth. All the efforts how much ever minimal they may be should be counted as minute steps towards environmental betterment.

Planting and growing trees is one of the major responsibilities we have today on us. [6] All people should come together to help build our green zones inside and nearby cities and villages. Older people have much time left with them, younger people have energy. If all these generations spend some time together, then planting and growing trees can be easily done. People can maintain small gardens at home, every home can have a small nursery of its own where they can grow saplings of the common regional trees, even fruit trees like Mango, Papaya, Custard Apple, Guava. Weekends and few days in the vacations can be spent by older – younger people of the house together to plant these trees near to our houses, residential areas or near to cities. Planting trees have a large potential to conserve energy in urban areas. [7]

When the younger people who live in cities come to visit their parents in the villages, if they spend time together in planting these trees, it will be memories to cherish for both the generations. When the children are away, older parents can remember them while taking care of these trees, when the old people are dead, the children can remember them while eating fruits from these trees. And most importantly every tree that is planted and grown will be a one-step ahead on the path of environmental betterment.

We had conducted this study to see what things older people do with the younger generations and weather they will be interested in planting trees.

Literature Review

AL Park et al [8] studied the impact of intergenerational activities on general wellbeing of older adults. They suggested that geriatric people who are involved in intergenerational activities of any form are healthy both physically and mentally as compared to those people who are left to live alone. They concluded that the geriatric people should be involved in daily

activities in home or in society to improve their overall wellbeing.

CN Reisig et al [9] studied the perception of geriatric people of wellbeing after intergenerational experiences with youth, they also concluded that the intergenerational activities are important for geriatric physical and mental health.

Faer M et al [10] conducted a large project on intergenerational activities between the adolescents, young adults and older adults. They reported that not only the older people but also the adolescents and young adults are benefited from these intergenerational activities and they recommended different social and community activities to be planned and executed on a regular basis. Their project brought together different age-distinct, high risk, ethnically similar populations in an intergenerational, reciprocal support mechanism that addressed those negative factors that affect high-risk behaviour and decisional processes in adolescents and physical and mental functioning in the elderly.

Many authors have raised a concern about the mental and physical wellbeing of geriatric people. [11-13] Some of them suggested the importance of intergenerational activities in improving the overall health of the geriatric people. [14 – 17]

Objectives:

2. To find out how older people spend time with younger generations
3. To evaluate if older people are interested in gardening and planting trees as an intergenerational activity.

Methods

We conducted a survey on 120 in the community attached to our parent medical college, where we enquired about the different means by which the older people spend time with the younger generations and if they will be interested in gardening or planting trees together with the younger generations.

Ethical Clearance for the institutional ethics committee has been taken to carry out this study.

Inclusion Criteria:

1. Old age people of both sexes and age more than 60 years
2. Residents of medical college and hospital area for more than 6 months

Exclusion Criteria:

1. Unmarried people
2. Those who are not willing to participate

Sample Size:

According to a study conducted by **GK Ingle et al** ^[18] the proportion of old age people more than 60 years will be 7.7%,

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So, $p = 7.7\%$

Using formula for sample size (n) calculation,

$$n = \frac{4 \times p \times q}{e^2}$$

Where, $p = 7.7\% = 0.077$

$$q = 1 - p = 0.923$$

Taking e, absolute error of 5%, $e = 0.05$

$$\text{So, } n = \frac{4 \times 0.077 \times 0.923}{0.05 \times 0.05}$$

$$n = 113.71 \approx 114$$

A minimum of 113 patients will be included in the study, rounding it up to 120 patients.

Sample size = n = 120

Sampling Technique: Convenience Sampling

Statistical methods: A simple questionnaire was prepared and a pilot study was conducted with 20 geriatric participants, the questionnaire along with the results were put forth the institutional research cell to validate the questionnaire. The validated questionnaire in google form format was used to collect the data from the geriatric people in the nearby community. Data was entered in Microsoft excel, qualitative data is shown in numbers and percentages and quantitative data in mean

and SD. Charts and graphs are used to show the results.

Results

There were a total of 120 study participants, 60 males and 60 females. Mean age was 68.49 ± 6.83 years.

Majority of them interacted with the younger generations daily (55.83%) followed by 3 to 4 days a week (30%).

Table 1: Frequency of quality time spent with the younger generations

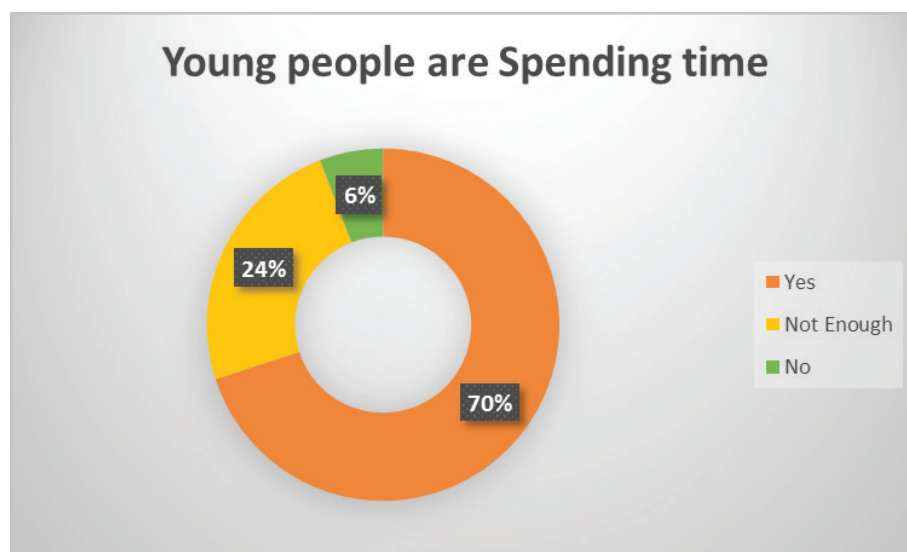
Frequency of quality time spent	Number	%
Daily	67	55.83%
3 to 4 days a week	36	30.00%
1 to 2 days a week	9	7.50%
Once or twice a month or Less	8	6.67%
Total	120	100%

General chit chat (56.67%), managing family business and farms (35%) and telling stories to grandchildren (32.50%), doing Pooja – Bhajans (10%) were the common things done by the participants with their younger generations.

Table 2: Common intergenerational activities done together

Common activities done together	Number	%
General chit chat	68	56.67
Managing family business / Farm	42	35.00
Telling stories to grandchildren	39	32.50
Pooja - Bhajan	12	10.00
Going for a walk	8	6.67
Gardening	4	3.33
Others	9	7.50

Majority (70%) felt that they spent enough time with the younger people, some felt that it was not enough (24.17%) while few were not spending time at all with their younger generations (5.83%).

**Fig 1: Opinion about younger people spending time with older people**

64 participants didn't have their own garden (53.33%), 79 participants never planted a single tree (65.83%). 107 participants felt that planting trees is necessary (89.17%)

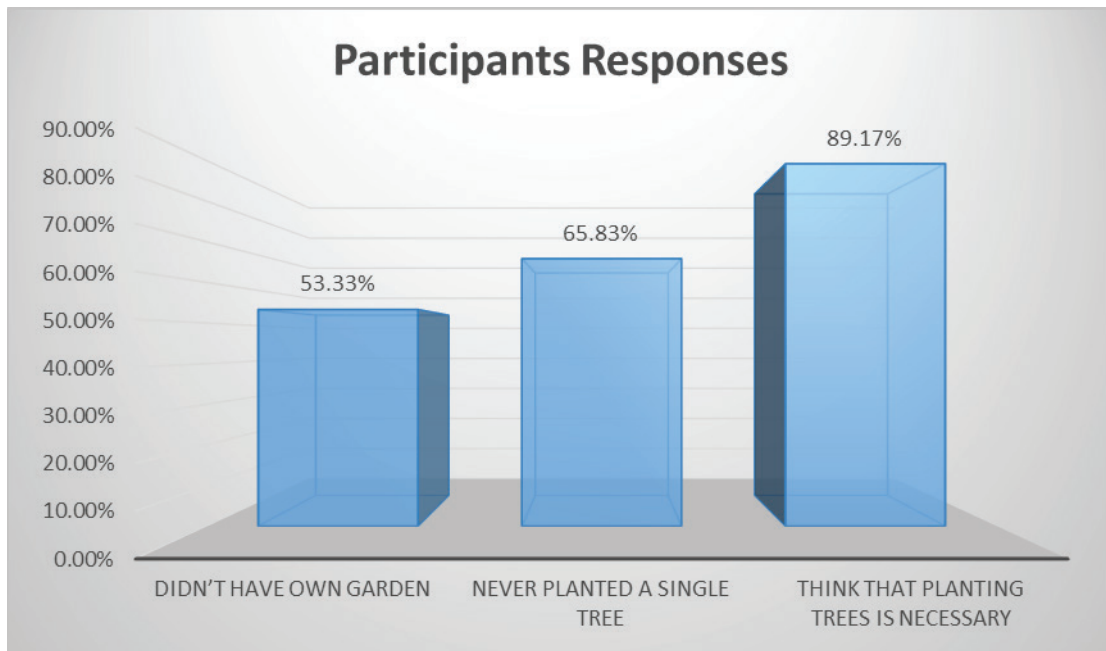


Fig 2: Participants response regarding gardening & tree plantation

104 participants (86.67%) would like to do gardening or planting trees with their younger generations, 9 responded that they might do it (7.50%) while rest 7 showed no any interest (5.83%) in doing gardening or planting trees as an intergenerational activity. Upon one month follow up, we found that 16 families (13.33%) actually did the activity.

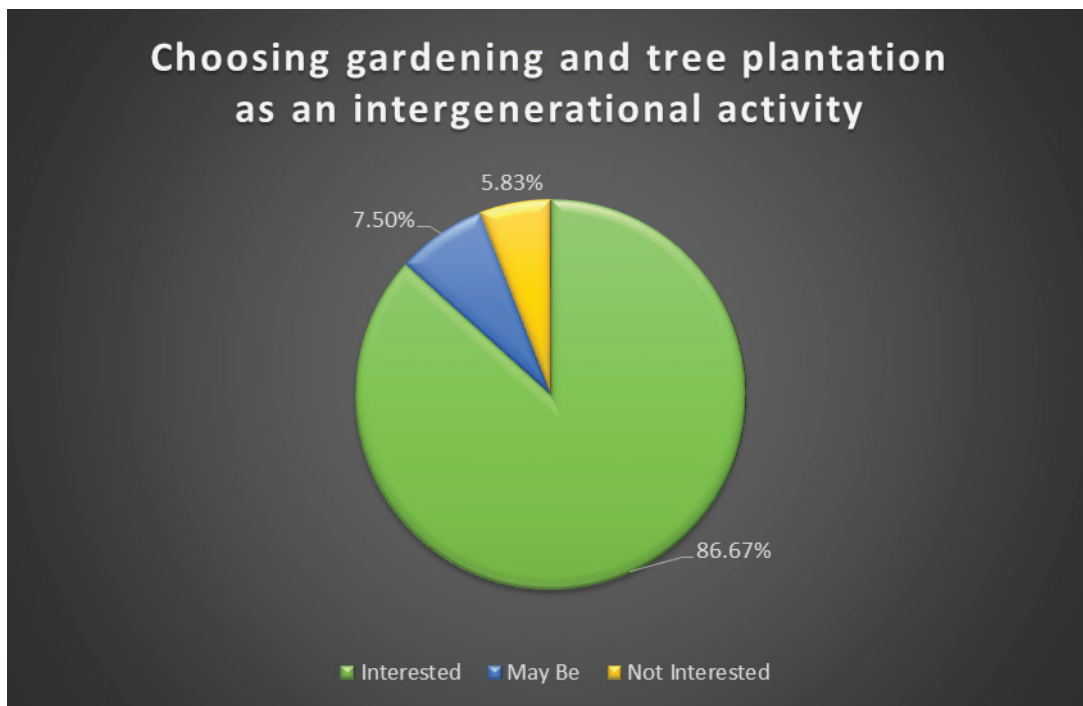


Fig 3: Choosing gardening and tree plantation as an intergenerational activity

Discussion

Various intergenerational activities have different impact on the people. We may look to attitudinal and behavioural measures for indicators of intergenerational community solidarity. Attitudes of youth towards elders are heterogeneous and may be positively or negatively affected by familial and nonfamilial intergenerational contact. [19, 20]

Y Fujiwara et al [21], in their study launched a new intervention study called REPRINTS in which senior volunteers were engaged in an activity of reading picture books to children. At the follow-up, social network scores (frequency of contact with grandchildren and others around the neighbourhood) and self-rated health was improved for majority of the individuals who did this activity most intensively as compared to those who did not. They concluded that this specific intergenerational activity helped in improving the mental and physical health of the older adults.

AL Park et al [8] studied the impact of intergenerational activities on general wellbeing of older adults. They recommended intergenerational activities for better health of the elderly.

CN Reisig et al [9] studied the perception of geriatric people of wellbeing after intergenerational experiences with youth while **Faer M et al** [10] conducted a large project on intergenerational activities, both of them recommended there should be intergenerational activities to maintain the health and wellbeing of people, both young and old.

We found out that majority of the participants interacted with the younger generations daily (55.83%) followed by 3 to 4 days a week (30%). General chit chat (56.67%), managing family business and farms (35%) and telling stories to grandchildren (32.50%), doing pooja – Bhajans (10%) were the common things done by the participants with their younger generations.

With increased urbanization and globalization, there is a reduced contact and also a marked reduction in the intergenerational bonding activities due to the migration of younger people for jobs in other cities. [22]

Whatever time these older people get to spend with their younger generations, should be spent in memorable

productive activities. What else can be more productive than planting trees together? The older generations can utilize their time in growing and nurturing saplings and trees at and around home, the younger generations can contribute their energy to plant these saplings in nearby areas.

We found out that 64 participants didn't have their own garden (53.33%), 79 participants never planted a single tree (65.83%). 107 participants felt that planting trees is necessary (89.17%). This indicates that with a little motivation and dedication these people can get involved in gardening and planting trees, which is the most important thing in today's era. [23]

Conclusion

Our study concludes that there are deficiencies in the intergenerational bonding activities. Various innovative and fruitful intergenerational activities should be developed, acted upon and followed to improve the physical, mental and social wellbeing of people from all the generations including old age people. Gardening and planting trees is one of such activity which people find important and are ready to follow.

Limitations:

Being a time bound study, follow up was not possible to check how many participants are actually involved in gardening and tree plantation as an intergenerational activity. A prospective study should be done to evaluate the impact and acceptance of this activity for intergenerational bonding.

Conflict of Interests: None

Source of Funding: Self

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