

A Case Study on Motivations Behind Sustainable Model of Kitchen Gardens Among Design Students of NIFT Kolkata

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Abstract:

In the present era of the 21st century, apartments and duplex housing play a dominant role in urban settlements. This way of urban settlements has certain benefits, compared to traditional Indian settlements like security, improved quality of life, access to basic and luxury facilities etc. Though this way of settlement has its limitations in terms of connecting with nature due to limited open space availability. Kitchen gardening helps establish a direct connection with nature along with several other benefits. Kitchen gardening is often labelled as a hobby or time passage activity for people having ample amount of free time along with ensuring a supply for kitchen. However, in reality, it does possess many other certain direct and indirect benefits. There are certain motivations behind this activity that needs to be identified. It is also an established fact, that kitchen gardening helps children in developing self-sufficiency while having other benefits like organic foods availability, being sustainable, providing stress relief, relaxation and physical exercise etc. Accordingly, descriptive research was conducted among design students of NIFT (National Institute of Fashion Technology) Kolkata to understand the motivational factors and barriers behind practicing kitchen gardening. As per the conclusion from the questionnaire, a suggested model of sustainable kitchen gardening is identified and further areas can be explored as future scope.

Encouraging or enhancing vegetable gardening at home can play a significant role in improving food security to resource poor rural and urban households in developing countries like Pakistan and providing additional sources of fresh and nutritionally rich food products (Asaduzzaman et al. [Citation2011](#); Galhena [Citation2012](#)).

KEYWORDS: Kitchen garden, reuse, urban lifestyle, environment, sustainability, Upcycle.

Introduction:

The world population has rapidly increased in 20th and 21st centuries, and it has exceeded 7 billion on March 12, 2012.(i) . As in 2018, 55% of the world population is currently living in urban areas, which is further expected to increase 68% by 2050. (ii). The concept of urbanisation and lack of open ground for gardening, motivated people to make other arrangements and ideas like kitchen gardening. (iii)Kitchen Garden is an area in residential building / house where vegetables and other herbs are grown for home

consumption. (iv) In urban settlements, it is generally considered as a leisure or hobby rather than a primary contribution to kitchen supplies. Some influencers references, mostly from covid lockdown periods also encouraged this culture (v). In some cases, people got associated to kitchen gardening activities through organic farming concept, mainly as an experimental activity at home. Kitchen gardening has multiple perspectives and one focused perspective about the motivation behind this activity is explored and figured out in this research paper.

In this busy world, everyone is competing and trying to become a better version of themselves by updating in terms of information and technological level. To compete at a global level often self-updating on the basic grassroots level is missed, including unawareness of basic life-leading culture and information among the younger generations. (vi). Maintaining a kitchen garden is beyond not solely food-oriented. As explored in other studies there are certain other significant motivations like pleasure, connection with nature, physical activity etc. which drives gardeners to maintain a kitchen garden. (vii). Identification of motivations behind growing your own food and other basic life skills is much required in today’s time. These small initiatives will help in understanding the basic connection between humans and their environment.



Figure: Geographical location of this research study

Research Objectives:

1. Understanding the motivational factors behind kitchen gardening among design students.
2. Understanding the barriers and benefits of initiating or maintaining a kitchen garden.
3. Design and development of a sustainable model for kitchen gardening.

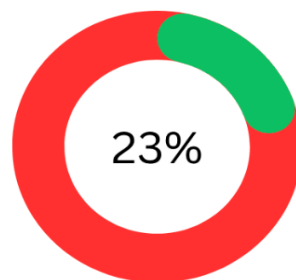
Methodology:

In order to achieve the above-mentioned objectives a study on motivational factors behind kitchen gardening was conducted among students of National Institute of Fashion Technology Kolkata. Based on the theoretical framework and indicators a questionnaire was prepared. This study explores motivations, limitations and ways of achieving the desired activity of kitchen gardening. The questionnaire was divided into 3 parts. First part was focused on socio-economic information including the questions in which

graduation year and type/place of residence with a total of 6 variables. This part helped Second part was developed to get responses only from those students who are practicing kitchen gardening. The second part of the questionnaire had 16 variables in total. The second part consists of variables to understand the motivations behind kitchen gardening, knowledge sources, cultivation techniques etc. The third part had 5 variables and was dedicated to the students who are not practising kitchen gardening in order to understand willingness, barriers, knowledge about kitchen gardening. The questionnaire was sent to a set of 5 experts for face validity. The experts were selected by rigorous discussion sessions, with their experience inputs. The 2 experts are involved in leading kitchen gardening ecommerce stores names Nurserylive and Seedbasket. Other 3 experts are from academia background and actively involved in kitchen gardening from last 3 to 10 years. The mode of communication was via emails and mobile calls. Both quantitative and qualitative analysis is done to conclude with the objective of this research focusing on motivations and barriers to kitchen gardening. The experts are selected based on experience in kitchen gardening and have been associated with this area for significant years. Upon clearance and changes suggested from subject matter experts, the questionnaire was shared to all students of NIFT Kolkata. A total of 60 students responded to the questionnaire. The questionnaire was filled out voluntarily. The questionnaire was prepared in google forms. Based on the responses collected the results are drawn.

Results:

As per thorough research and analysis through questionnaires among design students, the main facts the picture related to motivation, barriers and approaches towards kitchen gardening are presented data-wise below through charts.



Only 23% students are actively involved in kitchen Gardening.

The very first question was about to know how many participants are already known and practised this concept, it was analysed only 22.8% of participants were aware and in practice of Kitchen Gardening. The reasons/barriers for not practicing kitchen gardening were also identified.

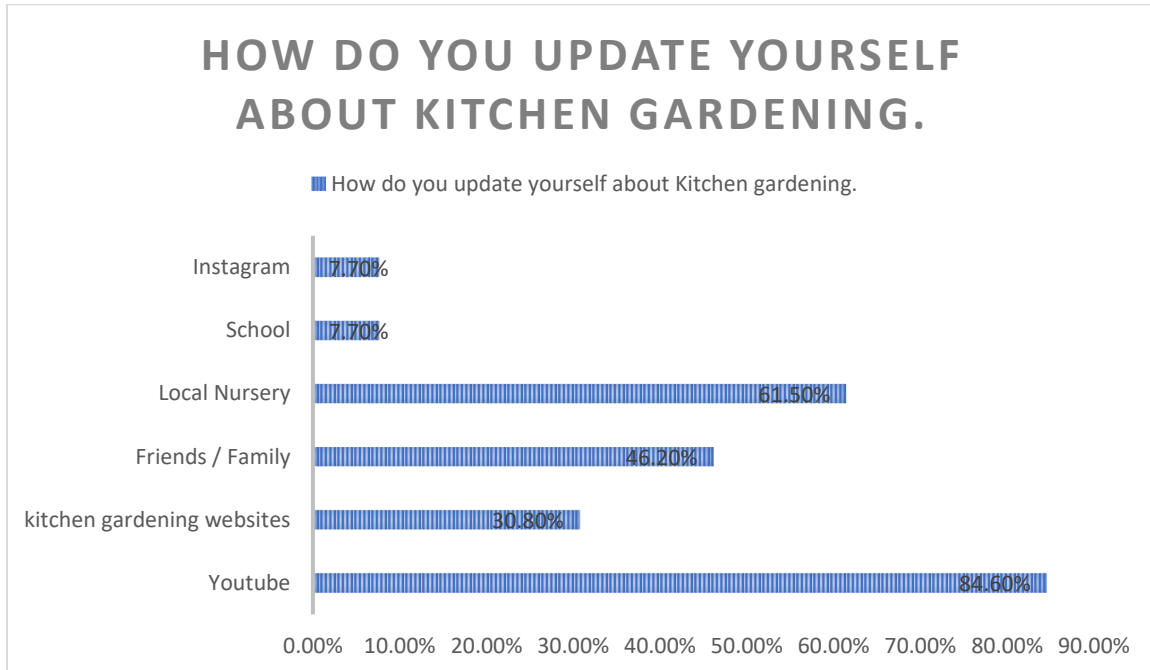
Participants Practicing Kitchen Gardening

The second question was about the area or space the candidates practising kitchen gardening are using, as a matter-of-fact Balcony area are was opted by 60% of participants and other are restricting themselves to other areas like Backyard, windows, separate room etc. In urban settlements, especially in high rise buildings, balconies are preferred area for kitchen gardening, due to limited space availability and ample amount of sunlight, open area.

The question was about the time dedication for the activity, it was surprising as the data shows around 30.8 % are practising kitchen gardening from more than 5 years and same percentage of people, which is

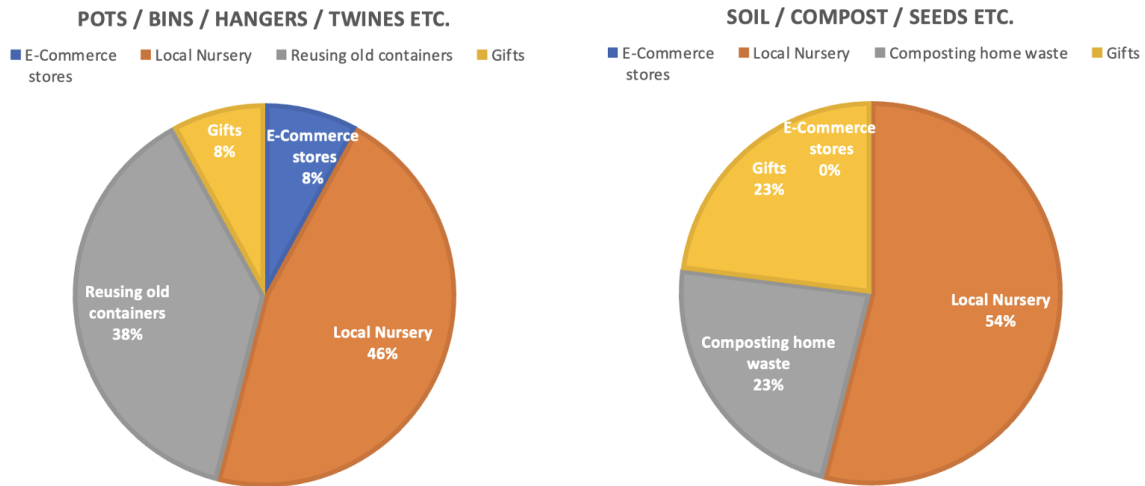
around 30.8 % have started just an year ago and others are 15.4% are in 2-5 years bracket and 23.1% are in 1-2 year bracket.

Analysis about time dedication in this practice on day wise schedule, maximum responses, which is around 16.7% show 1 hours is dedicated for the activity on day wise basis, otherwise maximum respondent are engaged according to availability of the time which varies to 1-10 hours maximum.



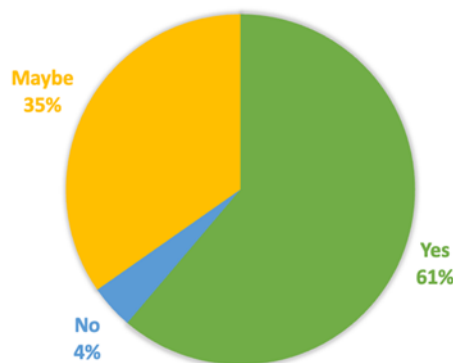
Broadening Knowledge - To maintain a healthy kitchen garden and ensure stable supply for kitchen, a good amount of knowledge level regarding understating soils, compost, seeds, looking after plants, adequate amount of knowledge is required. Also, knowledge level is a major constraint in initiating/maintaining a kitchen garden. A similar study in Surat identified 59% kitchen gardeners feel lack of scientific knowledge about kitchen garden is a major constraint. (ix). Accordingly, a variable was included in questionnaire by active students involved in kitchen gardening, and it was identified approx. 85% students depend on YouTube for updating themselves about kitchen gardening and 61.5% depend on local nursery. Surprisingly only approx. 8% believe in Instagram for kitchen gardening knowledge updating.

Supplies for kitchen Garden – Another major constraint notified in other studies behind maintaining kitchen garden is access to capital, water, seeds and planting materials etc. (ix). Accordingly, a variable was included in the questionnaire, Maximum respondents (46.2%) get their raw materials for kitchen gardening sourced from local nursery. And very few around 7.6 % are depending on ecommerce sites ,and 7.7 % for both as gifts/takeaways from family or relatives or may be from some mentor and teachers for the raw materials, in between 38.5% are using the old home containers and reusable materials, which helps in adding the sustainability’s reuse factor. (x)



After the analysis of raw materials procurement procedure, the analysis was done the most essential ingredient in gardening process, which is water, as per data gathered 30.8% used water from their own kitchen after washing vegetables or may be cleaning utensils used water and same percentage of participants are using municipality water. 15.8% are using RO and AC waste water. Remaining candidates are using all kind of waters, based on daily availability.

DO YOU WANT TO PRACTICE KITCHEN GARDENING



To appropriately and proudly mention that it is revealed from the survey 69.2% of respondents agreed not to use any pesticides in their kitchen gardening. Few are using vermicompost sometimes and only a small percent of 7.7% of respondents using pesticides regularly.

Participants Not Practicing Kitchen Gardening

Around 60% of the participants are proudly agree and willing to start their practice about kitchen gardening and around 34% are considering they may opt, its a very strong response which clearly shows the willingness about the concept and may be with a little help/push will help increasing the number soon to 100% possibility. There might be certain barriers which needs to be identified to ensure smooth initiation of kitchen gardening. Some of the drivers behind starting your own kitchen was the pride in growing your own food and sustainable living, which was agreed by 50% and 48% students respectively. Other drivers are also identified which are hobby and aesthetics purposes.

Conclusion:

The overall study about motivations behind kitchen gardening has concluded multiple driving factors to-

wards kitchen gardening including but not limited to making the home greener, connecting with nature etc. 25% of the respondents also acknowledged practising kitchen gardening regularly and a major chunk of respondents 71% know about kitchen gardening and 50% tried kitchen gardening as well. In terms of sustainability, 38% of the respondents used old containers, 23% uses home waste for soil, compost etc. However it has been also identified, there are some certain barriers in maintaining a kitchen garden, like constant care, birds and insects damaging plants, lack of knowledge etc. In order to address these issues a need for a guidance platform is felt required which can guide amateur kitchen gardeners based on geographical conditions, types of plants as per expertise, sustainable practices etc.

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