

Social Attitudes towards Kitchen Gardening

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ABSTRACTS

With the increase in population and the increasing trend of urbanizations leads towards a serious issue of food security and mal-nutrition. To cover come the mal nutrition in the household the concept of kitchen gardening was introduced over the centuries. Now this concept is very well know and taking success in developed and developing countries. So this study was designed to analyse the attitude of people towards kitchen gardening. For this purpose study was conducted on among 30 house holds in three different colonies of Islamabad. Rawal Town, Margalla Town, and Terlai. Results depict that 90% of the people practices the activity of kitchen gardening at their home and use their production for home consumption.

Keywords: Attitude, kitchen gardening, urbanization

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INTRODUCTION

Continuously increasing food prices of basic kitchen items, fruits and vegetables the poor and fixed income groups are suffering from the decreasing real incomes and purchasing power. The marginal increase in the income of the poor people to enable them to gain access to food and improve their nutrition is the need of the present time. In cities and urban areas where there is shortage of land for farming and over-population, areas of land around the house that tend to be useless, overgrown by weeds and turned to refuse dump could be an means of ensuring household food security and nutrition if properly harnessed. With increasing civilization and western education, kitchen gardens are being incorporated into modern houses for easy and quick access to fresh food produce and products (Sanogo, 2007).

A kitchen garden has numerous definitions. It is more common French term; these gardens are meant to supply the household with some vegetables, fruits or herbs. When hearing the term "kitchen garden" it is easy to visualize a shelf full of little flowerpots containing a few herbs. This can include vegetables, fruits, berries, herbs and flowers. Kitchen gardens can be grown in the empty space available at the backyard of the house or a group of women can come together, identify a common place or land and grow desired vegetables, fruits, cereals etc that can benefit the women and community as a whole (Christensen, 2011).

There are many social benefits that have emerged from kitchen gardening practices; better health and nutrition, increased income, employment, food security within the household, and community social life. Households and small communities take advantage of vacant land and contribute not only to their household food needs but also the needs of their resident city (Drescher. *et al.* 2000)

Most of the developed countries are doing the successful kitchen gardens which are not accidental. They are the results of planning, constant care, and the will to make things grow. Among the many things a vegetable garden may offer toward a satisfying experience are fresh air, exercise, sunshine, knowledge, supplemental income, mental therapy, and fresh food, rich in vitamins and minerals, harvested at the best stage of maturity (Stephens, 2003).

Looking at the importance of kitchen gardening there is a need of sound policies, effective agricultural research and technology that can help to bring the unit cost saving productivity increase in food production. In this regard the concept of roof and pot gardening can serve as the activity to promote an integrated approach to low cost and ecologically sound cropping systems. This activity can help to improve the household food supply and nutrition to some extent particularly in the slums. The organic farming and horticulture institute of NARC is also trying to promote this activity they are will providing the technical assistance regarding the plantation, on processes such as seasonal seeds, hybrid seeds, organic fertilizer and compost, precautions for the

disease, insect control and training of the women to make them able to establish and maintain the pot and roof gardens in future as well. Regarding this social scientist in NARC has also designed a study to analyze the Social Attitude and acceptance of Kitchen gardening in posh areas of Islamabad.

Study follows the following objectives i) To find out the perception of women towards kitchen gardening; ii) To find out the issues and constraints related to kitchen gardening; iii) To suggest recommendation for promotion of kitchen gardening.

MATERIAL AND METHODS

The study was conducted on three different colonies of Islamabad. Rawal Town, Margalla Town, and Terlai. Rawal Town is located near Rawal Dam, Islamabad. It is about 4-6 Km from Aabpara covered with one side Margala Town, at Murree Road or Orchard Road and other is Chak Shahzad or Shahzad Town, and Terlai, Islamabad in the year 2011. The result would have been more accurate, if the whole of population had been interviewed. However, keeping in view the time constraints and availability of respondents, only 30 respondents were selected and mostly are educated. This research was based on primary data and data were collected through personal interview using questionnaire, designed to achieve the pre-set objective on the basis of personal observations and literature review. The collected data was fed in to the computer by using the SPSS Package. Keeping in view the requirement of the study, simple statistical techniques like averages, their comparisons and percentage were applied using SPSS package (Muller, 1986). The classified data is coded, tabulated and percent calculated. The results were presented and discussed along with tables, cross tabs and percentages, to observe the change documenting the nutritional status of the families as well as their affect on the household budget.

We use the OLS method. In statistics, Ordinary least square is a method for estimating the unknown parameters in a linear regression model (Gauss, 1821).

Suppose the data consists of n observations $\{y_i, x_i\}$ $i=1$. Each observation includes a scalar response y_i and a vector of predictors (or regressors) x_i . In a linear regression model the response variable is a linear function of the regressors:

$$y_i = x_i' \beta + \varepsilon_i,$$

where β is a $p \times 1$ vector of unknown parameters; ε_i 's are unobserved scalar random variables (errors) which account for the discrepancy between the actually observed responses y_i and the "predicted outcomes" $x_i' \beta$; and ' denotes matrix transpose, so that $x_i' \beta$ is the dot product between the vectors x and β . Where y and e are $n \times 1$ vectors, and X is an $n \times p$ matrix of regressors, which is also sometimes called the design matrix. As a rule, the constant term is always included in the set of regressors X , say, by taking $x_{i1} = 1$ for all $i = 1 \dots n$. The coefficient β_1 corresponding to this regressor is called the intercept.

There may be some relationship between the regressors. For instance, the third regressor may be the square of the second regressor. In this case (assuming that the first regressor is constant) we have a quadratic model in the second regressor. But this is still considered a linear model because it is linear in the β s.

RESULTS AND DISCUSSION

A mixed method analysis of the data was conducted including separate analyses of the data collected using different methods. Examination of the combined results was then conducted to clarify and explore similarities and contradictory results and compare with the existing literature. This provided an understanding of what worked and what didn't, how it was experienced, what it cost and how it was valued. Urban gardening contributes to local food security. Gardeners report that sharing food with friends, families, neighbors, and/or needy members of their community in need are one of the important reasons that they grow produce.

Descriptive analysis is used to present the results in which mean and percentages are used. Socio-economic profile is required to have an idea about the present gardening activities and

possible development opportunities. Therefore age, education and total income, approximate dimensions of gardens, type of family, and total family members of the family were recorded for the study. The study was conducted in the posh area where well off and educated people were living so the income was divided in two groups middle income groups where the range was up to 40,000 and 43 % peoples lies in that group and more than that lies in high income group shown in table 1.

Table1. Income distribution different group of people

| Income Level | Frequency | Percent |
|---------------|-----------|---------|
| Middle income | 13 | 43 |
| High income | 17 | 57 |
| Total | 30 | 100 |

The area which was used for kitchen gardening was back yard and on average middle income groups people have 71 sq. yards area while higher income group people have 96 sq. yards as shown in table 2.

Table2. Appropriate dimensions of your kitchen garden (area in sq. yards)

| Income Level | Kitchen Garden Area(sq. yards) |
|---------------|--------------------------------|
| Middle income | 71 |
| High income | 96 |

Today, creating a kitchen garden have different aims. It may be a means to stretch the budget by growing food at home that then need to be purchased at a grocery store. Usually the most expensive year for the kitchen garden is the first one, when things like soil or different things may need to be purchased and thereafter, food produced in a kitchen garden usually does save money and tends to taste better than grocery store purchased fruit and vegetables (Christensen, 2011). The impact of kitchen gardening was very positive as it gave healthy and nutritious food to the household members and also helped in reducing financial burden and keep them healthy and active. Table tells us that the purpose of mostly people was getting fresh vegetables and the percentage is 46 and also some people do it as a hobby or good time pass. As it is a fruitful activity to get fresh and nutritious vegetables so mostly people adopt it to get many benefits from it.

Table 3. Purpose of Kitchen Gardening

| Reason | Middle income | High income | Total |
|---------------------------|----------------|----------------|----------------|
| Get fresh vegetables | 6(35) | 10(58) | 16(46) |
| Budget control | 4(25) | 3(18) | 7(21) |
| Hobby | 5(29) | 2(12) | 7(21) |
| Easy availability of food | 2(12) | 2(12) | 4(12) |
| Total | 17(100) | 17(100) | 34(100) |

According to Heyzer & Sen (1994), “Women are seen as having to balance several roles in coping with poverty and having to devise numerous survival strategies. Hence, in the generation of economic opportunities for the poor, there is need to target resources to women. Research shows that gardening is a preferred form of exercise across age, gender, and ethnicity. Research does not always capture gardening as exercise, because some gardeners perceive it as part of a day’s leisure or labour activities and not a separate activity in the category of “exercise.” In one study, men identified gardening as “exercise” more often than did women though women and men reported similar amounts of time gardening. Many women may associate gardening with gendered household food-related chores rather than exercise (Krems *et al.* 2004).Table 4 results also justified through literature, majority were the women who managed the activities of garden like 21 % daughters, 16% mothers, 13% sisters, and very less of men were involved in this activity. 73.9%

female got financial support from the head of the house as father, husband or they also used their own finances to manage the activities of kitchen garden.

Table 4. Manager of kitchen gardening

| Manager | Middle income | High income | Total |
|--------------|----------------|----------------|----------------|
| Husband | 3(19) | 2(9) | 5(12) |
| Wives | 0(0) | 3(13) | 3(8) |
| Mother | 3(19) | 3(13) | 6(16) |
| Daughter | 2(12) | 7(30) | 9(21) |
| Sister | 2(12) | 3(13) | 5(13) |
| Sons | 2(12) | 2(9) | 4(11) |
| Brother | 3(19) | 1(4) | 4(11) |
| Gardner | 1(7) | 2(9) | 3(8) |
| Total | 16(100) | 23(100) | 39(100) |

Kitchen gardening is a healthy activity it's not only an activity to controls the financial budget of the household. Results depicts that the on average a house hold can 7-8 Kg vegetable from his garden. And average consumption is 10 Kg weekly and 3-5 kg daily shows in table 5.

Table 5. Average production and consumption of kitchen garden vegetables (kgs)

| | | Middle income | High income | Total |
|-------------------|---------------|----------------|----------------|----------------|
| Production in Kgs | Weekly | 7.6 | 9.6 | 17 |
| Consumption in Kg | Weekly | 10(77) | 12(71) | 22(74) |
| | Daily | 3(23) | 5(29) | 8(26) |
| | Total | 13(100) | 17(100) | 30(100) |

Gardening benefits both individuals and neighbourhoods, and thus contributes to overall community health. The benefits of food production transcend the physical, mental and emotional health of the individual to leave lasting change on others and on the physical and social space of the community (Armstrong, 2000). People had fewer resources to increase their production, and mostly people use it for their own consumption. After fulfil their consumption 35% people give the excess amount to their neighbours and other family member as a gift show in the table 6.

Table 6. Utilization of vegetables

| Utilize of vegetables | Middle income | High income | Total |
|-----------------------|----------------|----------------|----------------|
| Home consumption | 10(63) | 12(67) | 22(65) |
| Free gift to others | 6(37) | 6(33) | 12(35) |
| Total | 16(100) | 18(100) | 34(100) |

Mostly people do not carry on the activity due to their financial constraints, and lack of knowledge about them and majority adopt it as a hobby and didn't know about complete information about kitchen gardening. In this way they face a lot of problems while growing the vegetables in their Garden. Some of the people also face problems shown in table 7 because they don't prefer to use insecticides and they don't have complete awareness about the gardening.

Table 7. Problems faces during kitchen gardening

| Problems | Middle income | High income | Total |
|--------------------------------|----------------|----------------|----------------|
| Weeding | 2(11) | 3(14) | 5(12) |
| Time management | 0(0) | 3(14) | 3(8) |
| Water shortage | 3(17) | 3(14) | 6(15) |
| Lack of proper place | 4(22) | 2(10) | 6(15) |
| Attack of insects and birds | 2(11) | 1(5) | 3(8) |
| Financial problems | 3(17) | 2(10) | 5(12) |
| Lack of knowledge | 2(11) | 3(14) | 5(12) |
| Non availability of good seeds | 2(11) | 4(19) | 6(15) |
| Total | 18(100) | 21(100) | 39(100) |

Now a day media is working fast it build a lot of awareness among the people. Kitchen gardening is a technology which enables us to grow bacteria free vegetables at home providing a good use of empty tins, old utensils and clay flower pots. Kitchen gardening technology is helpful to grow toxicity free organic vegetables like tomato, krela, dhanya, mint, garlic, pepper and onion etc at a little space in kitchen, rooms lawn and roof top (Cheema, 2011). Kitchen Gardening is not a hard activity. It only requires some time, space and Knowledge. Study area peoples require some types of help form the agriculture research organizations like good quality of seeds training course regarding the managements of place, use of organic composed etc.

Table 8. Help needed to improve vegetable production

| Reason | Middle income | High income | Total |
|----------------------------------|----------------|----------------|----------------|
| Good quality seed | 5(26) | 2(11) | 7(19) |
| Proper place | 2(11) | 2(11) | 4(11) |
| Courses/training required | 4(21) | 4(22) | 8(21) |
| Need help of nutritionist | 2(11) | 2(11) | 4(11) |
| Agricultural advertisement on TV | 2(11) | 2(11) | 4(11) |
| Better water supply | 4(21) | 6(33) | 10(27) |
| Total | 19(100) | 18(100) | 37(100) |

STATISTICAL ANALYSIS

In this economic analysis we take age, education, family type, family size and consumption per week and consumption in number as the main source of income as independent variable and income as dependent variable. We take age in years and mean age is 40 years. Education years are taken as independent variable and with mean value of 3.7. There are 80% families dwelling as single families, whereas 31% are living as joint families.

Equation

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7$$

In this equation, y is our dependent variable that is income and x is our independent variable as x_1 represents type of family, x_2 age, x_3 education, x_4 marital status, x_5 represents profession, x_6 consumption per week, x_7 consumption in number. In a cause and effect relationship, the independent variable is the cause, and the dependent variable is the effect. Least squares linear regression is a method for predicting the value of a dependent variable Y, based on the value of an independent variable X.

The value of R^2 indicates that the predictors explain 60% of the variance in income. This implies that model fits the data satisfactorily. The value of R^2 is given in table given below.

Table 9. Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|-------|---------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .775(a) | .601 | .474 | .57635 | .601 | 4.727 | 7 | 22 | .002 |

a. Independent Variable: (Constant), how many times vegetables consumed in number? Education of the respondent, Type of family, Marital Status, How many times vegetables consumed per week? Age, Profession

Table 10. ANOVA (b)

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|-------|---------|
| Regression | 10.992 | 7 | 1.570 | 4.727 | .002(a) |
| Residual | 7.308 | 22 | .332 | | |
| Total | 18.300 | 29 | | | |

a): Independent Variable: (Constant), How many times vegetables consumed in number? Education of the respondent, Type of family, Marital Status, How many times vegetables consumed per week? Age, Profession

b): Dependent Variable: Income level.

F test indicates over all significance. The F value indicates significant difference among the independent variables as on table.11

Table 11. F- Value indicates significant difference

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------------------------|-----------------------------|-----------|---------------------------|--------|-------|
| | B | Std.Error | Beta | | |
| Constant | -3.411 | 1.024 | | -3.331 | 0.003 |
| Type of family | .164 | .285 | 0.084 | 0.576 | 0.570 |
| Age | 0.052 | 0.018 | 0.706 | 2.938 | 0.008 |
| Respondent Education | -.0314 | 0.113 | -0.430 | -2.779 | 0.011 |
| Material Status | 0.490 | 0.341 | 0.307 | 1.439 | 0.164 |
| Profession | -0.165 | 0.101 | -0.398 | -1.633 | 0.117 |
| vegetables consumed per week | 1.529 | 0.344 | 0.866 | 4.448 | 0.00 |

T test tells about the individual effect of independent variables on dependent as can be seen in the table above.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that kitchen gardening is a healthy and joyful activity. It is unique kind of activity. From kitchen gardening, people can get fresh and healthy food. Most of the people like to eat organic food thus the kitchen gardening is one of the source of organic food. From kitchen gardening people can also control their financial expenditures and they can get fresh and healthy vegetables and fruits from their own gardens. Thus in such a way kitchen gardening also gives financial support as well. There is need of basic training. Women now a days plays a very important role in promoting the activity of kitchen gardening. Methods of mitigating the effects of

risk in rural. It is a good and constructive activity for the house wives and other household ladies. It is also a beneficial and positive activity which makes people self sufficient in the production of vegetables and fruits. Through kitchen gardening, we can get better quality food; it is also a learning activity, like through kitchen gardening people learn about the variety of seeds, fertilizers, pesticides etc. People can enhance their skills and knowledge through such a great activity. People also learn about the diseases, quality of food, importance of organic food and their effects on health. Most of the people are adopting it as a hobby and as a fun also. It is now a day symbol of healthy life style. It is a good and fruitful activity.

Kitchen gardening is now strongly recommended on a large scale. A project should be designed which requires systematic efforts to engage with women and assess their circumstances. There is a need of especial institutes which give the training of kitchen gardening. Kitchen gardening is recommended on the basis of its positive aspects like it gives healthy food and good environment to the people. It is a healthy and creative activity, which makes us active. It decreases financial burden and makes the people self sufficient in the production of vegetables. So people should carry out this activity, so that they can get healthy and nutritional food from their own gardens. It is a good time pass activity and a source of getting fresh and cheaper vegetables.

REFERENCES

- Armstrong-A, Donna. 2000. "A survey of community gardens in upstate New York: Implications for health promotion and community development." *Health and Place* 6:319-327.
- Christensen, T. E. 2011. What is a kitchen Garden? Kitchen gardening technology introduced in LCWU. *Pakistan Educational News Keiko Y.* pp.1-2.
- Cheema, J. K. 2011. Kitchen gardening technology introduced in LCWU. *Pakistan Educational News Keiko Y.* (1998).
- Davis, K., Ekboir, J., Mekasha, W., Ochieng, C., Spielman, D., and Zerfu, E. 2007. Strengthening Agricultural Education and Training in Sub-Saharan Africa from an Innovations Systems Perspective. IFRPI. Discussion Paper. 00736.
- Drescher et al. 2000. "Urban Food Security: Urban agriculture, a response to crisis?" *UA Magazine*(2000)1. <http://www.ruaf.org/index.php?q=system/files/files/Urban+food+security,UA+response+to+crisis.pdf>
- Gauss, C.F. (I 82 1/-3/-6). *Theoriu Combinutionis Observurionurn Erroribus Minirnur Obnoxie*, in two parts with a supplement. Reprinted with an English translation and notes by G.W. Stewart, (1995). Philadelphia: SIAM
- Heyzer, N and Sen, G.1994. Gender, economic growth, and poverty: Market growth and state planning in Asia and the Pacific. Published by Kali for Women and International Books, Netherlands in collaboration with Asian and Pacific Development Centre, Kuala Lumpur (Malaysia). Book, Edited (ISBN 8185107572).pp395
- Krems C, PM Lehrmann, M Neuhuser-Berthold. 2004. "Physical activity in young and elderly subjects." *Journal of Sports Medicine & Physical Fitness.* 44(1):71-6, Mar.
- Muller, Edward N. 1986. Income Inequality and Political Violence: The Effect of Influential Cases. *American Sociological Review* 51:441-45.
- Sanogo, D. 2007. Africa's Food Status: Implications and challenges in a changing world in facing up to food crisis in Sub Saharan Africa: The challenges, gaps and role of Agricultural Policies. Proceeding of the 12 Annual Symposium of the International association of Research Scholars and Fellows.

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