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ASSESSING THE POTENTIAL OF SMALL-SCALE URBAN AGRICULTURE IN HYDERABAD, PAKISTAN

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KeyWords
Small-scale Agriculture, Urbanization, Potentials, Consumer Demands, Desirability, farming methods, Economy.

ABSTRACT

Urban agriculture is an industry that produces, processes, and markets food, fuel, and other outputs, largely in response to the daily demand of consumers within a town, city, or metropolis, on many types of privately and publicly held land and water bodies found throughout intra-urban and peri-urban areas. The aim of this study was to determine the awareness and desirability of urban farming, and its impact on inhabitants in Qasimabad, Hyderabad. The data were collected through questionnaire survey. Afterward, data were analysed using SPSS software. Results revealed that the inhabitants have lack knowledge about urban farming. They do not know about the seeds, seasonal fruits and vegetables. People have limited access towards resources, is the major constraint in urban agriculture. People also showed positive response to urban farming, as it is healthy activity. Suggestions are provided to promote urban agriculture at neighbourhood/community level.

INTRODUCTION

Urban agriculture is the practise of food and non-food growing or processing of produce that is sold to consumers both within and on the margins of an urban area[1]. Today, fifty four percent(54%) of the world's population lives in urban areas, a proportion that is expected to increase to 66 percent by 2050[2]. The World Urbanization Prospects by UN DESA's Population Division released in 2014 notes that the largest urban growth will take place in developing countries[3]. The shortage of food and rising price of daily consumables of home will increase, and Twenty-five million children will go hungry by the middle of this century as climate change[4].

The current 7.5 billion global population is expected to continue growing in the decades to come, generating an ever-increasing demand for housing, food, employment, transportation, and health and sanitation services[5]; something which will not be easy to satisfy. In most developing countries, where largest and fastest growing cities primarily concentrate, the rate at which urbanization occurs is outperforming the progress of services and employment[4].

Presently, over 50% of the global people has been living in the towns, which is expected to grow further up to 70% by the year 2050. This value has increased from 15% since last century [6] . For a food system to support an ever-growing and ever-urbanizing population, there has been significant improvements to transport, refrigeration, processing, and to the storage of food[7].

A sobering scenario exploring the likelihood and potential reasons for the collapse of society[8]. A key aspect of their discussion relate to the ability for civilization to feed itself[9]. They argue the current approach of rural, large-scale, industrial agriculture has created serious vulnerabilities, as it depends on 'stable climates, crop monocultures, industrially produced fertilizers and pesticides, petroleum, antibiotic feed supplements and rapid, efficient transportation[4]'. How we, as part of civilization, feed the world[10], is a daunting proposition, and one taken seriously by the FAO, who conducted a high-level expert forum to try and understand the problem of feed in the world in 2050[11].

The indigenous food economy is an wide range of the budget[12] that increase the capability of the individual to grow and migrate to the urban area and also increase production and distribution of different seeds for the consumption[8] and is based on the manufacturedand will for organic and fresh food[13].

Additionally, urban agriculture provides other benefits to wide-ranging areas within a community including social, economic, education, carnal and mental health, and can even help alleviate poverty[14].

Urban agriculture is therefore socially and environmentally significant. The purpose of this study is to increase the understanding of how and why people engage in gardening, and how design can enable or encourage further participation[15].

As a result, more and more voices are raising lately in contradiction of the unsustainability of the current world-wide food system and the escalating inequalities and burgeoning hunger resulting from it[16]. It is unlikely that the planet will be able to bear in the long run an urbanized humanity that depletes the planet resources beyond its ecological carrying capacity and uses the biosphere as its particular dumping site[11]. Therefore, issues of environmental sustainability and equitable social development could not be more relevant these days[17], when a significant transformation of food production and supply chains seems to be required for the sake of the future well-being of the Earth[18].

Cities are inevitably called to spearhead the pathway towards a more just and sustainable world, so re-examining how to feed adequately the whole urban population is becoming one of the typical challenges of this century[19].

In conclusion, this study can trigger residential design criteria in which people have specified spaces for farming like they have specified spaces for parking[20]. It may help to promote community living in residential neighbourhoods especially apartments[18]. Study can foster a generation which is more concerned on ways to attain food and alleviate the problems of malnutrition in urban populations[4].

STUDY AREA

This study was conducted at Hyderabad, Sindh, Pakistan. Further to know the situation in detail, Taluka Qasimabad, Hyderabad was selected as case area. It is situated in the west of Hyderabad City on 25.24^{O} N Lat, 68.20^{o} E Long Earth Coordinates. Qasimabad is spread over about 49,800 acres consisting developed, under developed and vacant areas. The administrative boundary of Taluka Qasimabad is segregated into four Union Councils and Qasimabad City is the

headquarters. The North boundary of Qasimabad is adjacent with Hyderabad City Taluka, South with Taluka Latifabad, while; Hyderabad City Center from the East and Cantonment, and bordering with Jamshoro from West as indicated in Fig.1 & 2.

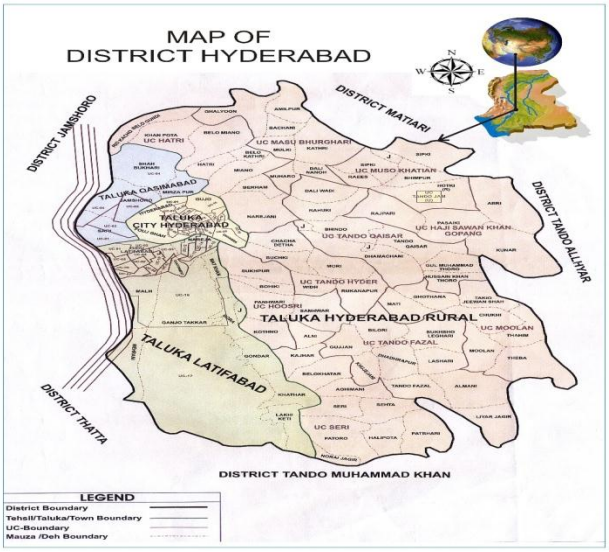

Fig.1. Location Map of Taluka Qasimabad, Hyderabad.

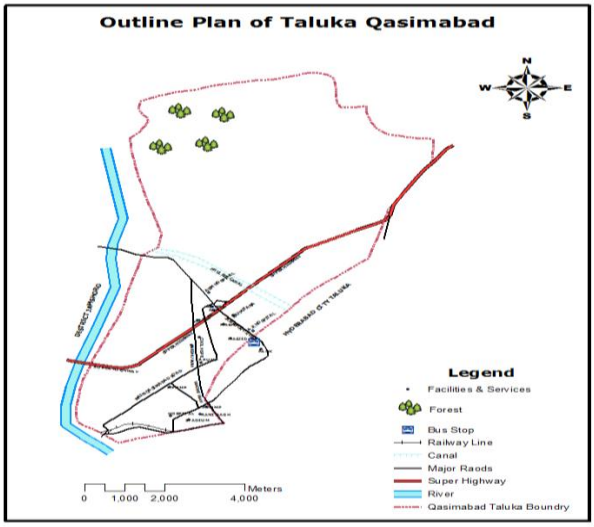

Fig.2. Administrative Boundary Map of Taluka Qasimabad

METHODS

This study was focused on assessing the potential of small scale Urban Agriculture[6] in Hyderabad, Sindh, Pakistan. The quantitative data survey method was applied to obtain the data. In this regard, a standardized Questionnaire was designed to collect the data. Close-ended questions were set to get specific information from local residences. The questionnaires were filled out randomly considering Random Sampling Technique. The Sample size of questionnaires was taken with respect to population of study area . Total 390 sample size of questionnaires was undertaken.In-addition; secondary data were also collected through literature, reports, official documents, and online sources. In the end, on-site surveys were done to observe the existing conditions of site[21].

Moreover; collected data were analysed using SPSS (Statistical Package of Social Sciences) Software. Descriptive statistics were applied to analysis and validate the data. The research methodology is presented in Fig.3.

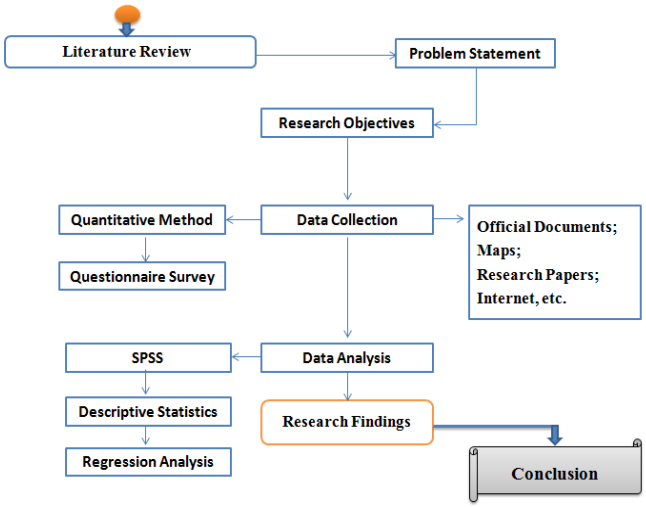

Fig.3. Research Methodology

RESULTS AND DISCUSSION

This study was conducted to determine the awareness and desirability of urban farming in Qasimabad Hyderabad and its impact on inhabitants. The data were collected using questionnaire survey. The descriptive statistics were employed to assess the obtained data. Study results are briefly discussed as follows:

A sample of 390 questionnaires was taken to collect the information from local dwellers, in which; 375 (96%) were male and 15 (4%) were female respondents as illustrated in Fig.4. People who filled the questionnaires were having higher secondary (27%) and graduation (31%) level education as pointed out in Fig.5.

Table 1 : Information Collected from Gender Respondents

Gender	Number of Respondents	Percentage
Male	375	96.16
Female	15	3.84
Total	390	100

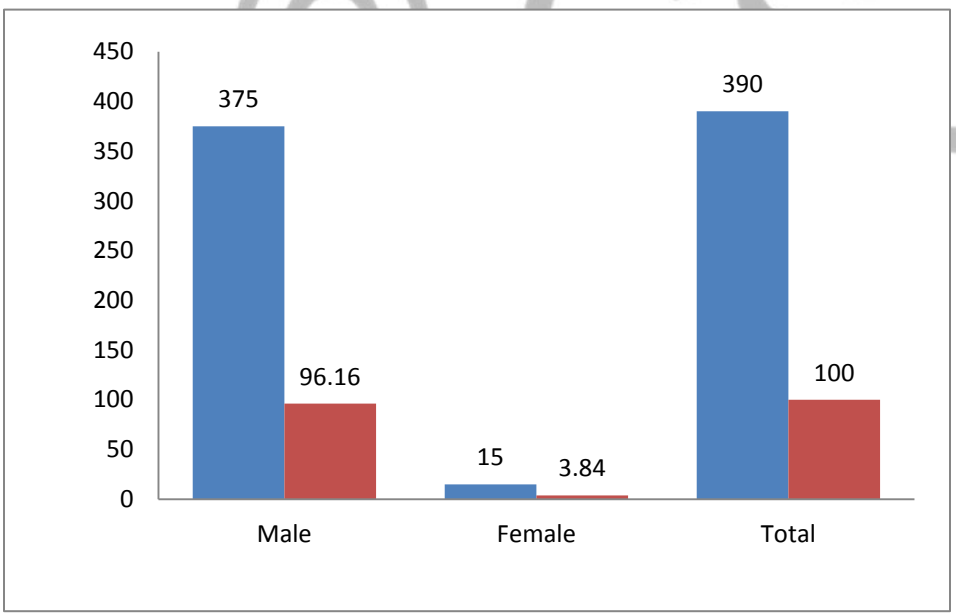

Fig.1. Gender of Respondents

Table 2: Education of the Respondents

Education Level	Number of Respondents	Percentage
No formal education	7	1.794
Primary	17	4.358
Elementary school	46	11.794
Secondary school	104	26.666
Graduation	120	30.769
Post-graduation	42	10.769
No response	54	13.846
Total	390	100

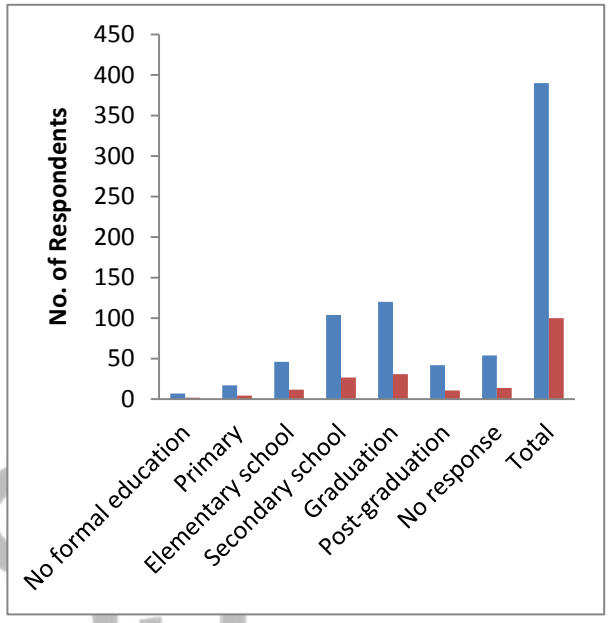

Fig.2. Education of the Respondents

Apart from daily vegetable expenditures of dwellers; 13 (3%) people bear the expenses in between 60-80 rupees, 23 (6%) persons' expenses 81-100 rupees, 34 (9%) respondents' expenses 101-120 rupees, and 103 (26%) bears 121-140 rupees per day. Whereas, 132 (34%) respondents pay the amount in between 141-160, 66 (17%) more than 160 rupees, and only 19 (5%) people did not give any response. Result indicates that majority of inhabitants (76%) bear the expenses of vegetables in between 121 to 160 rupees or more on daily basis, as shown in Fig.6.

Moreover;opinions were taken from people about growing vegetables in their houses. 83 (21%) participants were responded that they grow vegetables in the houses. While, 274 (70%) people replied that they don't grow the vegetables in the homes. Remaining 33 (9%) persons did not reply as pointed out in Fig.7. Result revealed that maximum number of dwellers don't grow the vegetables in the houses.

Meanwhile, respondents' views were also taken about awareness of urban farms/farming. 147 (38%) participants replied that they have enough awareness about urban farming. Whereas, 176 (45%) people responded that they don't have any kind of awareness. Remaining 67 (17%) did not give any response as indicated in Fig.8. result indicates that majority of local residences don't know about urban farms/farming.

In the end, perceptions of inhabitants with respect to knowledge and skills / accessing tools and resources about growing urban farms were also taken. 103 (26%) persons responded that they have knowledge and skills / accessing tools and resources to grow the urban farms, whereas; 259 (66%) people don't have any capability to grow the farms. Remaining 28 (7%) respondents did not response as shown in Fig.9. Result shows that a big number of inhabitants do not have any ability to grow the farms inside your houses.

Conclusion

Urban agriculture is the activity of growing fruits, herbs, and vegetables raising in neighbourhood, towns and cities, process that is accompanied by many other complementary activities such as processing and distributing food, collecting and reusing food waste and rainwater, and educating, organizing, and employing local residents.This study aimed to determine the awareness and desirability of urban farming in Qasimabad, Hyderabad and its impact on inhabitants. The focus of study was to assess the potential of small scale urban agriculture in Hyderabad, Sindh, Pakistan. Standardized questionnaire survey was conducted by the researcher to collect data from the study area through random sampling. The size of the sample was 390. The collected data was segregated and properly filled questionnaire put in Statistical Package for Social Science (SPSS) for further analysis. The data were analyzed using descriptive statistical techniques.

The results of this research revealed that the inhabitants of study area have lack of knowledge about urban farming. They do not know about the seeds, seasonal fruits and vegetables. People have limited access towards resources, is the major constraint in urban agriculture. People also showed positive response to urban farming, as it is healthy activity. Lastly, this study results may be beneficial to introduce, promote and initiate the urban farming activities at Hyderabad, Pakistan in a systematic way.

In conclusion, it is recommended that the majority of people have less knowledge about urban farming, so the importance of urban farming should be promoted at government level through print and electronic media.Today water shortage is major issue in urban area, utilization of gray water may be helpful in practicing urban agriculture.Community should be encourage to utilize available spaces for urban agriculture, it will fulfil the demand of food as well as improve surrounding environment.Urban farming programs should be initiated to provide knowledge regarding seeds and skill to grow agriculture products to local inhabitants at neighbourhood/community level through Community Based Organization and Non-Governmental Organization.Local agriculture products should be cultivated within different residential community spaces to minimize the daily expenditures. Resultantly, urban agriculture can be helpful in generating employment, increase livelihood of local people.It may also enhance beautification of urban areas.Urban farming may contribute in the GDP of the Country and can boost the economy of country.

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