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## Potential contribution of public parks in urban environment

Shuaib Raza and Muhammad Qasim

Department of Horticulture, University of Agriculture, Faisalabad, Pakistan

**Abstract:** A social survey of visitors of two main city parks was conducted to study the role and value of public parks as perceived by city dwellers. Purposive sample of 246 respondents was selected and they were interviewed. Respondents were divided into different socio-economic groups based on age, profession and nature of visit. Survey results revealed that walk, jogging and exercise were the main reasons for visiting the parks. People reported several benefits from the parks being health benefits on the top followed by personal, psychological and social benefits. Greenery was the main source of enjoyment, which reflects towards the importance of plants in improvement of environment. People also highlighted role of parks in improvement in quality of life.

**Key words:** Public parks, environment, open spaces, quality of life

### Introduction

Pakistan is facing numerous environmental problems like over-population and urbanization which has resulted in congestion of houses and deteriorated quality of life. Today's industrial, domestic and agricultural activities, such as fuel combustion, resulted in a wide range of emissions including sulphur dioxide (SO<sub>2</sub>), smoke, oxides of nitrogen (NO<sub>x</sub>) and Volatile Organic Compounds (VOCs) into the atmosphere. Ultimately result is the detriment of air quality with corresponding effects on health and ecosystems. Box and Harrison (1994) suggested that provisions should be made for local nature reserves in every urban area at minimum level of 1 ha per thousand of population i.e., equivalent to 10 m<sup>2</sup> per person. There are also recommendations to have at least 20 percent area of the cities under the open space in the form of green belts, parks, playgrounds etc (Singh, 1990). Faisalabad, the city under study and being the third biggest industrial city of Pakistan, constitute only 943,86 acres equivalent to 4.21 percent of the city having a backlog of 531.13 acres to achieve the open space standards of one acre per 1000 population (FDA, 1986). Green spaces in urban areas have an important role in providing the much-needed standards of good life. Robinson (1992) reported personal benefits like pleasure and spending good time associated with visit to parks and gardens. According to Parsons (1991) there are other human pride-benefit in accomplishment, restoration experiences, stress relief, increased work satisfaction, feeling at home and feeling of sacredness. Some psychological benefits like gardens being the source of quiet and tranquillity and enjoying peacefulness are also studied by Kaplan and Kaplan (1989) and Qasim and Dunnet (1997).

### Materials and Methods

Jinnah garden and Kaleem Shaheed parks were selected for the survey and to collect information needed. These parks were chosen for conducting this research because they are the main city (Faisalabad) parks with almost equal area i.e., 53 acres and highest possibilities for meeting maximum social groups.

A social survey was conducted starting from July, 10 1999 to September, 10 1999. Random sampling among the park visitors was not manageable, therefore purposive sampling was done and willing persons were interviewed. Park

visitors were interviewed on structured format. In total, 246 respondents were interviewed selecting 123 from each park. A pilot survey of park visitors was conducted in both the parks to see people's response and to find out any mistakes in the interview questionnaire.

An interview schedule was prepared in English and translated into Urdu for convenience in discussing research questions. Each interview took 10-15 minutes. Information through a combination of enclosed and open-ended questions on the following main topics was collected.

- Personal information
- Reasons to visit the parks and time spent in the parks
- Benefits and Enjoyments associated with visit to parks
- Visitor's opinion about contribution of parks in improving the urban environment

The data collected was arranged and for analysis, SPSS (Statistical Package for Social Sciences) program was used. Chi square test was applied on the data for statistical significance of difference between the number of observed responses with those that could be expected to occur by chance.

### Results and Discussion

From the data collected among respondents different groups based on age, profession and nature of visit were identified and their relationship to different values that people ascribe to the parks were identified.

#### Group identification

Groups	Stratification	% age
Gender	Male	100.0
	Female	0.00*
Locality	Jinnah Garden	50.0
	Kaleem Shaheed Park	50.0
Age	Adult (18-30 years)	34.6
	Mature Adult (30-50 years)	40.2
	Aged (Above 50 years)	25.0
	Businessman	51.6
Profession	Government Employee	15.0
	Student	8.9
	Private Job holder	8.5
	Labor	7.3
	Retired	6.1
	Unemployed	2.4
Nature of visit	Along	68.2
	With family	15.9
	With Friends	15.9

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There was no participation of female visitor in the interview. Reason for non-participation of female visitors was a hesitation to respond for the interview. When women coming with families were contacted, they refused and only male members of the family gave their willingness for interview.

**Reasons for visiting the Parks and time spent during visit:** To identify different uses of parks, people were asked to give their reasons for coming to parks. People gave many reasons for coming to the parks, which are presented in Fig. 1. Walk was the main reason given by highest percentage of visitors followed by exercise and jogging. Other reasons included family outing, children's wish and outing. A comparison of different groups with respect to reasons for coming to parks was also made, statistical analysis revealed non-significant differences. Critical analysis of data revealed that purpose of visiting the parks such as walk, jogging and exercise that can be attributed to the need of parks for maintaining health. Among other common reasons, simple outing either alone or with family and enjoying people around was mentioned. Parks and gardens provide opportunities for physical exercise, social activities and are also reported by Thaman (1987). Watching people and wish to see people around is contrary to a reason which people give as relaxation and calmness associated with contact with nature.

Survey results showed that on average majority of the people spent upto one hour while visiting the park. Statistical analysis for comparing different groups showed similar trends, however, highest percentage of retired people and students reported more time (1-2 hrs) spent during their visit.

**Benefits and enjoyments associated with park visit:** To study different benefits that people ascribe with their visit to parks and gardens and their percentage share to total sample is presented in Table 1. Highest percentage of people ascribed health related benefits followed by personal, psychological and social benefits.

A comparison of health benefits presented in Table 1 shows that enjoying fresh air was the health related benefit reported by highest percentage of visitors. Collectively about half of the total respondents related their visit to mental satisfaction and mental relaxation. Nine percent of the total respondents associated their visit with curing some diseases through exercise.

Among personal benefits reported by park visitors feel refreshed was the major benefit given by highest percentage, while 32.5 percent of people expressed their feelings of pleasure for their visit and 25.5 percent reported good time spent. Only a small percentage of the respondents reported spending spare time on thinking. Results of the comparison of psychological benefits showed that enjoying nature was reported by highest percentage of respondents, while 32 percent of the total respondents reported improvement in their working efficiency and for 17 percent of the respondents it was peacefulness. Among social benefits socialization was a benefit reported by highest percentage of the total visitors followed by talking to people and making friends. Comparison of profession group showed that for retired people talking to people was a priority while amongst students making friends was reported by highest percentage of students.

World wide such health benefits are also reported such as by Grossmann (1979). Personal benefits, like pleasure and spending good time associated with visit to parks and gardens, are reported by Robinson (1992), Thaman (1987) sorted social benefits associated with parks including social ties through the garden activities and the recreational and physical exercise value. Some psychological benefits like gardens being the source of quiet and tranquillity and enjoying peacefulness are also reviewed by Kaplan and Kaplan (1989) and Qasim and Dunnet (1997). Results of this survey have also indicated that people have related similar benefits with their visit to parks.

**Enjoyments associated with Parks:** Enjoyments associated with parks as mentioned by percentage of respondents is presented in Fig. 2. Enjoying greenery was the major element for enjoyment perceived by highest percentage of the respondents, followed by calmness which was reported by 20.5% of the visitors. Comparison of different groups including locality, age, profession and based on nature of visit with respect to enjoyment was made which showed non-significant difference.

Greenery was the most perceived enjoyment reported by the majority of visitors, which reflects towards the need of space required for vegetation, which is an important role and value of plants in their life. Manaker (1987) reported that greenery is aesthetically pleasing because green is a colour of peace and serenity. Hare and Synge (1989) concluded that plants in their natural setting provide an opportunity for people to see and enjoy them. Walters and Hamilton (1993) reported that greenery through plants helps in providing clean air.

Relieving tension or stress caused by modern way of living was another important benefit reported. People considered this as an enjoyment as well. Visual impact that greenery, flower and their arrangement creates has direct or indirect relationship with human well being. This relationship between people and natural environment is apparent in the survey results. People have mentioned enjoying walking on grass, flowers, design and fresh air, which can be attributed to the availability of spaces for these activities. Such personal, social and health giving benefits are also reported by Ames (1980), Parry-Jones (1990) and Robinson (1992).

**Contribution of parks in improving urban environment:** In addition to investigating the perceived values that people ascribe to parks, people were asked that what role on the collective basis the parks can play in improving urban environment. In depth discussion was made with the park visitors and based on their opinion, twelve categories were identified which are presented in Fig. 3. People mentioned different benefits, which the people can get from these places. Availability of clean air was the role, which highest percentage of visitors associated with the availability of parks followed by improvement in quality of life responded by 15.3 percent. Third major role of parks was in health and disease control, emphasised by 14.2 percent respondents. Importance of trees and shrubs in purity of atmosphere is well-known phenomenon and therefore provision of clean air as a result of presence of plants was highlighted by highest percentage of respondents.

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Table 1: Benefits comparison

Scales	% age of Respondents
<b>Health Benefits</b>	33.8%
Enjoying Fresh air	39.5%
Mental Relaxation	26.5%
Mental Satisfaction	23.5%
Curing some diseases	9.0%
Exercise	1.5%
<b>Personal Benefits</b>	30.8%
Feel Refreshed	37.7%
Pleasure	32.5%
Spend good time	28.5%
Enjoying Plants	1.0%
Spare time on thinking	0.3%
<b>Psychological Benefits</b>	25.5%
Enjoy nature	51.0%
Improve working efficiency	32.0%
Peacefulness	17.0%
<b>Social Benefits</b>	9.9%
Socialization	64.0%
Talking to people	23.0%
Making Friends	13.0%

N = 246

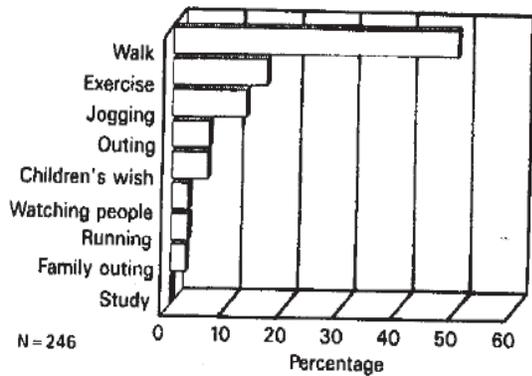


Fig. 1: Reasons for coming to the parks

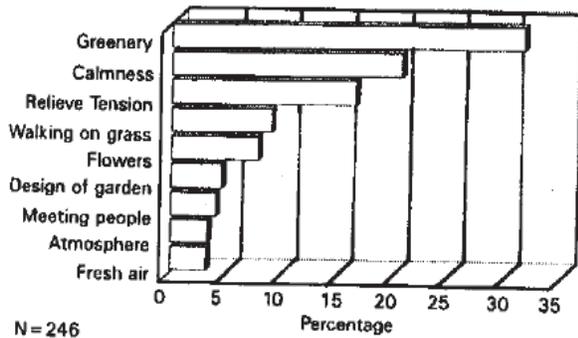


Fig. 2: Enjoyments associated with the visit of parks

People were asked to tell about the condition of parks in their residential areas. Almost half of the respondents reported that parks in their localities are not maintained and facilities that are required for an average park were not provided. As people ascribed several health, personal, psychological and social benefits to the parks and in their opinion, these places have a positive role in creating an

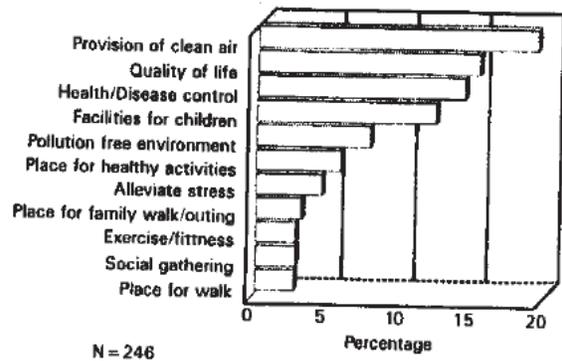


Fig. 3: Contribution of parks in urban living as perceived by the park visitors

environment desirable for healthy living. It is therefore concluded that creation of such communal places and protecting those already allocated for such purposes will be of great help in extending these benefits to urban dwellers.

### References

- Ames, R.G., 1980. Urban tree planting programs: A sociological perspective. *HortScience*, 15: 135-137.
- Box, J. and C. Harrison, 1994. Natural spaces in urban places. *Urban Nat. Mag.*, 2: 18-19.
- FDA., 1986. Structural master plan of Faisalabad. Faisalabad Development Authority (FDA), Faisalabad, Pakistan.
- Grossmann, R.S., 1979. Horticultural therapy programs in Britain and the United States. *HortScience*, 14: 690-694.
- Hare, T. and H. Synge, 1989. *Plant life*. The Conservation Foundation, London, UK.
- Kaplan, R. and S. Kaplan, 1989. *The Experience of Nature: A Psychological Perspective*. Cambridge University Press, New York, ISBN-13: 9780521341394, pp: 162-164.
- Manaker, G.H., 1987. *Interior Plantscapes: Installation, Maintenance and Management*. 2nd Edn., Prentice Hall Inc., New Jersey, USA., ISBN-13: 9780134693217, Pages: 324.
- Parry-Jones, W.L., 1990. Natural landscape, psychological well-being and mental health. *Landscape Res.*, 15: 7-11.
- Parsons, R., 1991. Influence of passive experiences with plants on individual well-being and health. *Proceedings of the National Symposium on the Role of Horticulture in Human Well-being and Social Development*, April 19-21, 1990, Arlington, VA., USA.
- Qasim, M. and N. Dunnet, 1997. Perceived benefits to human well-being of urban gardens. *Plant-Human Well-Being Conference Proceedings*, University of Reading, UK.
- Robinson, N., 1992. Healing with nature. *Landscape Design*, June 1992, pp: 29-31.
- Singh, P., 1990. *Urban Environmental Conservation*. Ashish Publishing House, New Delhi, ISBN-13: 978-8170243090, Pages: 382.
- Thaman, R.R., 1987. Urban agroforestry: The Pacific islands and beyond. *Unasylva*, 39: 2-13.
- Walters, M. and A. Hamilton, 1993. *The Vital Wealth of Plants: WWF and the Conservation of Plants*. World Wide Fund for Nature, Gland, Switzerland, ISBN: 2-88085-115-7, Pages: 48.