

Impact of Water Pollution on Human Health in Faisalabad City (Pakistan)

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ABSTRACT

The present study was undertaken to assess the ill effects of water pollution on human health in urban area (D-Type Colony) of Faisalabad. A sample of 120 respondents was selected using simple random sampling techniques. The data were collected through well-structured interviewing schedule. The collected data were analysed by using descriptive and inferential statistics.

Key Words: Pollution; Human Health; Water; Diseases; Sewerage system

INTRODUCTION

Water pollution is any chemicals, physical or biological that changes the quality of water and has harmful effects on any living organism that uses it. When humans drink polluted water, it often has serious affects on their health. Water pollution can also make water unsuited for the desired use. A little negligence on the part of civic bodies can result in the spread of many diseases (Mukhi & Srivastava, 1987).

In Pakistan the problem of water pollution is also growing at an alarming rate. The phenomenal increase in country's population has brought unprecedented pressure on safe drinking water. Water born diseases account for 20 to 30% of all hospital cases and 60% infant deaths (Government of Pakistan, 1999-2000). In Pakistan, 72% population lives in rural area. More of them have not the availability of good quality drinking water. So due to polluted water the people of villages have a many diseases like typhoid, stomach problems, kidney problem, food poisoning and skin problem (Ilyas, 1998).

Faisalabad has a large number of textile and dying mills, where generally weaving, dying, printing and finishing of cloth is carried out. These operations usually produce intensely alkaline liquor high in dissolved materials and suspended soil. In the absence of adequate treatment facilities and effective drainage system, bulk of the effluent from these industrial units flow into open land and low lying areas with consequential severe damage to flora and fauna. The offensive smell of stagnant pools of waste water is great source of nuisance to the local people (Javed, 1989).

The objectives of this study were to 1) study the socio-economics characteristics of the respondents, 2) examine the awareness of the respondents about the water pollution and 3) find out the methods to control the ill affects of water pollution on human health.

METHODOLOGY

The present study was conducted to assess the ill effects of water pollution on human health in urban area (D-Type Colony) of Faisalabad. A sample of 120 respondents was selected through simple random sampling techniques. The data was collected through well-structured interviewing schedule. The collected data were analyzed by using descriptive and inferential statistics.

RESULTS AND DISCUSSION

Distribution of the respondents with regard to their age, education and income has been given in Table I. Majority of the respondents (67.5%) said that the main reason of water pollution was bad sewerage system; 3.3% said that the pesticides and 29.2% opined that the polluted scraps of factories are responsible for this malaise. Majority (60%) respondents were not satisfied with the

Table I. Distribution of the respondents with regard to their age, education and income

Age (years)	Frequency	Percentage
15-25	48	40.0
26-35	35	29.2
36 and above	37	30.8
Total	120	100.0
Education	Frequency	Percentage
Illiterate	10	8.3
Upto Middle	26	21.7
Matric & Intermediate	50	41.7
BA and above	34	28.3
Total	120	100.0
Monthly income (Rs.)	Frequency	Percentage
Upto 5000	41	34.2
5001-10000	27	25.5
1001 and above	52	43.3
Total	120	100.0

Table II. Distribution of the respondents according to the type of disease

Type of diseases	Frequency	Percentage
No disease	29	24.2
Diarrhoea	21	17.5
Cholera	9	7.5
Hepatitis	23	19.2
Typhoid	23	19.2
Hair disease	4	3.3
Skin disease	5	4.2
Any other	6	5.0
Total	120	100.0

Table III. Association between education of the respondents and their awareness about water pollution (Hypothesis I. Higher will be the education, higher will be the awareness about water pollution)

Education Level	Awareness about water pollution		Total
	No	Yes	
Illiterate	6 60.0%	4 40.0%	10 8.3%
Upto Matric	19 34.5%	36 65.5%	55 45.8%
Intermediate	3 14.3%	18 85.7%	21 17.5%
Graduation and above	6 17.6%	28 82.4%	34 28.3%
Total	34 28.3%	86 71.7%	120 100.0%

$\chi^2 = 9.937$ d.f. = 3 Significance = .019* Gamma = .454
* = Significant

Table IV. Association between income of the respondents and their awareness about water pollution (Hypothesis II. Higher will be the income, higher will be the awareness about water pollution)

Income (Rs.)	Awareness about water pollution		Total
	No	Yes	
Upto 5000	20 48.8%	21 51.2%	41 34.2%
5001-10000	6 22.2%	21 77.8%	27 22.5%
10001 and above	8 15.4%	44 84.6%	52 43.3%
Total	34 28.3%	86 71.7%	120 100.0%

$\chi^2 = 13.23$ d.f. = 2 Significance = .001**
Gamma = .544 ** = Highly-Significant

quality of water that they drink. Likewise, a vast majority (90%) had awareness about polluted water harmful for human health and only 10% had no such awareness. Majority of the respondents (75.8%) replied that some members of their family suffered from any disease due to polluted water and 24.2% said that none of their family member suffered from any disease due to polluted water. Distribution of the respondents according to the type of disease they suffered due to polluted water is given in Table II. A great majority of the respondents (78.3%)

cleaned the pipeline or used chemical for reducing pollution; 10% of them cleaned water storage tanks, 8.3% various other methods and only 3.3% were not using any method for reducing pollution.

The chi-square value (Table III) shows a significant association between education of the respondents and their awareness about water pollution. The gamma value shows a positive relationship between them. Its mean highly educated respondents had more awareness about water pollution. So the hypothesis "higher will be the education, higher will be the awareness" is accepted.

The chi-square value (Table IV) shows a highly significant association between income of the respondents and their awareness about water pollution. The gamma value shows a positive relationship between them. It means that higher income respondents had more awareness about water pollution. So the hypothesis "higher will be the income, higher will be the awareness" is accepted.

Recommendations. The findings of the present study may not be as conclusive as the study was limited to a smaller area. It is, therefore suggested that more studies on large scale may be undertaken to draw broad conclusion about the water pollution and human health.

Subject of water pollution should be included in the national curriculum for creating awareness about the benefits of body water and all effects of poor quality water on human health. Mass media can play vital role to create awareness among the public about the problem of water pollution. Social workers, local governments and leaders should be involved to seek greater public participation in seminars and workshops about awareness of water pollution in rural areas. The municipal corporation Faisalabad and D-type Colony Faisalabad should observe the water pollution legislation which is approved by Government of Pakistan. Programmes on T.V. and radio should be presented in easy languages so that illiterate persons may also get awareness about water pollution.

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