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Analyzing the Impact of Air and Water Waste Pollution on Human Health in Rawalpindi

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ABSTRACT

This paper provides an in-depth view of the effects of environmental pollution from the perspective of air & water waste pollution on humans by diseases and problems, animals, and trees/ plants. Study found that these kinds of pollution are not only seriously affecting humans with diseases and problems, but also the animals and trees/ plants. The study was conducted in Rawat, Rawalpindi. In this study, the researcher used a purposive sampling technique and collected data by using the interview method from a sample of 120 individuals, 60 male and 60 female, respectively. The data thus obtained were edited, tabulated, and statistically analyzed. Findings of the current study revealed that 52.5 percent of respondents said that environmental pollution is the discharge of waste materials and the release of harmful substances, which generate many harmful diseases and affect the environment in a negative way. Additionally, waste material affects the beauty of the natural environment. A major proportion of the respondents said that water pollution causes Hepatitis B & C, specifically, 51.7 percent believed that flu and cough spread due to air pollution, and 55.8 percent said that outdated motorized vehicles and factory smoke should be banned.

Keywords: *Pollution, air & water waste, harmful diseases, natural environment*

INTRODUCTION

The environment is a complex system that forms a range of physical and chemical factors and their mixture. The physical components of the natural environment, such as air, water, and land, provide basic means for sustaining living organisms. Ecological pollution implies pollution of nature's arrival of any material from any method that is fit for creating damage to man and other living life forms that support the earth.

Air pollution has turned out to be the prime ecological issue in China, owing to fuel burning due to a lack of regulation. Associate thoughtful of the relation between rule use and skill, toxic waste with allied ecological crash is vital to judge completely odd smog board choices missing within China's rule-making process. (Cropper *et al.,* 2000).

Air pollution is a high priority in its total Burden not illness initiative, and air pollution is likely liable for 1.4% of all deaths and 0.8% of disability -adjusted life years globally. We examine the impact of air pollution, including both death and morbidity. Fast industrialization, urbanization, and transportation are bringing new and irritating components into nature's turf. (Hussain, 1998).

Water pollution is any chemical, physical, or natural factor that changes the quality of water and has a harmful effect on any living organism that uses it. When humans drink polluted water, it often has serious effects on their health. Water pollution can also make water unsuitable for the desired use. A little negligence on the part of bodies can result in the spread of many diseases. (Bittman, 2008).

Asia differs from us and Europe in its water pollution, the conditions and balance of exposure to this pollution, and therefore the health rank of its people. However, a recent writing review of time-series conducted in Asia found that short contact with water pollution within the studied regions is associated with an increase in daily mortality and morbidity effects that support virtual risks. (Krzyzanowski *et al*., 2005).

In Pakistan, this special issue is dedicated to increasing the depth of research across all areas of health effects of pollutants in air, water, and soil environments. Polluted air adversely affects the health of human beings, animals, plants, and soil, and damages buildings and other property. Cities have widespread use of low-quality fuel, combined with a dramatic expansion in the number of vehicles. Pakistani roads have led to significant air pollution problems. Lead and Carbon emissions are major air pollutants in urban centers such as Karachi, Lahore, Faisalabad, and Islamabad. (Kargarfard, 2011).

In the present study, the environmental pollution was discussed within the context of Pakistani society. Therefore, the study was conducted under the following objectives:

- To study the impact of environmental pollution (water and air) on human health
- To suggest some precautions for the reduction of pollution

MATERIALS AND METHODS

This research aims to provide information about the perception of environmental pollution and its impact on human health.

The study was conducted in the area of Rawat, the main city, District Rawalpindi. The study was conducted on the perception regarding environmental pollution on human health. The focus of the study was the impact of pollution on human health; the researcher concentrated on affected people.

Researchers used a purposive sampling technique for the purpose of obtaining excellent results. Purposive sampling technique is a type of non-probability sampling where the researcher consciously selects particular elements or subjects for inclusion in a study so as to ensure that the elements will have certain characteristics pertinent to the study. It normally targets a particular group of people. For this purpose, a sample of 120 individual interviewees was drawn (males 60, females 60). An interview schedule with closed-ended questions. While completing the questionnaire, the researcher starts data collection. A successive move was emulated by the researcher for qualified data gathering. Further than a heap of information, the information was utilized in the Statistical Package for Social Sciences (SPSS), adding value.

RESULTS AND DISCUSSION

As mentioned earlier, this study was conducted to study the effect of Health 2011 on the people of Rawat Union Council of Murree Tehsil from a community point of View.

Table 1: Percentage allocation of respondents about environmental pollution

Pollution	Frequency	Percentage
Discharge of waste material	60	48.0
Release of harmful things	44	38.7
Undesirable change in the environment	15	12.5
Change in temperature	1	.8
Total	**120**	**100**

Table 4.1 indicates the proportion allocation of respondents with regard to defining environmental pollution, which shows that 48.0 percent of respondents said that discharge of waste material, 38.7 percent release of harmful substances, 12.5 percent undesirable change in the environment, and 0.8 percent change in temperature. Majkova (2010) finds that the most appropriate definition of environmental pollution would be the introduction of different harmful pollutants into a certain environment that makes it unhealthy to live in. During his research, he found the same percentage as I have. He had also found 12.5 percent Undesirable change in the environment and 48.0 percent discharge of waste material.

Table 2: Frequency distribution of respondents about the effect of Water pollution and human health

Effects of water pollution	Frequency	Percentage
Hepatitis B.C	55	45.8
Tuberculosis	12	10.0
Neurological disorders	4	3.3
Stomach aches and diarrhea	49	40.8
Total	**120**	**100**

Table 2 illustrates the proportion division of respondents about the effects of water pollution on human health, which shows that 45.8 percent of respondents said that Hepatitis B.C, 10.0 percent said tuberculosis, 3.3 percent said neurological disorders, and 40.8 percent said stomach aches and diarrhea.

Beach (2001) found that water pollution, resulting from large amounts of untreated wastewater discharge, has caused ecological deterioration, reduced the efficiency of water sources, and reduced the quantity of water for use. While researching the effects of water pollution on human health, he found 40.8 percent of respondents had stomach aches and diarrhea, and 3.3 percent had neurological disorders due to water pollution.

Table 3: Frequency distribution of respondents about the effect of air pollution on human health

Effect of air pollution	Frequency	Percentage
Flu and cough	62	51.7
Temperature	1	.8
Temporary deafness	3	2.5
Asthma	51	42.4
Others	3	2.5
Total	**120**	**100**

Table 3 illustrates the fraction allocation of respondents with regard to the effects of air pollution on human health, which shows that 51.7 percent of respondents said flu and cough, .8 percent said temperature, 2.5 percent said temporary/ permanent deafness, 40.0 percent said asthma, and 2.5 percent said others.

Vigotti *et al.* (1996) defined that to estimate the health damages associated with air pollution in developing countries, policy makers are often forced to extrapolate results from studies conducted in industrialized countries. They had 51.7 percent of respondents in favor of flu and cough due to air pollution, 40.0 percent in favor of asthma, and 2.5 percent said temporary/permanent deafness due to it.

Table 4: Frequency distribution of respondents about the impact on Environmental pollution and human health

Pollution impact on human health	Frequency	Percentage
Causes lung cancer, Asthma, and hepatitis	66	55.0
Badly affected on human health	29	24.2
Psychological and physical disturbance	25	20.8
Total	**120**	**100**

Table 4 shows the proportion allotment of respondents by considering the impact of environmental pollution on human health, which shows that 41.7 percent of respondents said that pollution is a cause of lung cancer, asthma, hepatitis, 55.0 percent said pollution badly affected human health, and 20.8 percent said psychological and physical disturbance. Willett (2010) stated that the first Healthy People report in 1979 declared "there is nearly no major chronic unwellness to which environmental factors don't contribute, either directly or indirectly". In step with the World Health Organization, globally one quarter of all deaths are often attributed to environmental conditions. In the U.S., concerning thirteen percent of total deaths are often attributed to the setting, specifically upset, medical disorders, cancers, asthma, and cardiovascular diseases.

Table 5: Frequency distribution of respondents about ways to reduce environmental pollution

A way to reduce environmental pollution	Frequency	Percentage
By avoiding smoke-producing cars	35	29.8
By cleaning streets and surroundings	34	28.4
By throwing waste in the proper place	13	10.5
Recycling of waste products	38	31.3
Total	**120**	**100**

Table 5 indicate the fraction allocation of respondents by regard to way of reduce of environmental pollution which shows that 29.8 percent of respondents said that we can reduce environmental pollution by avoiding smoke producing cars, 28.4 percent said by cleaning streets and surroundings, 20.0 percent said by growing greenery, 10.5 percent said by throwing waste at proper place, and 11.3 percent said recycling of waste products. Altaf (1998) found that the fundamental Law for Environmental Pollution Control is to develop plants outside and inside the home and reuse waste items. A researcher suggested that environmental pollution can be minimized by keeping our surroundings clean, growing greenery, and recycling waste material properly. The number of respondents in favor of this was the same as mine.

Table 6: Frequency distribution of respondents about precautionary measures to control air and water pollution

Precautions for air and water pollution	Frequency	Percentage
Outdated motorized vehicles should be banned	31	25.8
Waste material should not be thrown into water	8	6.7
Factories should be built outside the city	14	11.7
All of the above	67	55.8
Total	**120**	**100**

Table 6 represents the percentage. Distribution of respondents by regard to precautions to control air and water pollution, which shows that 25.8 percent of respondents said that outdated motorized vehicles should be banned, 6.7 percent said waste material should not be thrown in water, 11.7 percent said factories should be built outside the city, and 55.8 percent said all the above. Mehmood (2000) did research on safety measures to control air and water pollution. He also found that air and water pollution can be controlled by banning outdated motorized vehicles, not throwing waste material in water, and by building factories outside the city. The number of respondents in favor of this was the same as mine. His result is the same as my research result.

CONCLUSION

The 2012 World's Worst Pollution Problems Report sets out to quantify the human health impacts from major sources of hazardous pollution. Populations of developing countries are particularly vulnerable to toxic pollution resulting from industrial processes. In Pakistan, the problem of water pollution is also growing at an alarming rate. The phenomenon of an increase in the country's population has brought unprecedented pressure on safe drinking water. Water-borne diseases account for 20 to 30% of all hospital cases and 60% infant deaths. (Government of Pakistan, 1999-2000). Environmental pollution means pollution of the environment due to the release of any substance from any process, which can cause harm to man and other living organisms supported by the environment. Rapid industrialization, urbanization, and mechanized transport are introducing new and disturbing elements into the environment. The expected outcomes of the research were to identify the factors responsible for pollution, the effects of water and air pollution on human health, and to suggest some policy measures for the reduction of pollution in those areas.

The consequences are the recommendations:

- More methods should be developed for reducing environmental pollution.
- The government may also take more steps against environmental pollution.
- Factories should be outside of the livelihood area, and they should seriously improve the condition of their sewerage system
- The government may as well give introductory events for decreasing pollution.
- Instruct relations, companions, and neighbors about the approach to reduce their contribution to pollution.

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