

Research Article

Environmental Factors Affect the Human Health

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ABSTRACT

This objective of this research was to increase the understanding of the relation between environment and health. This is done by an action research, visiting different areas having different environmental factors. In order to define and to analyze environmental health, choose the five different factors, and study their impact on health of people living in different areas. Two different areas are selected to establish that whether environmental factors always have negative impact or can also impact health in positive way. Further, my aim is also to compare the rural area with urban area and to determine whether urban areas are more exposed to negative impacts of environmental factors. This action research used a mixed methodology to discuss different environmental factors including physical, biological and environmental factors. There are numerous factors in the environment having deep impact on human health but practically it is not possible to quantify the impact of each environmental factor on human health. Environment is such a vast term and so closely associated with lives of all living beings that all dimensions of it are difficult to cover through a single research paper within limited time. Finally, it can be concluded that to determine correlation between environment and health and describing the environmental health by stating each existing factor of environment is not possible however by using some specific and most common factors of environment can be used to determine the relation between health and environment, and this thesis also based on some specific but common factors of environment and conclusion is drawn after performing active research and collecting data through practical involvement, collection of both qualitative and quantitative data and conclusion is drawn after considering all possible impacts of gathered data. However, exceptions of all set rules are always exist and the drawn conclusion is applicable on general, normal, ordinary circumstances not to the exceptional or extraordinary circumstances.

INTRODUCTION

The concept of environmental health addresses all of these influences and includes the assessment and control, mitigation or avoidance of environmental risk factors that affect health. The core mandate of public health units is to prevent disease through the creation of healthy and health supporting interventions and environments [1]. There are some basic sources of pollution of the atmosphere: industries, transportation devices, and others. Due to recent studies, we now know that industrial production and its waste products are the strongest pollutant of the air [2; 3]. Their sources of pollution are thermal power stations, which together with

smoke; throw out sulphurous and carbonic gas in the air. The metallurgical enterprises, especially nonferrous metallurgies, fill the air with nitrogen compounds, chlorine, fluorine, ammonia, compounds of phosphorus, particles and compounds of mercury and arsenic, chemical and cement works, to name a few. Harmful gases get into the air as a result of the burning of fuel for the needs of the industry, heating of our homes, transportation needs and the burning and processing of household and industrial wastes. The purpose of this research is to evaluate how the "Environment" affects the human health [4;5]. In order to understand and

determine the correlation between the two topics "environment" and "health", it is important to understand the environmental factors. This environmental assessment contributes to determine whether environmental factors affect the people of whole world in same way or more harmful in low income countries than in higher income countries? Further, the research aims at recommending the possible strategies to mitigate the effects of harmful environmental factors [6;7].

METHODOLOGY:

This research was conducted at various places including a hospital, rural and urban area using a mixed methodology approach and this type of research is sometimes referred to as action research. The only point which makes unique one data collection method from others is the way the gathered information is analyzed [8;9;10]. The data collection methods that have been used for this research are participant observations and interviews, as they have made it possible for the researchers to be flexible in their search for information. The use of several diverse data collection methods is common in qualitative research, and the combination of interviews with participant observations will ensure credibility by triangulation of information [11].

By triangulation, it has been possible to validate information given in interviews with observations, which has increased the credibility of the outcome of this study. Data was collected through observations. This research is conducted at various places.

One is Jinnah hospital Lahore, at here I observed the patients suffering from different diseases and collect data about their disease, causes of disease, medical and personal history of patients. Second place is Village near "Naroval"; at here I observed the different environmental factors and their impact on human health. Third place is Lahore city; at here I also observed the various environmental factors and their impact on health and compare it with observations made in rural area. And correlate the data with data gathered from the observations made at hospital. Observations are primary source of data collection for any type of

research and also the most reliable source. It also enhances the level of understanding of researcher for a topic being researched. Through observation various new dimensions also come into the knowledge of the researcher. Numerous interviews were carried out concerning the effect of environment on health and whether the environmental factors at rural and urban areas are different and at which area environmental factors are more hazardous for human health, at the rural, urban areas and also from patients and doctors at hospitals

RESULTS:

CASE STUDY I: "NAROVAL VILLAGE"- RURAL AREA

It is small village in the district of Naroval, having population of 87,000 people approximate. This village has medium level of facilities to live the life as compared to any under developed city. The infrastructure is not fully developed, only one main road is constructed which connects this village with main highway while all others inter village are road are unpaved.

Air pollution:

In this village air pollution is not a major factor, because the whole area is surrounded by lush green fields, have bunch of trees and greenery after few yards. Greenery plays important role in reducing the air pollution. Trees released oxygen and absorb carbon dioxide and make the air refreshing and purified for the human beings but mostly rightly for the all living beings. Transport is a second major factor in spread of air pollution because the fuel used in transport creates hazardous smoke containing carbon, sulphur dioxide which has harmful effects on human health. But this factor is also not common in this place, because there is almost little use of transport. People usually use the cycles or animal driven caught for carriage and journeys to other towns. Smoke of industrial units is another major source of air pollution. Smoke emerged out of factories contains chemical particulars and poisonous gases.

This smoke becomes major reason of causing cancer, asthma, respiratory diseases and even

lung cancers. But due to non existence of factories at this area, this factor also becomes irrelevant at here. Only females cooking on the fire of woods have some mild disease of cough. Their disease cannot be rate as any critical disease.

Water pollution:

In the village under research, although water is not available to its residents at door step but still they manage to get pure and clean water from nearby wells and tube wells for drinking purpose only. Water obtained from well is pure and clean. It is not contaminated with sewerage water, or other harmful effluents. Therefore, people have access to pure drinking water by making some hard effort.

But this source of water is only available for drinking purposes. For all other various use of water, usually canal water is used which is exposed to various harmful material. Usually animal effluents, sewerage water, industrial effluents is also mixed in it, therefore it is not hygienic to use it for daily life usage purposes. People also used it for bathing, washing household items and washing clothes also. This water become carrier for bacterial diseases and usually people get suffered of various diseases through this source.

Noise pollution:

Major factors which are source of noise pollution are transport, industrial setups and use of heavy machinery for infrastructure development projects.

In this village use of transport is not often. People still used old method of ploughing and harvesting in the fields with the use of tools driven by the animals. Factories are also not established in this area and project of infrastructure development are also not initiated on continuous basis at here. Due to non existence of transport and industry, noise pollution is also less at this area. People use simple ways of doing their routine tasks; use of machinery in their daily life is rare.

Exposure to chemical hazardous:

Chemical hazardous is majorly creates from industry. Fuel used in machines create a huge Views about environmental pollution in Lahore:

amount of smoke which contaminated the open air with large amount of carbon dioxide which makes the breathing in air difficult and also cause suffocation. Different type of industry uses different type of chemicals for the development of their products. Most of the industries use different kind of chemicals, acids, poisonous gases such as sulphur dioxide, nitrogen, ammonia, and carbon dioxide. These toxic gases have harmful impact on human health.

The liquid ejected from these industries is also contained such type of toxic material and caused the various skin diseases, and also pollute the water, soil, and air of nearby areas. As industrial units are not established at here which are major source of pollution caused through its harmful smoke and liquid chemical effluents, therefore, people are less exposed to risk of chemical hazardous.

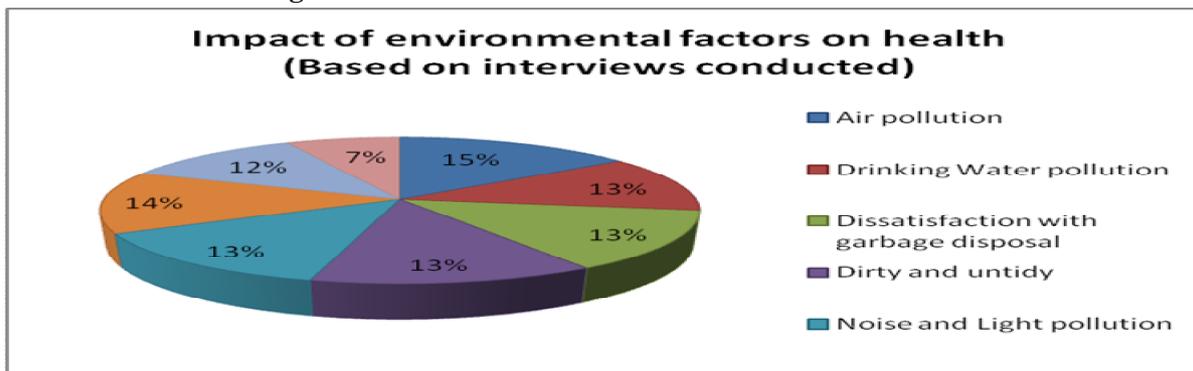
4.4 CASE STUDY II: “LAHORE CITY”- URBAN AREA:

Lahore is the capital of Province Punjab, and ranked as 34th more populated urban area of the world, according to an estimate its population is almost 1.5 million. This city is considered as second biggest city of Pakistan and has almost all facilities of modern living standard. Public transport remains on road 24/7 and almost 75% of its population has its own cars. Different industrial zones are also established in it or near to it. One is at “Kot lakhpat” and other is near to it in Raiwind “Sunder Industrial estate” and some factories are also established in Thokar Niaz baig. Although water is available at door step to people but still supply of clean and pure water is challenge for local administration. Air pollution, water pollution, noise and sound, Food source, chemical hazardous and biological hazardous all types of pollution is main challenge for residents of this city.

In Lahore, population resident near to industrial units is significantly suffered from exposure to chemical toxics. Most of the people are suffered from skin diseases, lung cancer, hair loss, and allergies.

FACTOR	RATING	COMMENTS
Air pollution	65	HIGH
Drinking Water pollution	54	MODERATE
Dissatisfaction with garbage disposal	58	MODERATE
Dirty and untidy	58	MODERATE
Noise and Light pollution	58	MODERATE
Water pollution	60	HIGH
Dissatisfaction to time spend in city	50	MODERATE
Dissatisfaction to time spend in parks in the city	31	LOW

Presentation of Ranking of Environmental Factors Based On Interviews Conducted

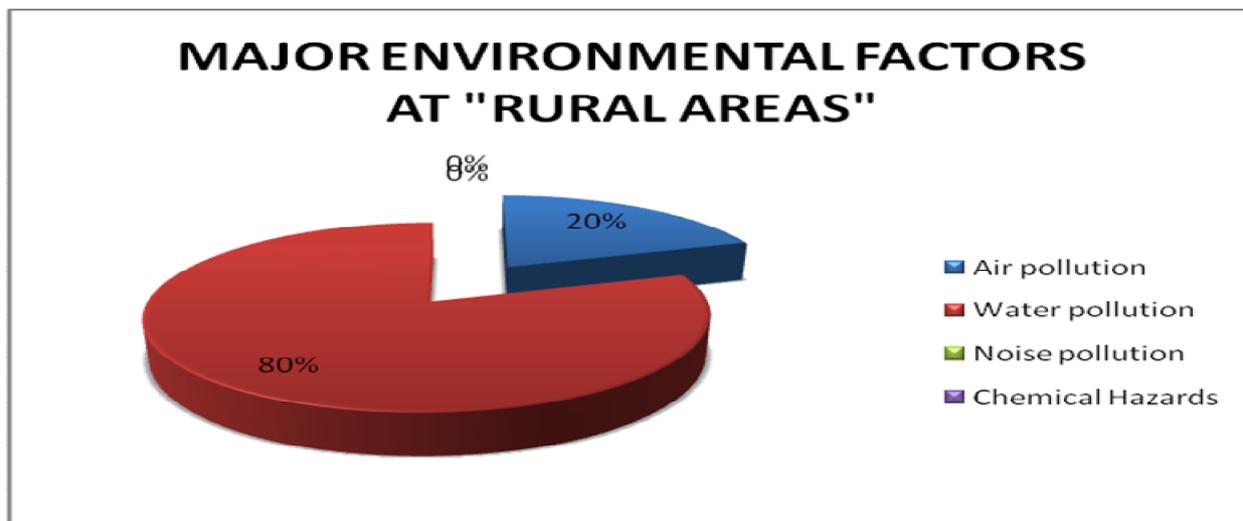


Source of Diseases among 100 people selected in “Case study I”, at rural area “Naroval Village”

Source of Disease	No of people suffered	Percentage
Air pollution	5	5%
Water pollution	20	20%
Noise pollution	0	0%
Chemical Hazards	0	0%
TOTAL	25	25%

Presentation of Ranking of Environmental Factors at Rural Area:

Source of Diseases among 100 people selected in Case study II, at urban area “Lahore city”

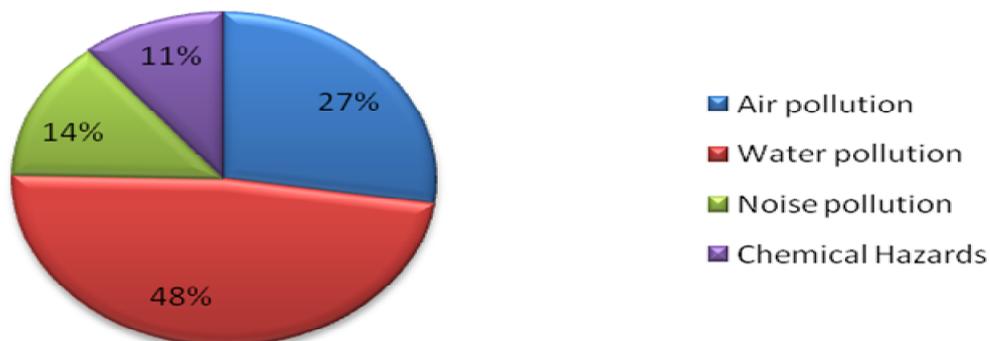


Source of Diseases among 100 people selected in Case study II, at urban area “Lahore city”

Source of Disease	No of people suffered	Percentage
Air pollution	20	20%
Water pollution	35	35%
Noise pollution	10	10%
Chemical Hazards	8	8%
TOTAL	73	73%

Presentation of Ranking of Environmental Factors at Urban Area:

RANKING OF ENVIRONMENTAL FACTORS IN "URBAN AREAS"



Based on the data gathered through active research, personal observation and interviews conducted, it can be easily analyzed that environmental factors have deep impact on human health. Through research and data collected, it is evident that where imbalance exist in environmental composition it adversely affects the human health. All four factors considered in detail during this research have affected the health in negative manner. Imbalance in environment has negative impact while healthy environment has positive impact on human health. People living in natural and healthy environment have enjoyed with healthier life. So, this point is established that environment has impact on human health. Whether this impact will be positive or negative it depends on the surrounding environment. Based on data collected, in rural areas, environmental imbalance is no severe and therefore its impact on human health is positive. Major imbalance of environment is due to water pollution, people are mostly get suffered with seasonal diseases, gastro, diarrhea, vomiting and other similar diseases due to polluted water. As air is less polluted than any other urban area, therefore people are less prone to diseases due to air pollutants. Only people exposed to smoke have suffered with respiratory diseases. Through research and data collected, it is obvious that environment has direct relationship with human health. In urban areas, environment is more imbalances and therefore has adverse impact on human health. Air pollution, water

pollution, noise pollution and chemical hazards all are critical sources of health issues for people lived in urban areas. Air pollution caused various respiratory diseases, skin diseases and also the cancer. Water pollution caused the various diseases gastro, diarrhea, vomiting and other seasonal diseases. Noise pollution caused high blood pressure, headache, deafness and other stress related diseases. Chemical hazards are more commonly disbursed in the whole environment of urban health and therefore affecting the health in negative way. So it can be easily establish that environment has impact on health. In urban areas environment is not balanced and various types of pollutants exist in it, therefore it has negative impact on health.

CONCLUSION:

Based on the whole research performed and data collected through various sources, it was concluding that Environmental factors affect the human health, it depends on the environmental matrix and balance of environmental factors that whether it would have positive or negative impact on human health. It was also established that environmental factors in urban areas are worst than rural areas, therefore environmental health of people of rural areas is better than people of urban areas. The reason of existence of worse factors in urban area is the injection of all those matters and activities which imbalance the natural environment. Therefore, people of urban area are paying the cost of their

environmental health for achievement of modernization.

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