

ENVIRONMENTAL POLLUTION AND HEALTH HAZARDS : AN AWARENESS STUDY IN THE REPRODUCTIVE AGE BRACKETS

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Abstract

The purpose of the study is to understand the sensitivity of adult groups to environmental pollution. The project was carried out by collecting information from the respondents of reproductive age groups using structured interview schedules. The interview schedule was pretested by a pilot study and necessary modifications were done. The data were assigned with percentage scores for a quantitative analysis. The awareness level was evaluated from the stand points of air, water, soil, noise, radiation and thermal pollution. The responses were compiled and interpreted from the objective point of view. The results revealed that among the pollution categories most of the samples were mostly aware of air, water, soil and noise pollution and very few knew about thermal and radiation pollution. Table-1 depicts awareness level of samples with regard to environmental pollution. Information shows that a great number of samples (85 %) were aware of air and water pollution, 80 % of samples were aware of soil and noise pollution, 60% of samples were aware of thermal pollution and only 50 % samples were aware of radiation pollution. Table -2. Reveals that 25 % of the samples were aware of sources of soil pollution and noise pollution, similarly 20 % of the samples were aware of sources of air pollution, water pollution and thermal pollution and only 15 % of the samples were aware of sources of radiation pollution. Table- 3 shows that most of the samples (25 %) were aware of pollutants of soil pollution, 20 % of the samples were aware of pollutants of air pollution, water pollution, noise pollution, radiation pollution and thermal pollution. Table-4 reveals that 20 % of the samples were aware of ill health effects due to water pollution, noise pollution and thermal pollution 15 % of the samples were aware of ill health effects due to air pollution and 10 % of the samples were aware of ill health effects due to soil pollution and radiation pollution. Thus, proper strategies for environmental education and legislation should be enforced.

Key Word- Environment, Air, Water, Soil, Noise Radiation, Thermal Pollution, awareness, sources

Introduction

The environment is everything around the human being, outdoors and indoors. The air we breathe, water we drink, the ground we walk on and the food we eat are all parts of our environment. It is important to know what things of environment affect our health. The connection between environment and health has been established through research studies (Patro, 2002). The world Health Organization (WHO) estimates that environmental factors account for

24 per cent of the world's burden of disease and 23 per cent of all deaths. Environment is estimated to play a larger part in some diseases, such as asthma (44 per cent). While the costs are higher in developing countries, environmental factors have a significant impact on many diseases across the globe. Over 50,00,000, children under 14 years die every year from diseases that relates to environment- al conditions, mainly in the developing world. Seventeen per cent of deaths in developed regions were accountable by environmental factors. In developed regions, environment plays a significant role in chronic diseases such as lung cancer (30 per cent).

Environment pollution is a global concern and consequently its effect on world health is getting increasingly important. Increased rate of urbanization and industrialization are the major causes of environmental pollution. There are numerous types of environmental pollution caused by solid waste, liquid waste, gaseous waste and waste without weights which constitute a potential danger to human lives. Reproductive age is a crucial and central part of human life. Health during this period is a reflection of health status during child hood, adolescence and adulthood and also sets the stage for health beyond the reproduction years for both women and men, and affects the health of next generation. Reproductive health is a pre-requisite for social, economic and human development. At this juncture the investigators have tried to carry out this project keeping in view the sensitiveness of samples of reproductive age groups towards the hazards of environmental pollution. Thus the objectives have been formulated:

Objectives

1. To understand the information level of samples about various types of environment pollution.
2. To elicit information level of respondents with regard to sources and pollutants of different types of environment pollution.
3. To assess the awareness level of the sample groups in respect of ill effects of environment pollution on health.

Methodology

For the purpose of understanding the awareness towards environment pollution samples were picked up randomly from post graduate students of Berhampur University, Orissa, who

belonged to reproductive age groups. The samples groups were in the age groups of 19 years to 23years. The tools of data collection were developed from the objective point of view. A structured interview schedule was prepared and pre- tested through pilot study and modified as required. The interview schedule was prepared taking into consideration types of environment pollution like air, water, soil, noise, thermal and radiation; their sources; pollutants; and ill health effects due to pollution. After collection of information on the basis of interview schedule the results were interpreted and analyzed. For the purpose of quantitative analysis percentage scores were assigned.

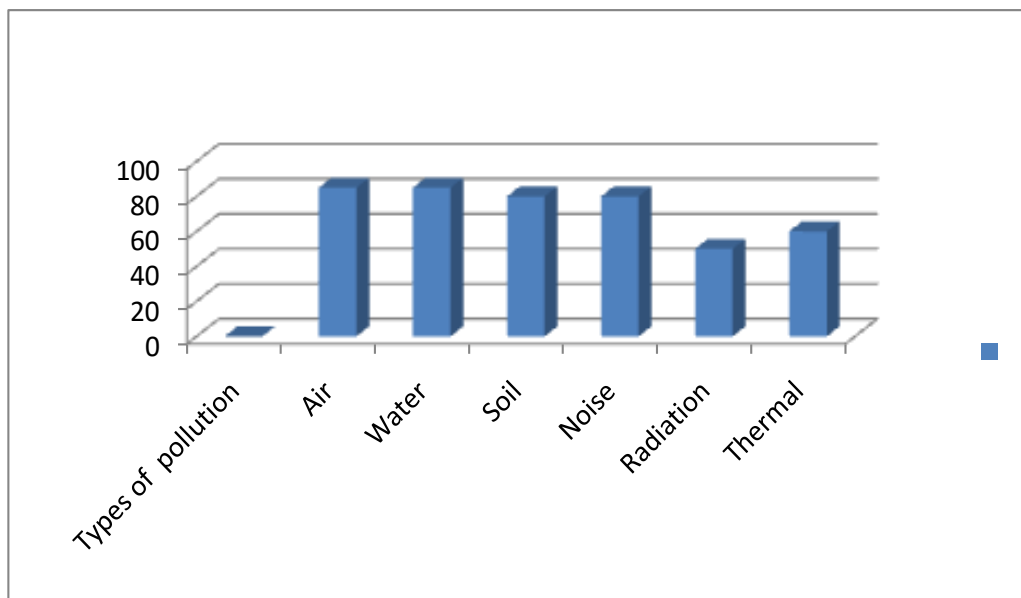
Results

The results of the study has been interpreted under four aspects as awareness towards different types of pollution, sources of pollution, various pollutants, and ill health effects of environment pollution.

Table-1 Awareness level of samples with regard to Types of Environmental Pollution

Types of pollution	Average Score (%)
Air	85
Water	85
Soil	80
Noise	80
Radiation	50
Thermal	60

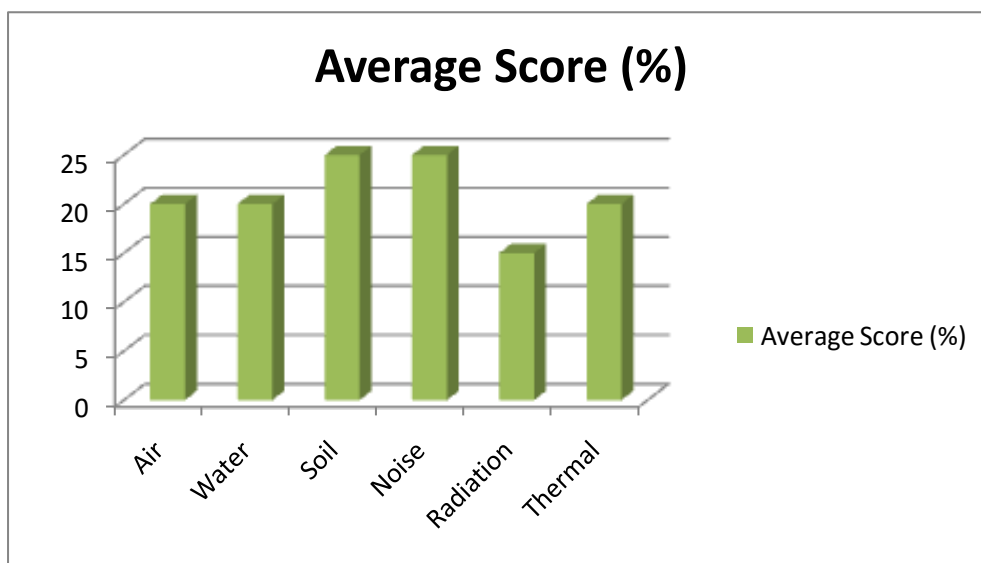
Figure- 1 Awareness level of samples with regard to Types of Environmental Pollution



Result of Table-1 depicts awareness level of samples with regard to environmental pollution. Information shows that a great number of samples (85 %) were aware of air and water pollution, 80 % of samples were aware of soil and noise pollution, 60 % of samples were aware of thermal pollution and only 50 % samples were aware of radiation pollution.

Table-2 Awareness with regard to sources of Environmental Pollution

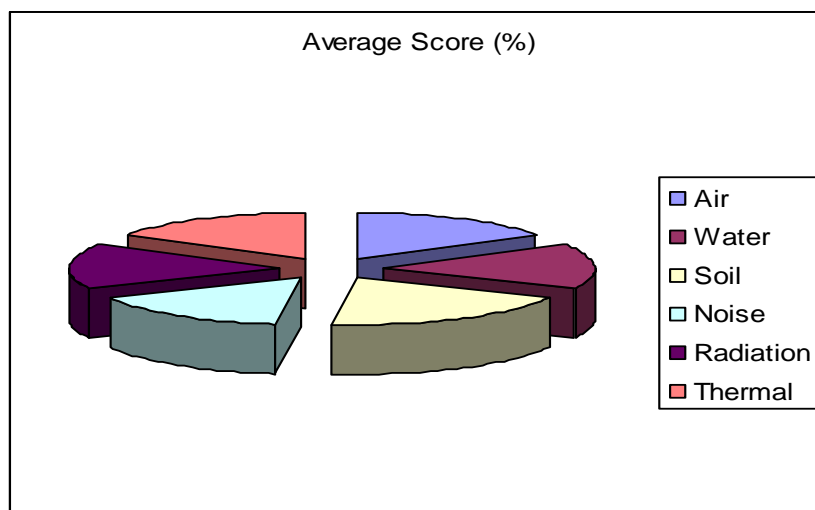
Types of pollution	Average Score (%)
Air	20
Water	20
Soil	25
Noise	25
Radiation	15
Thermal	20

Figure -2 Awareness with regard to sources of Environmental Pollution

Observation of result as presented in Table -2 reveals that 25 % of the samples were aware of sources of soil pollution (agro-chemicals, domestic garbage, open defecation, industrial wastes) and noise pollution (heavy machinery, over crowd cities, increased number of automobiles, trains and air craft sounds); similarly 20 % of the samples were aware of sources of air pollution (forest fire, automobile exhausts, industrial exhausts, agricultural chemicals, tobacco smoke), water pollution (agricultural waste, industrial discharges, surface run off, heat) and thermal pollution (industrial wastes, thermal power plant, hydro-electric power plant); and only 15 % of the samples were aware of sources of radiation pollution (television, computer set, radio- active wastes, nuclear power plants).

Table- 3. Information level with regard to various pollutants of Environmental Pollution

Types of pollution	Average Score (%)
Air	20
Water	20
Soil	25
Noise	20
Radiation	20
Thermal	20

Figure- 3. Information level with regard to various pollutants of Environmental Pollution

The Table- 3 shows that most of the samples (25%) were aware of pollutants of soil pollution (human wastes, dangerous chemicals, wastes of chemical manufacturing company, iron and still plants), 20% of the samples were aware of pollutants of air pollution (ground level ozone, dust, smoke, industrial emissions), water pollution (hazardous chemicals, thermal wastes, silt), noise pollution (industries are run with heavy sound machineries, over crowded towns and cities, vehicles, domestic noise), radiation pollution (research laboratories, nuclear power plants) and thermal pollution (change in natural temperature of water, industrial manufacturers, water coolant by power plant).

Table-4 Knowledge Assessment in respect of ill effects of Environmental Pollution on Health

Type of pollution	Average Score (%)
Air	15
Water	20
Soil	10
Noise	20
Radiation	10
Thermal	20

Figure- -4 Knowledge Assessment in respect of ill effects of Environmental Pollution on Health

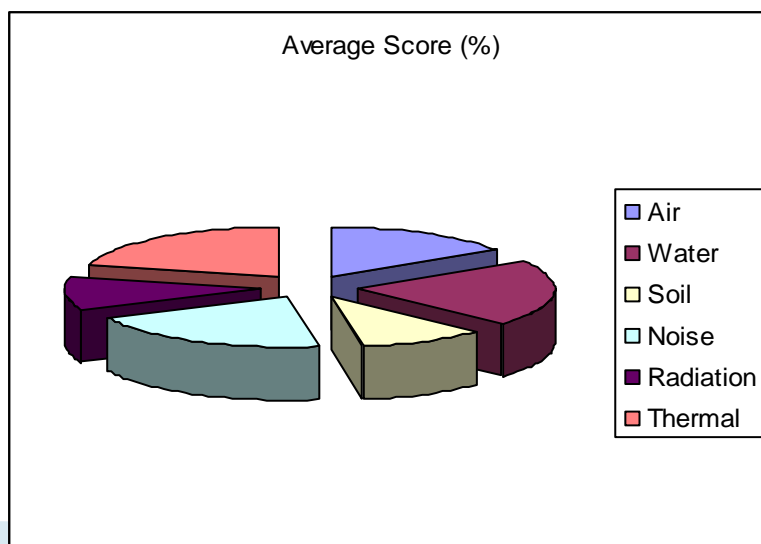


Table-4 reveals that 20 % of the samples were aware of ill health effects due to water pollution (vomiting, stomach problems, reproductive problems ,skin problems, developmental problems, cancer, typhoid /jaundice),noise pollution (heart decease, hearing loss, mental tension, high blood pressure, reproductive health, headache) and thermal pollution (vomiting, cancer, skin rashes, reproductive health problems), 15 % of the samples were aware of ill health effects due to air pollution (skin diseases, respiratory diseases, kidney problems, jaundice, cancer, reproductive health problems); and 10 % of the samples were aware of ill health effects due to soil pollution (cholera and dysentery, cancer, kidney and liver diseases, malaria, reproductive health `problems) and radiation pollution (cancer, skin burns and skin cancer, tumors, reproductive health problems).

Discussion

Rising industrialization and consequent environmental pollution, increasing use of synthetic chemicals and exposure to hazardous compounds affect the reproductive health. A great proportion of world's population is exposed to both traditional and modern hazards due to environmental pollution, Patro, 2007. This double burden of risks affects women more than men. Research on environment pollution stated that air, water, soil, noise, thermal and radiation pollutions along with other health disorders affect the reproductive health of women (Osagbemi,

2005; Butter & Kamal, 2006; Cankurt, 2008). Thus the vulnerability of women to hazards of environmental pollution is more. At the out set the study examines the awareness of adult girls for environmental pollution which dealt with water, air, soil, noise, radiation and thermal pollution. The analysis depicted that all the samples were mostly aware about air, water, soil, and noise pollution, but only meager percent of samples responded about the thermal and radiation pollution. The observation into the results revealed that even though the sensitivity of the sample were more to environmental pollution the level of information pertaining to sources of pollution, different pollutants and various health hazards caused by environment pollution were very poor.

Conclusion

For the healthy nation priority should given to control environmental pollution by developing strong strategies and enforcing environmental legislation. Awareness education should be provided to reproductive age brackets to control environmental pollution that would ultimately control their health hazards. Specially women in India are facing more adverse health effects from exposure to fine particulates generated by domestic combustion as cooking is their primary responsibility.

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