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Health Related Problems in Industrial Locality of Tirupur District of Tamilnadu

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Abstract: ***Systematic assessment of the effect of industrial pollution on the health and survival of residents certainly goes a long way in monitoring the pollutants and bringing out mitigative measures by the authorities. The present study was taken up with the objective of assessing the impact of industrial pollution on the growth and Human Health, data reveals a higher prevalence of respiratory, eye and skin problems in the industrial areas, as compared to those living in non-industrial areas. Long-term health studies are suggested for proper management of environment and health in these areas by the governmental authorities and the society at large.***

Keywords: Pollution, authorities, locality, health, Prevalence

1. Introduction

The developing and developed countries are equally accountable for environmental pollution because both are utilizing natural resources expansively. Developed nations are using it for their ease and luxuries while developing nations are using it for their existence. In this blind race, they forget what affect will it cost on human health. Industry plays a vital role in the process of economic growth in the world. It enhances the economic welfare of citizens and supplies the material goods they consume. The mode in which society will develop in the future is largely dependent on how the growth which industry generates is distributed

2. Review of Literature

Pandey (2006) in his study "Water pollution and health "pointed out that water is the important constituent of life support system. No one can like and even dream to live without water. Most of our water bodies have become polluted due to industrial growth; Urbanization and manmade problems are mainly the result of population growth. Poor sanitation and contaminated drinking water arising from human activity and natural phenomena create serious problems in human health. The chief sources of water pollution are sewage and other waste, industrial effluents, agricultural discharges and industrial wastes from chemical industries, fossil fuel plants and nuclear power plants. They create a large problem of water pollution rendering water no longer fit for drinking, agriculture and as well as for aquatic life. More than 2.6 billion people of the world's population lack basic sanitation facilities and over one billion people still use unsafe drinking water sources. As a result thousands of children die every day from diarrhea and other water, sanitation and hygiene related diseases and many suffer and are weakened by illness

Need for the Study

Pollution is one of the most severe of all environmental problems and, at its nastiest, poses a major threat to the health and well-being of millions of people and the worldwide ecosystem. Industrial pollution and waste pose potential threats to human and ecological health if not properly managed.

Statement of the Problem

The heavy usage of chemicals and the waste effluents from the Hosiery industries are not properly treated through water effluent treatment .Establishing the water effluent treatment required huge investments in crore's, hence the small and medium entrepreneurs in Hosiery units are unable to launching and they have directly linked the waste disposal in the river. Due to these toxic elements in the waste disposal the entire ground water as well as river water where polluted acutely.

Objectives of the Study

1To identify the health related problems faced by the respondents due to industrial pollution.
2. To suggest better strategies for reducing industrial pollution in the industrial locality of Tirupur District.

3. Data Analysis and Interpretation

Multiple Regression Analysis

A regression is a statistical tool used to find out the relationship between two or more variables. One variable is caused by the behavior of another one. The former variable is defined as independent and the later variable is defined as the dependent. When there are two or more independent variables, the analysis that describes the relationship between the two is called multiple regression analysis. The main objective of using this technique is to predict the variability of the dependent variable based on its co-variants with all the independent variables. It is useful to predict the level of dependent phenomenon through multiple regression analysis, if the levels of independent variables are given.

The linear multiple regression problem is to estimate the coefficients of β_1, β_2, β_j and β_0 such that the expression,
$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots\ldots\ldots + \beta_j X_k$
provides a good estimate of an individual Y score based on the X scores,
Where,
Y = Level of impact of pollution
X_1 = Respondents' Age
X_2 = Respondents' Gender
X_3 = Respondents' Marital status
X_4 = Respondents' Educational qualification
X_5 = Respondents' Occupation
X_6 = Respondents' Family size
X_7 = Respondents' family type
X_8 = Respondents' Monthly income

Causes of Industrial Pollution

Factor Analysis
The opinion of the respondents on causes of industrial pollution was studied by selecting 15 statements of cognitive components, affective component and conative components. These 15 statements were chosen and classified in an orderly form, and factor analysis was employed and the detailed analysis and discussions are done at various stages.

S. No	*Causes*
1	Release large amount of toxic gases in the atmosphere
2	Most industries still rely on old technologies to produce products that generate large amount of dangerous gases
3	Lack of effective policies and poor enforcement drive
4	Unplanned growth took place wherein those companies flouted rules and norms and polluted the environment with both air and water pollution
5	Inefficiency in disposal of water effluents
6	Industrial boilers and power plants generates heat
7	Sulfur dioxide of chemical industries is also the form of industrial air pollution
8	Burning of fossil fuels causes dangerous gases
9	Discharge of chemical into water bodies and waste water
10	NO_2 is one of the most prominent air pollutants especially, with the reference of industries.
11	Accumulation of solid waste around bore wells
12	Plants are not properly managed by the industries
13	Industries fail to adhere to the laws and continue with their careless actions
14	laws on environment are not strictly enforced and or recognized
15	Big rivers adjacent to large industrial cities have been converted into open sewers

Statistics Associated With Factor Analysis

Bartlett's Test Of sphericity - Bartlett's test of sphericity can be used to test the null hypothesis that means that the variables chosen are not correlated with the sample population. The test of sphericity is based on the chi-square transformation of the determinant of the correlation matrix. A large value of test statistics favours the rejection of null hypothesis.

Kaiser-Mayer-Olkin measure of sampling - This index compares the magnitude of the observed correlation co-efficient to the magnitude of partial correlation co-efficient. Instant small values indicate that the correlation between pairs of variables cannot be explained by other variables and that factor analysis for evaluating a particular aspect will not be appropriate.

Eigen values and Communalities - A factor's Eigen value or latent route is the sum of squares of its factor loading. It helps us to understand how well a given factor fits the data gathered from all sample respondents on all the statements. Communalities are the sum of squares of a statement's factor loading, i.e., it explains how much each variable accounts for the factors taken together.

Factor loading - Factor loading is simple correlation between the variables and the factors. Factor matrix contains the factor loading and the factors. The researcher applied Factor analysis to assess the causes of industrial pollution.

4. Findings

The study highlighted the various impacts of Industrial Pollution. It can be found that waterborne diseases and vector borne diseases are quite common. This indicates the level of environmental degradation that has occurred in the area. Analysis of the health impacts show that regarding the different signs and symptoms.

5. Suggestions

Although there are no comprehensive data on waste generation rates, collection coverage, storage, transport, and disposal volumes and practices, the Central Public Health and Environmental Engineering Organization (CPHEEO) estimated a per capita waste generation in Indian cities and towns in the range of 0.2 to 0.6 kilograms per day. To prevent future problems, India must take immediate steps to control waste generation, to enhance recycling recovery and reuse, and to ensure better collection and sustainable disposal.

6. Conclusion

Indian municipalities have overall responsibility for solid waste management (SWM) in their cities. However, most of them are currently unable to fulfill their duty to ensure environmentally sound and sustainable ways of dealing with waste generation, collection, transport, treatment, and disposal. The failure of municipal solid waste management (MSWM) can result in serious health problems and environmental degradation.

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