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Hazardous Chemicals in Environment and Awareness Among Youth in Rural Area of Punjab

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ABSTRACT

The pace of science and technological progress of human has started encroachment of nature which gave us threats like acid rains, depletion of ozone layer, contamination, environment pollution, climate changes, global warming, rise of sea water level etc. Present days, we are dealing with many of the environmental tragedies predicted by scientists decades ago. Two decades ago, global problems relating to degradation of natural resources and pollution have increased dramatically. In this paper, researcher investigated awareness level about hazardous chemical in the environment among youth in rural area of Punjab. The results of the study showed a poor level of awareness level among rural youth about the presence of hazardous chemical in the environment.

1. Introduction

Modern society has a primary concern about environmental and health concerns. There is considerable interest in this topic from both public authorities and customers. Since this process requires the updating of the used methods of manufacturing, and the use of chemicals – Chemicals in goods used every day – could have a huge effect on both human health and the health of the world, as those products remain in the atmosphere for an exceptionally long time.[1] As man affects his world, his environment in turn influences him. As coal was increasingly used and new technologies were being made, high quantities of pollutants were released, and more natural resources were also being used for output. The planet has created interconnected and opportunities for manufacturing, and challenges because each wave of technology has a strong advantage, producing a collection of waste previously unknown to human people: hazardous waste, nuclear waste, waste electronics, etc. The growth in population and urban areas has shown that annual waste production is growing in proportion.

Various international legislative proposals have been discussed. It is a big concern for the people of the European Union, along with pollution and depletion of natural resources. With 43% of EU28 people worried about the human health effects of chemicals, this has not only been an issue of concern for policy making, but also for NGOs fostering increased understanding and awareness.

2. Environmental situation

Indian Climate Risk Index (CRI) 2019, established by German watch and referred to 2017, shows India to be the 14th more vulnerable region. India is now at the heart of this trend: the temperatures in the south are already above average and, in the north, a similar risk rise in internal areas is posed. This is an improvement on the last two years, but India is ranked second in severe weather-related injuries.

Air quality is declining rapidly in Indian cities and is worse than China today. The paper, 'Airpocalypse, 'Air Pollution' was published by Greenpeace in January 2017. 11 out of the 12 cities with the highest levels of small particulate matter – PM2,5 – are in India in the 2018 World Health Organization (WHO) global ambient air quality database[2]. The PM 2.5, 22 of the top 30 of the world's most polluted cities is in India, according to the World Air Quality Report 2018 of AirVisual. Gurugram is the most polluted town in the country, a suburb of the Indian capital, Delhi. In November, December, and January the situation is particularly critical because of a combination of atmospheric and human factors, including winter reversal and burnt-in of post-monsoon biomass (stubble) to clear crop residues in rural areas. According to AQLI[3], pollution in Delhi in 2016 was decreased by more also 10 years by the health effects on the population of the northern Indian Gangetic plain. According to the University of Chicago's report on air quality life Index.

Pollution from air correlates with hunger, with an estimated 790 million people (nearly 60 percent in Indians) still dependent on cooking biomass (wood, coal, or animal dung) in 2016[4]. This is particularly true in rural areas where toxic fumes of burning biomass are threatening human health and increased infant mortality - with two thirds of India living in rural areas. This is true in rural areas. India is only likely to decline modestly in its reliance on coal – the largest polluter in fossil fuels – due to increased coal consumption in the power industry, the 2019 "Energy outlook" published by the oil and gas company BP[5].

In India, too, water pollution is a major concern. Untreated waste is mostly found in wetlands, streams, and rivers, which is 60% of the municipal sewage. This leads to waste and rendering water inadequate for human use. In addition, farmers

[1] European Commission. Attitudes of European Citizens towards the Environment (Report); European Commission: Brussels, Belgium, 2014.

[2] https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ambient-air-pollution
[3] https://aqli.epic.uchicago.edu/about/
[4] https://www.cleancookingalliance.org/country-profiles/focus-countries/5-india.html
[5] https://www.bp.com/en/global/corporate/energy-economics/energy-outlook/demand-by-fuel/coal.html

also pump water from polluted rivers to irrigate their crops, thus placing their health and the supply of Indian food at risk. Tens of rivers are tainted by heavy metals, like the Ganges, the National River, and the Hindu Holy River, where many people bathe each day, and thousands of pilgrims gather at the Kumbh Mela, the largest religious festival in the world. In March 2017, the Uttarakhand State Court ruled that, in order to force public authorities to strengthen their security against pollution, Ganges and its primary tributary Yamuna were to be granted living human beings, first in the case of India. The Supreme Court of India overruled the order in July 2017.[6]

India is facing major challenges in terms of waste management with rapid urbanization: 75 percent of the municipal waste is dumped without processing in India – the state varies. Alang beaches are also home to 80 percent of ship-breaking global activité, which is mostly done under unsafe working practices and contribute to environmental pollution, along with Chittagong in Bangladesh and Gadani in Pakistan[7]. In March 2019, the Norway Government Ethics Board announced that its priority will be ship blocking on India's beaches and thus the Global Pension Fund, the world's largest sovereign wealth fund.

3. Review of Literature

A literature review should lead to a better understanding of the existence and meaning of the issue. Chemicals play an important role in prosperous life in a wide variety of goods and the climate and healthy lives. And healthy life. However, there is an increased concern for public health and the community regarding the availability of hazardous chemicals in the environment.

Ignorance of environmental problems can lead to apathy, little personal behavior change and government dependence (Bulkeley 2000)[8]. Global warming understanding and education play a key role in encouraging people's environmental or conservation actions (Frick et al. 2004[9]; Kaiser and Fuhrer 2003[10]).

If a problem is located, people may interpret their behavior or inability to act more effectively (Macnaghten and Jacobs 1997[11]; Burgess et al. 1998[12]). Kirk (1963)[13] stressed that the environment was not a static backdrop but a dynamic one that takes shape and acquires meaning by human perceptions. If we do not conserve and protect environment, we will destroy ourselves and our society (Huckle 1991)[14]. Today, everyone is aware of environmental issues and understands them, but few people realize the importance of the environment and are aware of them. Environmental education seeks to strengthen values, ethics, problem solving and action (Spork 1992)[15]. Research shows that people from developing countries such as India are less willing. Aid for the safety of the environment even though they are more equipped (Gelissen 200)[16]. World educators and environmental experts have consistently pointed out that environmental consciousness needs to be firmly ingrained on the education systems at all levels of school education to solve environmental crises (Khan 2013)[17].

4. Research Methodology

Objective: The main aim of the study is to investigate awareness level about hazardous chemical in the environment among youth in rural area of Punjab.

Sample Design: Descriptive and Exploratory

Sample Size: 150 respondents

Sampling Technique: Convenience Sampling

Hypothesis

There is a no awareness among rural youth regarding hazardous chemicals in the environment.

5. Data Analysis & Interpretation

After collection of the data, the responses have been scored on a scale of 1 to 5 based on the weight, merit and significance of the answers.

Association between Age and Awareness about Hazardous Chemicals in the Environment

Age(In Years)	N	Pass	Fail	% Pass
15 - 20	35	20	15	13.33
20 - 25	52	32	20	21.33
25 - 30	46	40	6	26.67
30 - 35	17	10	7	6.67
Total	150	102	48	68.00

Table No. – I

To assess the impact of various factors on awareness of hazardous chemicals in the environment in an individual, age-wise distribution was carried out. It showed that respondents of the age between 25 – 30 years had more knowledge followed by the respondents of the 20 -25 years, and respondents of age 15 -20 years. While respondents of age 30 -35 years have extraordinarily little awareness about the hazardous chemicals in the environment. As compared to older people but

[6] https://www.circleofblue.org/2018/india/toxic-water-toxic-crops-indias-public-health-time-bomb/

[7] https://safety4sea.com/the-problems-of-ship-breaking-in-india-an-overview/

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statistically it was not significant (p-value >0.05, not significant) (Table 1). No difference was found regarding the extent of knowledge between males and females (p-value>0.05, not significant).

Association between Education and Awareness about Hazardous Chemicals in the Environment				
Education	N	Pass	Fail	% Pass
10th	38	18	20	12.00
10+2	55	34	21	22.67
UG	35	20	15	13.33
PG	22	13	9	8.67
Total	150	85	65	56.66667

Educational status showed that higher secondary (10+2 level)education was associated with more awareness followed by the respondents of UG level compared to lower education(10th) but here too difference was statistically not significant (p-value>0.05, not significant). Thus overall knowledge regarding the causes of hazardous chemical in the environment, which is responsible for various diseases, was very poor in our population irrespective of age, gender and education status. The hypothesis framed for the study that, there is a no awareness among rural youth regarding hazardous chemicals in the environment was rejected.

6. Conclusion:

In conclusion this study of the awareness of hazardous chemical in environment among youth in rural area of Punjab showed that there is poor level awareness. This emphasizes the urgent need for increase in awareness raising activities related to nature of hazardous chemicals. This could be achieved through mass media campaigns, public lectures and door-to-door campaigns for the general population.

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