

# A Review on Noise Pollution

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**Abstract:** Noise pollution has become a serious problem for human health. Noise pollution means an unwanted or undesirable sound that leads to physical and mental problems. Noise pollution is dependent on the loudness and frequency of the sound. Source of most noise worldwide is mainly caused by atmospheric noise or environmental noise such as industrial machines, transportation systems and indoor noise generated by machines.

**Keywords:** Pollution, Effect, Human Being, Control

## I. INTRODUCTION

Noise is unwanted sound and unnecessary form of energy which is emitted by a vibrating body and on reaching the human ear causes the feeling of hearing through nerves. Sounds produced by all vibrating bodies are not audible. The limits of audibility are from 20 Hz to 20 kHz. Sounds of frequencies less than 20 Hz are called infrasonic and greater than 20kHz are called ultrasonic. Noise may be continuous or intermittent as well as may be of high frequency or of low frequency which is undesired for a normal human hearing. The discrimination between sound and noise also depends upon the tendency and interest of the person receiving it, the ambient conditions and impact of the sound generated during that duration of time [1].

Noise pollution is emerging as a major environmental hazard to public health. Recently, noise pollution is on the rising trend in India due to the rapidly developing industrialization and urbanization. Increasing number of automobile cars, trucks, autos and two wheelers have become instrumental in producing high vehicular sounds and noise pollution. Poor town planning and lack of space in cities have led to construction of houses near railway tracks, airports, industries and along busy traffic commuting lanes [2].

sources of noise pollution include inter alia, vehicular traffic, neighborhood, electrical appliances, TV and music systems, public address systems, railway and air traffic and electricity generating sets. Most of the people inhabiting metropolitan cities or big towns and those working in factories are susceptible to the adverse effects of noise. The problem of noise pollution is less in small towns and villages. But, those residing in villages or towns along the national or state highways or close to railway tracks do bear the brunt of excessive noise. Indiscriminate use of horn by the vehicles and widespread use of loud speakers in Indian social and religious ceremonies cause several health hazards to the urban inhabitants.

## II. METHODS OR SOURCES OF NOISE POLLUTION

*i. Industrial Sources:* Textile mills, printing presses, engineering establishments and metal works etc. contribute heavily towards noise pollution. In industrial cities like Kolkata, Ludhiana, Kanpur

the industrial zones are not separated from the residential zones of the city especially in the case of small scale industries.

**ii. Transport Vehicles:** Heavy trucks, buses trains, jet-planes, motor-cycles, scooters, mopeds, jeeps the list of vehicles is endless, but the outcome is same.

**iii. Public Address System:** In India people need only the slightest of an excuse for using loud speakers. The reason may be a religious function, birth, death, marriage, elections, demonstration or just commercial advertising. Public system, therefore, contributes in its own way towards noise pollution.

**iv. Agricultural Machines:** Tractors, thrashers, harvesters, tube wells, powered tillers etc. have all made agriculture highly mechanical but at the same time highly noisy. Noise level 90 dB to 98 dB due to running of farm machines have been recorded in the state of Punjab.

**v. Defence Equipment:** A lot of noise pollution is added to the atmosphere by artillery, tanks, launching of rockets, explosions, exercising of military airplanes and shooting practices. Screams of jet engines and sonic booms have a deafening impact on the ears and in extreme cases have been known to shatter the window panes and old dilapidated buildings.

Urban noise or environmental noise pollution, however, is not a recent phenomenon. In Kolhapur, the urban noise complaints were restricted to only Diwali and Ganpati festivals. However, it was found that soon the frequency of noise complaints will increase significantly because of rapid increase in population, business activities and industrialization [7-10]. Table shows the typical noise levels.

Table: 1. Typical noise levels

<i>Sources of noise pollution</i>	<i>Level dB</i>
Lathe machine	87
Milling machine	112
Computer rooms	55-60
Trains	96
Trucks	90-100
Car horns	90-105
Air compressors	95-104
Pulveriser	92

### III. EFFECTS OF NOISE POLLUTION

Now a day's, man as well as environment affects pollution. Following are some effects of pollution. It may lead to the permanent loss of hearing. A large explosion can cause the injury to tympanic membrane. It can cause anxiety and stress which may lead to the fright. It causes the disturbance in nervous systems of urban babies. It may increase the heart rate, decreased output, constriction of vessels and impaired vision. In case of animals it can affect the heart, liver and brain. It may also affect the brain by dilating the blood vessels. It affects the eyes by dilating the pupil.

### IV. CONTROL ON NOISE POLLUTION

- Use of head phone for TV and Music

- Noise-free electronic appliances
- Noiseless office appliances:
- Keep your fingers touched on keyboard
- Intercom the best way of internal communication
- No honking in residential area
- Silencer of your vehicle in good condition

## V. CONCLUSIONS

Today day by day noise pollution concern to be major problem not only human being but also environments. Automobiles, industries, highway transport, airports are the major sources of noise pollution. Noise pollution adversely affects the human being leading to irritation, loss of concentration, loss of hearing. Avoid noise pollution government has strictly apply rules and regulation so that minimize noise pollution.

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**Ethical statement:** The authors declare that they have followed ethical responsibilities.

## REFERENCES

- [1]. Deepak Jhanwar, “Noise Pollution: A Review”, *Journal of Environment Pollution and Human Health*, 2016, Vol. 4, No. 3, 72-77
- [2]. Dr. Rajalakshmi R, Dr. Nitin Ashok John, Dr. Jyoti John, Review on Noise Pollution and Its Associated Health Hazards *Sch. J. App. Med. Sci.*, 2016; 4(2C):500-503
- [3]. Savale P. A, Review Paper Effect of Noise Pollution on Human Being: Its Prevention And Control, *J. Environ. Res. Develop. Journal of Environmental Res. and Development* Vol. 8 No. 4, April-June 2014
- [4]. Sørensen M., Hvidberg M., Andersen Z.J., Nordborg R.B., Lillelund K.G., Jakobsen J., Tjønneland A., Overvad K., RaaschouNielsen O., Road traffic noise and stroke: A prospective cohort study, *Europ. Heart J.*, 32 (6), 737-744, (2011).
- [5]. Babisch. W. and Van Kamp I., Exposure response relationship of the association between aircraft noise and the risk of hypertension, *Noise Heal.*, 11 (44), 161- 168, (2009).
- [6]. Selander J., Milsson M.E., Bluhm G., Rosenlund M., Lindqvist M., Nise G. and Pershagen G., Long-term exposure to road traffic noise and myocardial infarction, *Epidemiol.*, 20 (2), 272-279, (2009)
- [7]. Evans, G.W. & Hygge. S., “Noise and performance in children and adults”. In Prasher D, (Eds.), *Handbook of Noise and Health*. 2000.
- [8]. Hunashal, Rajiv B. & Patil, Yogesh B., “Environmental noise pollution in Kolhapur city, Maharashtra, India”. *Nature Environment & Pollution Technology*, 10(1), 39-44, 2011.
- [9]. Moura-de-Sousa, Carolina & Cardoso, M.R.A. “Urban noise in the city of Sao Paulo, Brazil: An important problem of public health”. *Noise Health*, 4(16), 57-63, 2002.
- [10]. Ozer, S., Yilmaz, H., Yesil, M. & Yesil, Pervin, “Evaluation of noise pollution caused by vehicles in the city of Tokat, Turkey”. *Scientific Research Essays*, 4(11), 1205-1212, 2009.