

Effect of Noise Pollution on Health

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Abstract

Noise pollution refers to the unwarranted and troublesome sound that is injurious to health. Noise pollution refers to the presence of such levels of sound in the environment that are disturbing, irritating and annoying to living beings. It causes uneasiness and harm to living being's mental and physical health. It is one of the major causes for deafness and other health hazards. This theoretical article throws light on noise pollution and its prevention.

Keywords: *Noise pollution, troublesome sound, mental and physical health, deafness, prevention.*

Introduction

Noise is found everywhere and it is part and parcel of our life. It is unavoidable part of our life but escalating noise problem is becoming a major threat to our quality of life. Noise pollution is defined as a form of air pollution that is an audible unwanted sound that poses a threat to a person's health and well-being.(Goines, L, Hagler, L.2007) (Regecova, V, Kelleroval, E.) Young, elderly and hospitalized people are more vulnerable to noise pollution. After considering many researches in this field now it is well supported fact that noise pollution has become a serious health concern. There are many bad effects of noise pollution on health which includes high blood pressure, noise induced hearing loss, irritability and sleep disorders. (Goines, L, Hagler, L. 2007) It is also found that noise pollution decreases in the performance at work and school. (Goines, L, Hagler, 2007) Noise is described in terms of loudness (intensity) and pitch (frequency) and noise exposure is measured using a logarithmic decibel (dB) scale.(NIDC Fact Sheet..) An article published in American Family Physician in 2001 depicts some common sources of noise. (Rabinowitz, P. May 2000)

Sound	Loudness(dB)
Whisper	30-40
Quiet Room	50
Conversation	60
Lawnmower	90
Stereo Headphones	110-120
Rock Concert	110-120
Jet	140
Gunshot	140-170

There are various health effects of noise and one of them is Noise Induced Hearing loss that is second only to age induced hearing loss. NIHL takes place due to damage of the hair cells of cochlea in the inner ear. Unfortunately the

damage is irreversible .Many activities like listen to loud music, to attend rock concerts or play in band increase the risk of NIHL.

As far as mental health is concerned there are many well researched studies which show significant relationship between noise pollution and mental health. According to one study children who were more exposed to noise level above 55 db had decreased attention ,increased oppositional behavior and difficulty in social adaptation.(Ritovska, G, Djorgjev, D, Jordanova, N.2004) Noise level has been also associated with magnified negative reactions such as increased dissatisfaction, anger, agitation and distraction. (Hagler, L.)

To maintain a good health and mental functioning one needs an adequate well rested sleep. Noise is a common identified offender of interrupting sleep. There may be primary effects which include difficulty in falling asleep and awakenings. Secondary effects include fatigue, decreased well being and performance. (Berglund, B, Lindvall, T., 1995)

There are many evidences which throw light on associations between noise pollution and heart diseases. If a person goes through noise greater than 65 db,body goes into “fight or flight” mode a resulting in elevated blood pressure, heart rate and peripheral resistance by the discharge of hormones such as norepinephrine, epinephrine and cortisol. (Berglund, B, Lindvall, T. 1995)

Not only adults but children are as well also at risk. In a study on over 1542 children between the ages of 3-7 years old who were in kindergartens in areas with traffic noise greater than 60db.The results showed that these kids have higher blood pressure .(Regecova, V, Kellerovala,E.) Unfortunately in India there are no strict laws for prevention of Noise pollution although in developed countries governments are more concerned and there are many grassroots community groups that support a quiet environment.

This is the time when efforts should be made to develop programmes to help avoid this preventable disease. It is recommended to use earplugs when near loud activities. Self awareness regarding harmful noises that can cause damage should be developed among families, friends and colleagues.

Some effective measures should be taken to solve the problem. The following measures can be taken to prevent noise pollution:

- The use of speakers should be controlled and regulated strictly.

- To prevent and control noise pollution it is necessary to create public awareness as only law is not sufficient. People must be made aware of the harmful consequences of noise pollution.
- People should be made aware that excessive noise is harmful and can cause irreversible diseases.
- There should be minimum use of sound producing instruments.
- The Pollution Control Board and the High Court have already taken effective measures to bring sound pollution under control. Adequate measures should be taken to ensure that noise related restrictions are not violated.
- Anti-pollution laws should be enacted and enforced.

Conclusion

Noise pollution has become a major social and health concern as it has potential biological and social effects on physical and mental health. So more concrete studies and researches should be taken in this field and general awareness should be developed accordingly to impart information.

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