



ENVIRONMENTAL EFFECT ON HEALTH AND WELL-BEING: A PSYCHOLOGICAL PERSPECTIVE.

Nidhi Meena

Assistant Professor-Psychology

Govt. Arts Girls College-Kota

Abstract

A clean and safe environment is essential for the health and well-being of the people. The natural and built environment has direct or indirect and positive or negative impact on the health. The good quality environment fulfils basic needs in form of fresh air, clean water, non-toxic food etc. The aim of this paper is to analyze consequences of the environmental factors on health and well-being. Various stressors like air, water pollution, climate change, built environment, noise, leakage of hazardous chemical etc. has negative impact, whereas clean, stable, peaceful, environment with green built areas associated with good mood, positive thoughts, lowered cardiovascular, and respiratory problems.

Key words- health, well-being, stressors, cardiovascular, respiratory problems

Introduction

The environment and humanity are interdependent. Therefore, not only the actions of human beings affect the planet, but the planet also has great influence on the health and well-being of the entire humanity. Human health and well-being are intimately linked to the state of the environment.

For long, physical environment had remained in the background, Environmental psychology reversed this equation and brought environment in the forefront to understand complex human and social problems since late 1960s. Studies like the interaction between physical environment and psychological processes, and human behaviors in real-life settings gained importance. Environmental psychology studies interplay between individuals and their built and natural environment. It is the study that examines the influence of the environment on human experiences and well-being as well as the influence of individual on the environment.

In broken window theory, Wilson et al (1982) pointed that environment has powerful impact on human health and well-being. According to world health organization (WHO), the full ability to take social, psychological and physical roles is called health. Subjective well-being indicates individuals' happiness and satisfaction about quality of life and is a positive state of physical, psychological and social welfare.

Environmental factors

Fresh air, clean water, shelter, pollution free and a stable climate are some important requirements for human physical and psychological health. If we look after the health and safety of our environment, it can be ensured that the mental well-being and physical health remains intact. There are many environmental factors that can negatively affect us. Some of them are discussed here

Noise pollution -It is unwanted, unpleasant sound characterized by intensity, frequency, periodicity and duration that causes some kind of physiological or psychological harm to humans or other living things. It is caused by industrial activities and other like domestic noise (loudspeakers, fireworks, car alarm,), natural noise (dog bark, bird shouts) and commercial noise (noise by modes of transport, traffic, machines, construction sites) etc. It is an underestimated threat that in

increasingly becoming a potential hazard to health, physically and psychologically and affects the general well-being of an individual.

Water and sanitation-Clean, safe and adequate fresh water is central to the survival of all living being and smooth functioning of our ecosystem, communities and economies. Water pollution is contamination of water bodies like lakes, rivers, oceans etc., that makes it unfit for consumption. It occurs when pollutants are directly or indirectly discharged into water bodies from industries, agriculture and homes.

Air pollution-It is the presence of harmful gases and chemicals in our atmosphere. When the amount of harmful content increases, it can be detrimental to plant, animal and human life. Air pollution is caused by carbon monoxide and oxides emitted by vehicles, manufacturing, mining operations, use of fertilizers, chemicals, pesticides, radioactive sources, waste deposition and other natural dust, wildfires, volcanoes etc. For example, Delhi is badly hit by air pollution due to vehicular emission (41%), dust (21.5%) industries (18%). Agriculture is main occupation in adjacent states of Delhi. The farmers burn crops to prepare it for next harvest, the smoke comes over Delhi, making the situation worst. In November 2017, air quality index crossed the pollution level of 999, making it the worst of all years.

Crowding and built environment – Built environment includes urban structure and individual housing. Environment characteristics like hosing, crowding, noise, indoor air quality, light, design features access to green and blue space have impact on mental health. However, there is weak evidence for association between mental health and urban green space. Crowding is a psychological state where need for space exceed the available supply (Stokols 1972). It is influenced by individual differences (culture, personality, gender, age) and situational factors (temporal duration, activity, private vs public space). Overcrowding poses serious direct and indirect health risks to all segments of the population, particularly the elderly, young children and the disabled.

Natural disaster-These are extreme, sudden natural or manmade calamities that injure people and damage property. Disaster is commonly categorized by their origin, natural or man-made. The most widely recognized types of disasters are -disasters related to extreme weather events (floods, cyclones, tornadoes, blizzard), and earth's geology (earthquakes, volcano eruption). Even the industrial accidents and epidemics have been categorized as disasters. For example, The Bhopal gas release, Chernobyl nuclear accidents, etc. The threat of climate change is continuously increasing. According to WMO, the number of disasters has increased by a factor of five over the 50 years period, driven by climate change.

Negative Impact

Environmental health hazards can trigger poor human health and well-being in the following way

Respiratory and cardiovascular problems- Dust, ozone, sulfur oxide is a growing threat for billions of people around the world. Acc to WHO's world global ambient air quality database, Kanpur, India tops the list with a yearly average of 319 micrograms per cubic meter of PM 2.5, the most hazardous particle commonly measured. 11 of the 12 cities with the highest level are located in India. Acc to WHO report every single year, exposure to both ambient and indoor air pollution causes more than 7 million deaths globally. In India air pollution is the fifth largest killer. According to WHO, India has highest death rate from asthma and chronic respiratory ailment in the world. High air pollution level can cause aggravated cardiovascular and respiratory illness like asthma, congestive heart failure and irregular heartbeat. The air pollution results in lesser visibility and lower penetration of ultraviolet B radiation, resulting in a lower haze score i.e. decreased serum concentration of vitamin D and lower immunity in inhabitants. Pregnant women, elderly people and children under age of 14 are most vulnerable to this disease. Study shows that in Delhi, apart from lungs and respiratory ailments, hypertension was also very prevalent among inhabitants and a study also found a correlation between particulate level in ambient air and attention-deficit hyperactivity disorder (ADHD) in children.

Waterborne disease-lack of water, sanitation and hygiene results in the loss of Cholera, diarrhea, dysentery, hepatitis A, typhoid and polio are some of the common diseases transmitted by poor water and sanitation. Each year waterborne disease afflicts hundreds of million people. The research show that diarrhea is the second leading cause of death for children. People living in low-income communities are most at risk for infectious disease.

Crowding, built environment and health- Most of the people spend the vast majority of time indoors. These structures thus have direct or indirect impact on the mental health and well-being of the people. Lack of exposure to nature leads to long-term stress and negative feelings about the built environment (Joy 2007). Biophilia designs are associated with positive and restorative experience

Overcrowding causes insufficient ventilation, sanitation problems and scarcity of basic amenities. Effects on the quality of life due to crowding may include increased physical contact, lack of sleep, lack of privacy and poor hygiene practices. Poor

quality housing appears to increase psychological distress. Many slum areas in the cities suffer from ill effects of ghetto life. Spreading of communicable disease or respiratory illness is also common in crowded areas. f

Crowding leads to invasion of personal space that elevates physiological stress example crowding elevates skin conductance, blood pressure and stress hormones (Evans 2001). Overcrowding may lead to negative affect, tension, anxiety and nonverbal signs of nervousness, such as fidgeting or playing with objects repetitively (Evan & Cohen 1987). Increasing population density also leads to higher irritability, restlessness, social withdrawal and higher aggressive tendencies. All these factors increase the risk for poor mental health.

Noise and health – The noise that humans are living with every day is a growing problem. The worldwide hearing index was created by digital hearing app in data from 50 cities was analyzed. The results showed that Guangzhou, in China had the worst noise pollution followed by Delhi, India. Acc to WHO- 360 million people have worldwide disability hearing loss and 32 million of these are children (Gray. A 2017). Apart from hearing loss other auditory problems, like tinnitus, ear ache, non-auditory disorders like headache, and other psychological manifestations are common among people. Intense, unpredictable and uncontrollable noise can create negative feelings such as irritation and annoyance (Berglund, Lindvall & Schewela 2000). Studies show that chronic noise produces physiological stress levels (Evans 2001, Ising & Kruppa 2007), sleep disturbance, lack of concentration, reduced work efficiency and disturbed peace of mind. It can also result in increased level of aggression and antisocial behavior. Studies also reported that people living in noisy neighborhoods have fewer social interactions, are more aggressive and tends to dislike their neighbors and have higher blood pressure (Tomei et al 2010)

Natural disaster and health problems-The effects of many disasters may be long lasting and can endure for years. These disasters affect the individual victims at all levels physical, cognitive, psychological, behavioral and socio-economic level. Due to unpredictability, sudden loss and helplessness to deal with it, causes a lot of stress to individuals, families and the community. Post-traumatic stress disorder, anxiety, sadness, shock and depression are some of the common responses. Victims of disaster also face cognitive problems like reduced attention span, memory loss, lack of concentration etc. Apart from these, change in behavioral pattern like addiction to alcohol, drugs, disturbed sleep etc. is also seen.

Positive impact

When all the basic criteria for human life like fresh air, clean water, enough food and protected shelter are available both length and quality of life would increase. Thus, focus should be on protecting and increasing the biodiversity, reducing industrial emission and waste and human activities responsible for degrading the environment should be controlled. Thus stable and clean natural environment can help to combat health crisis (cardiovascular disease, respiratory condition), by supporting an active , stress free lifestyle .

Recent studies indicate that connect with nature can promote people's health and well-being. It lowers blood pressure, improves attention and enhance ability to focus on the problem. Viewing nature scenes help to cope with stresses and pain. This is because we are genetically programmed to find trees, plants, water and other natural elements engrossing. A study showed that patients with the view of trees tolerated pain better, had fewer negative effect, and spent less time in a hospital as compared to patient with view of a wall. Nature is associated with positive mood, meaningfulness and vitality.

Apart from the natural environmental, built environment (building design, interior architecture) also affect the human beings. A bulk of studies reported that physical health of a person has been reported to increase with greater contact with nature. Residents with a high percentage of green space in a 1 or 3 km radius around their home reported better mental health and fewer mental complaints in comparison with low percentage of green space around their homes. (De Vries & et all). Public housing who had green space and trees around their building reported knowing more people, having stronger feeling of unity with neighbors, being more concerned with helping and supporting each other and having stronger feeling of belonging than tenants in buildings without trees

conclusion

Human being shares a dynamic relationship with the environment. It is important that environment should not be treated as a commodity to be exploited, rather viewed as a valued possession. Environment is being damaged at alarming rate, therefore immediate corrective measures for its restoration should be taken. To bring about change it is important to change the attitude of the people towards environment. Making them eco-friendly is the need of the hour. It is important to make people aware of the consequences of our everyday actions and change those bad habits. Some eco-friendly behavior that will go a long way in ecological balance should be promoted. Some of them are-stopping the use of plastic bags, planting a seedling, conserve water, using public transport, waste management, saving electricity, constructing environment friendly homes and practice of 3R's (reduce, reuse, recycle).

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