

## Review Article

# Public Health and Environment in Pakistan

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### Abstract

The present review paper highlights the situation of public health and environment in Pakistan. In country different environmental related problems are responsible for the unhealthy life. Major issues in the country are air pollution, water pollution, noise pollution, climate changes, food insecurity and improper sanitation and waste management. Environmental problems are the reason for unsafe/unhealthy public health. For healthy life we need clean, safe, pure, healthy, supportive and better environments. The environment in which we live is a major determinant of our health and wellbeing. We all are dependent on the environment either directly or indirectly, for attaining the basic necessities of life. We needed materials to sustain our life, such as clean air, nutritious food, safe drinking water and safe places to live.

**Keywords:** Public health; Pakistan; Healthy life; Environmental pillar

### 1. Introduction

Environment is the surrounding/circumstances of an organism in which organism lives. We are dependent on environment for healthy life. The environment is connected to public health in both direct and indirect ways. Public health is the art and science that works on protecting and improving the health and life of individuals, families, communities and population. Public Health promotes healthy lifestyles, through organized efforts of society members, organizations, public and private sectors, individuals and communities. Public Health works to improve the life by detecting, preventing and responding to various infectious diseases that are present in the environment. Public health and environment, both are interrelated to each other as it affects our life in a variety of ways (Remoundou & Koundouri, 2009). Environmental health comprises of five pillars on which our life is dependent. These five

pillars are disease control, water, hygiene and sanitation, built environment, occupational health and food safety.

## **2. Situation of Public Health and Environment in Pakistan**

Pakistan is located in south Asia, covering a total land area of 880,000 km<sup>2</sup> (Including AJK& northern areas). Many factors are present in the environment that directly or indirectly influences the life and health of several individuals in a population. These factors include; sanitation, hygiene, food safety, socioeconomic status, literacy, and lifestyle (Ruwaard and Kramers, 1998). Health is directly connected to environmental. In Pakistan several factors are responsible for polluting the environment which in results affecting the public health. Number of diseases occurred in the country due to environmental disturbance. Pollution is a very big issue now a day's countries facing according to the international study, around 92% of all polluted related deaths are in the middle income developing countries like Pakistan, China, India, and Bangladesh [1]. Major issues of the country are air pollution, climate changes, water pollution, noise pollution, improper sanitation and waste management and food insecurity. Air pollution in Pakistan is caused due to vehicles emissions, Industries, brick kilns (19000 brick kilns in Pakistan) and thermal power plants. An estimate shows that every year 135000 deaths occur due to ambient air pollution. Gases that are emitted from different sources are nitrous oxides, carbon monoxide, oxides of sulphur and ozone that are highly dangerous to human health (PEPA and MOE, 2006). High concentration of nitrous oxide is recorded in Lahore, Karachi, Quetta, Peshawar and Islamabad. According to the latest global environment, performance index (EPI) Pakistan is ranked in the list of countries that suffers from poor air quality [1]. Climate change and global warming are the main alarming issues in the country. The Reasons for these environmental issues are carbon emission, deforestation

and population explosion. Pakistan ranked at 7<sup>th</sup> number in the list of the most vulnerable countries that is affected by climate change [2]. According to global climate risk index Pakistan is ranked at 40th (566 casualties, losing US\$47.313), due to weather related loss events. Unavailability of safe drinking water is also one of the main issues. According to IMF international monetary fund report Pakistan ranked at the third number in the list of countries that facing water shortage. In country water is not only less in quantity but also poor in quality that in result, causing several impacts on public health [1]. An estimate shows that 40% deaths and 30% diseases in Pakistan occur due to poor water quality (Daud et al., 2017). One of most annoying problem faced by the residents of Pakistan's major cities like Karachi (Metropolitan area) is noise pollution. Noise pollution in a country reached to critical levels (Samad, 2017). Average noise values are recorded in different regions of the country, in Karachi noise value is 76.5db, whereas in Islamabad is 72.5db and in Peshawar is 86db. According to World Health Organization noise above 70 db is considered as painful and irritating. Food safety is also poor in the country, about 60% of the population is facing food insecurity [3]. Another important problem in a country is improper/poor sanitation and waste disposal. Wastes are dumped openly on roads, streets, and open fields which causes several health effects. All of the waste either hospital, industrial, laboratory or municipal are openly dumped without any proper waste management system. Improper waste disposal is one of the devastating issue in a country that affects the public health. We cannot solve all the problems at once, but we can work together to minimize them.

<b>Environmental problems</b>	<b>Health effects</b>
Air pollution	Heart diseases, stroke, Respiratory problems, eye and skin irritation
Water pollution	Diarrhea, measles, cholera, typhoid
Noise pollution	Psychological effects (stress, irritation, sleep disturbance), increased blood pressure
Climate change	Vector born diseases (Dengue, Malaria, Chikungunya)
Global warming	Heat stroke, hyperthermia
Improper sanitation and waste disposal	Infectious and diarrheal diseases

**Table 1:** Different environmental related problems and their health impacts in country

### 3. Conclusion

Interaction between the public health and the environment is to be focused for maintain the health of public and environment in a country. Annually majority of diseases and deaths occurred in the country due to environment related problems. Several environmental related hazards are responsible for affecting the public health. Public Health and environment are both connected to each other so, for the healthy life we need environment that must be clean and safe. If the environment is clean it directly affects the health status in a positive way. We need proper rules, regulations and guidelines in order to maintain the health of the public and the environment. Organizations either Public, private or governmental should work together for the proper protection, management and maintenance of public health and environment. We have more money but we don't have clean air to breath, we don't have clean water to drink, we don't have clean environment to live. Proper protection, management and maintenance of the environment is not only the responsibility of a single one, it is necessary that all individuals should come together for the safety of health and environment.

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