

Environmental challenges and mental health: A perspective of sustainable development

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Protection of environment has posed not only a major challenge but also a social and moral responsibility in the present society. Environmental threats to any individual's physical & mental health can broadly be divided into "Traditional" hazards, stemming largely from a lack of development, and "modern" hazards, arising essentially from unsustainable patterns of development. Mental health is defined as a "state of wellbeing enabling individuals to realize their abilities, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities (WHO, Book on Mental Health). The Rio Declaration on Environmental and Development states that human beings are at the centre of concerns for sustainable development, and that they are entitled to a healthy and productive life, in harmony with nature. The goals of sustainable development can only be achieved in the absence of a high prevalence of debilitating disease, while obtaining health gains for the whole population requires poverty eradication. There is an urgent need to address the causes of ill health, including environmental causes, and their impact on development, with particular emphasis on women and children, as well as vulnerable groups of society, such as people with disabilities, elderly persons and indigenous people. In developing countries, like India is facing newer hazards associated with chemical contamination of the environment are significant. In developing countries, health and environmental problems are often related to poverty and arise largely as a result of such factors as rapid, uncontrolled urbanization and agricultural and land-use practices. In addition to hazards related to pollution, vector-borne environmental diseases may be prevalent as well as health and environmental problems associated with a lack of proper shelter, water and sanitation or poor food hygiene. The research paper will therefore, elaborate three area of emerging concern about the relationship between environmental hazards and mental health. Firstly, the direct impacts of climate change, urbanization, poverty are likely to impacts on mental health concerns. Secondly emerging understanding of the ways in which climate change as a global environmental threat may create distress and anxiety about the future. Third, we summarize with some reflections on future policy practice & recommendation for mental health promotion & attainment of sustainable development. Journey for sustainable development is continue from seventies & will be continue, if we would be able to achieve the ultimate goal to attain good mental health.

Keywords: mental health, sustainable development, environmental hazards, poverty eradication

Protection of environment has posed not only a major challenge but also a social and moral responsibility in the present society. Environmental threats to any individual's physical & mental health can broadly be divided into "Traditional" hazards stemming largely from a lack of development, and modern hazards, arising essentially from unsustainable patterns of development. Mental health is defined as a state of well being enabling individuals to realize their abilities, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities (WHO, Book on Mental Health). The Rio Declaration on Environmental and Development states that human beings are at the centre of concerns for sustainable development, and that they are entitled to a healthy and productive like, in harmony with nature. The goals of sustainable development can only be achieved in the absence of a high prevalence of debilitating disease, while obtaining health gains for the whole population requires poverty eradication.

While the burden of disease of mental illness has long been recognized. There have been major advances in science and technology and health and medicine, infrastructure has expanded, literacy has increased, education has improved and incomes and opportunities have increased. But problem regarding physical and mental health are also increasing environmental factors are a major contributor to sickness and death throughout the world especially in

the developing countries. So many environmental factors are playing a role in deterioration of mental health among urban population.

Impact Environmental hazards on physical and mental health

Age - old public health hazards such as inadequate and unsafe food and water, microbiological contamination of the environment and poor sanitation and environmental hygiene are still prevalent. New development problems have emerged, some of which appear to threaten the entire eco system. While factors associated with the development process and the changing use of technology have resulted in considerable gains to people throughout the world. They have also presented additional threats to people's health. Many of the "newer" hazards associated with chemical contamination of the environment are as significant for developing countries as they are for industrialized countries.

In industrialized or developing countries, typical health and environmental problems include outdoor air pollution, radon in homes and schools, the "sick building" syndrome, toxic chemicals in drinking water, and non-ionizing, electromagnetic radiation and pesticide residues in food. In developing countries, health and environmental problems are after related to poverty and arise largely as a result of such factors as rapid, uncontrolled urbanization and agricultural and land use practices. In addition to hazards related to pollution, vector-borne environmental diseases may be prevalent as well as health and environmental problems associated with a lack of proper shelter, water and sanitation or poor food hygiene.

Developing countries thus have to deal simultaneously with problems due to a lack of basic services and facilities, with the impact on health of large scale, rapid industrialization urbanization and technological development. Rapid population growth makes it more difficult to solve this load of problems, which outstrips a country's economic development, retards social development and makes excessive demands on services, resources and the capacity of the increasingly fragile environment.

Air pollution : People may be exposed to high levels of air pollution in developing countries where burning of biomass and use of fuels such as coal and Kerosene for cooking and heating still prevails. ARI and other respiratory diseases caused by the use of biomass as cooking fuel in rural areas is the main source of indoor air pollution. Vehicular air pollution & industrialization is a major cause of respiratory distress, in other word, people suffer with psychosomatic disorder in urban areas.

Water pollution : In recent years the problem of arsenic contamination of ground water has further caused large sections of the population to risk exposure due to the absence of alternative safe water supply solutions. Attention needs to be given to improve understanding of the contribution of poor water reforms supply, sanitations and hygiene to the national burden of disease. School health needs strengthening as vital points of intervention for life skills education for sanitation and hygiene and for helminthes control and nutrition.

Climate change : Global warming is occurring that it is largely caused emission of greenhouse gases, mostly responsible for global warming over the past even if emissions are greatly curtailed, the existing accumulation of emissions in the Earth's atmosphere to some warming over the coming century (Few, 2007). The impacts of current global warming are new observable in physical systems such as the rise of sea level, significant reductions in the extent and thickness of Artic sea ice, alterations in rainfall pattern (Blashki et al., 2008).

Effect of climate change on physical health has focused largely

- Death and injury from extreme weather events ;
- Impacts of increased temperatures and heat waves ;
- Spread of vector-borne disease ;
- Air quality and respiratory illness ; and
- Changes in food and water quality and availability
- *Arsenicosis* : Arsenic contamination of ground water is directly affecting the health of some 30-35 million people in India, through ingestion of arsenic cont-aminated tube well water.
- People living in flood prone areas and urban slums, the poor disabled persons and the elderly, children and adolescents are affected proportionally more by poor environment and infrastructure.

Urbanization : Urbanization is a major contributor of environmental health hazards unbridled urban growth and proliferating slums are leading to serious risks to well being and health of the urban population.

Industrialization : Casual labour, industrial and agricultural workers work long hours in exhausting and after dangerous conditions. Occupational health risks in particular in the non-formal sector need attention. Risks related to the use of chemicals and radiation sources in industry and society at large should be reduced through proper licensing, training and public information.

Poverty : Poverty remains the number one killer, with the poor bearing a disproportionate share of the global burden of ill health. The poor live in unsafe and overcrowded housing, often in under served rural areas or peri urban slums which lack access to safe water to sewerage. They are more likely to consume insufficient food or food of poor quality. Even in rich countries, the poor suffer worse health than do the better-off. Poor children are particularly affected - one in five children dies before his or her first birthday, mostly from environment - related diseases such as acute respiratory infections, diarrhea and malaria. Populations were unanimous that the ongoing drought was a major source of pressure for rural landholders and their families.

The length of the drought, that's become an economic problem for a lot of people. "Economic factors create a feeling of hopelessness among this population. Anxiety, depression, suicide or suicidal thoughts were all mental health themes commonly raised by all focus groups. All groups felt that mental health issues were increasing in prevalence.

Some of the major factors that affects health in the twenty first century.

Table 1: Factors affecting health in the twenty - first century.

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- Wide spread absolute and relative poverty.
 - Demographic changes: ageing and the growth of cities.
 - Epidemiological changes: Continuing high incidence of infections disease, increasing incidence of non communicable diseases, injuries and violence.
 - Global environmental threats to human survival.
 - New technologies: Information and tele medicine services.
 - Advance in biotechnology
 - Partnerships for health between the private and public sectors and civil society.
 - Globalization of trade, travel and spread of values and ideas.
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Source: WHO (1)

While the many hazards present in the environment today may have various effects on human health, the global burden of disease attributable to these hazards cannot be quantified with any degree of confidence.

Mental health and climate change (Environmental hazards)

There is an extensive body of evidence showing the ways in which extreme weather can lead to psychological mental health outcomes associated with loss, disruption and displacement as well as cumulative mental health repeated exposure to natural disasters. Mental health impacts differ according to the type, suddenness and scale of the catastrophe, and the socio-cultural context in which it occurs (Rao,2006).

Acute traumatic stress is the most common normative response post disaster subsiding once conditions of safety and security have been re-established. Some survivors however experience chrome post traumatic stress disorder (PTSD) as well as a range of other stress-related problem complicated grief, depression, anxiety disorders, somatoform disorders and drug and alcohol abuse (Ozer et al.,2003). These changes are directly implicated in some of the symptoms of PTSD such as hyper arousal (see, for example, Van der Kolk, 1996, Yehuda, 2002). Women are more likely than men to develop PTSD following traumatic event (North et al., 1999).

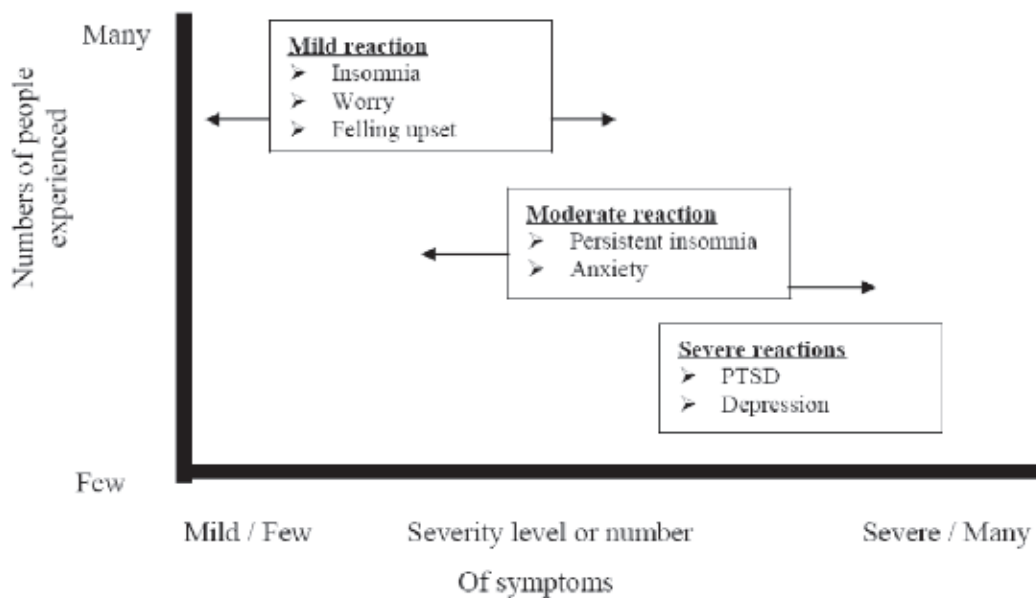


Figure : 1 Severity of psychological reactions experienced by the population following a naturalistic traumatic event.

More recently, interest in mental health interventions post disaster has also included pre-event community preparedness. Significant mental health issues are experienced by members of communities in disaster particularly during disaster seasons where people have to live with ongoing uncertainty, anxiety and disaster has even occurred. These significant background stressors are routinely underestimated or ignorant. There is an urgent need for better understanding of the mental health impact of ongoing climate change individuals and communities living in disaster prone regions.

The negative mental health impacts of forced migration, whether fleeing from violence. Destroyed livelihood, poverty are significant though vary greatly depending on individual circumstances. The loss of conenseses of belonging associated with displacement can also undermine mental health. Irrespective of the precise contribution of the environment to ill physical & mental health in the world; concerted action is needed to reduce the health impacts. Environmental threats to child & women's mental health can broadly be divided into "traditional" hazards stemming largely from a lack of development, and modern hazards, arising essentially from unsustainable patterns of development. The quality of the environment and the care a child receives from parents and family members exerts a powerful influence on his or her physical and mental development processes. Recommendation for mental health promotion & attainment of sustainable development is now defined as the process of enlarging people's choice and freedoms so that they may lead a long, healthy and secure life, acquire knowledge, and have equal access to the resources, needed for a decent standard of living without compromising the prospects of future generations (UNDP, 1998). The key dimensions of development include:

Empowerment: embodied as choices, freedoms, participation in decisions, dignity, respect, cooperation and the sense of belonging to a wider community.

Equity: seen as equal opportunity in access to natural and social and economic resources.

Sustainability: defined as meeting present needs without compromising those of future generations.

Security: Encompassing freedom from violence, discrimination,

unemployment and disease.

By sensitizing the young minds to environmental problems : natural and man made, education and communication can assist, in keeping the demands within environmentally sustained limits and thus improve the quality of life for all. Human health in its broadest sense of physical, mental and spiritual well being is to a great extent dependent on the access of the citizen to a healthy environment. For a physically and mentally healthy, productive and fulfilling life every individual should have the physical and economic right to a balanced diet, safe drinking water, clean, air, sanitation, environmental hygiene, primary health care and education. Citizens of developing countries continue to be valuable to a double burden of diseases. Traditional diseases such as malaria and cholera, caused by unsafe drinking water and lack of environmental hygiene, have not yet been controlled. In addition, people are now falling prey to modern diseases such as cancer and AIDS, and stress related disorders.

Role of public health services / health intervention

The role of public health services must give preventive health care equal emphasis as curative health care. People should be empowered through education and awareness to participate in managing preventive health care related to environmental sanitation and hygiene. In the long term, hope and morale in the community about climate change is deeply intertwined with mental health promotion. For the community to be less pessimistic about the future requires a realistic understanding of change means and what can be done. At a time when the predictions from our most credible scientists are increasingly grave, those involved in mental health promotion need to pay close attention to the relation hope and action. One interesting attempt in this direction was to create awareness among school children and their teachers. We believe that the school children in rural areas are the eyes and ears of the community. In a study evaluating the effect of the school mental health programmed it was shown that knowledge, attitudes and superstitions about mental health problems significantly improved in a group of school children, their friends and neighbors after implementation of the programmed, compared with a control group (Rehman & et al., 1998). More recently, the work has been extended to the detection

of disabilities by children (Gater et al., 1999). An interesting impact of improved mental health literacy was its effect on general health indicators such as maternal mortality and the immunization of children, which were significantly improved following integration of the mental health awareness campaign within primary health care (Maqsood et al., 2001). Recently, the issue of the role of the World Health Organization in improving mental health literacy in developing countries has been debated (Mubbashar & Saeed, 2000) and directions for developing cost-effective and sustainable mental health programmes have been outlined.

Poverty eradication

Poverty and a degraded environment are closely inter-related, especially where people depend for their livelihoods primarily on the natural resource base of their immediate environment. Restoring natural systems and improving natural resource management practices at the grassroots level are central to a strategy to eliminate poverty. Removal of poverty is therefore a prerequisite for the protection of the environment. At least, poverty, directly have the impact on the mental state of the individual, if we can eradicate the poverty, then we can achieve the mentally & physically healthy person.

Legislation and regulatory reforms

A growing awareness of the links between development, health and the environment is also evident from the recent history of the public health movement. In 1986, with the launch of the Ottawa Charter on Health Promotion (14), the need to develop supportive environments for health was highlighted. In particular, the charter stressed the need to look at the various elements known to improve health as part of an integrated whole and to look outside as well as within the health sector when devising strategies for improving health. This theme was expanded at the Sundsvall conference on Supportive Environments for Health held in Sweden in 1991. The WHO commission on health and the environment was convened in 1990 (16) and provided key input for the subsequent earth summit. The central relevance of human factor to the concept of sustainable development was stressed in the preamble to the Rio Declaration, as follows: "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature." (11). Chapter 6 of Agenda 21 takes this principle further by emphasizing the fundamental commitment within sustainable development of "protecting and promoting human health."

Public education and communication

Different NGO will provide education and training on children women's rights and environmental health, designing a curriculum on environmental education. Communication application in promoting environmental rights among children should be promoted and a variety of media could be used in making the program truly effective and enriching for the children. Most importantly, greening the young minds of children through promoting digital opportunities to have access to on line communication and information on environmental issues and threats affecting their lives. In this way, they can improve their mental and physical health.

Emergency preparedness and response (EHA)

Progress has been made in EPR in the last few years, in particular through the publication of guidelines, protocols and standard

operating procedures on best public health practice in humanitarian emergencies. Further orientation and institutional capacity building of the health sector for emergency preparedness, health risk assessment, vulnerability reduction as well as disaster mitigation are critical to ensure that the adverse health consequences of frequent emergencies and disasters that are prevalent in the country do not offset the long-term health development gains in the country and that public health risks of natural as well as other human induced disasters are substantially reduced.

Future outcome

The strong relationship between health and the state of the environment in developing countries is becoming increasingly evident. This call for greater emphasis on preventive and social medicine, and on research in both occupational health and epidemiology. Because of the close link, there need to be greater integration between the ministries of Health and Environment, and effective coordination and cooperation between these. Basic health and educational facilities in developing countries need to be strengthened. The role of public health services must give preventive health care equal emphasis as curative health care. People should be empowered through education and awareness to participate in managing preventive health care related to environmental sanitation and hygiene Mainstream education must now be realigned to promote awareness, attitudes, cancerous and skills that will lead to sustainable development. Population control through greater attention to socio-economic issues such as child physical & mental health and survival, illiteracy, empowerment of women and increased participation by men in Planned Parenthood, gives it greater breadth and depth, thereby holding forth better promise of achieving its long term objective of a stable population by mid century. Access to good quality green space - in rural areas and in urban parks, gardens and public spaces - has a positive effect on the physical health and mental well being of adults and children, and may lead to shorter recovery times from illness. With this research paper we are hoping to draw the attention on mental health of individual which are affected due to environmental hazards, this is big challenge for society, health care is no longer found by geographical structure. It is an International discourse requiring international solution which are very necessary for sustainable.

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