

ENVIRONMENT AND OVERPOPULATION: THE HEALTH AND SOCIAL IMPLICATIONS

BY

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Abstract

This paper attempted to highlight the health and social implications of overpopulation in the environment. Some of the health and social problems associated with an overpopulated environment include air pollution, (with resultant respiratory diseases such as bronchitis), overcrowding, food and water shortages, unemployment, thuggery and so on. Recommendations made among others include more sensitization or health education of the people on the need to check overpopulation by embracing family planning, protecting the environment from danger and individuals protecting themselves too from the environmental dangers such as air pollution.

Key words – *Environment, overpopulation, air pollution.*

Introduction

The term environment implies all the external factors – living and non-living, material and non-material which surround man. In its modern concept, environment includes not only the water, air and soil that form our environment but also the social and economic condition under which we live (Park, 2013). Akinsola (1993) in his own view, opined that the environment is the collective term used to describe all the living and non-living things that make up our

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surroundings. Environment is a very important element in human, animal and plant health hence a healthy environment is crucial in the general well-being of an individual community and the general society.

According to Greenberg and Gold (1994), the environment provides certain materials and conditions that are essential for the healthy existence of living things. Among these essentials are clean water, air, adequate and safe food and living space. Unfortunately, nowadays, it is clearly evident that many people are struggling to get these essentials as a result of population growth. Human population is growing rapidly, day in day out. This has resulted partly from improved health care delivery systems, increase in life expectancy and so the number of people living on earth has increased and continues to increase. Such a rapidly growing human population places a burden on the natural resources in many regions. More people are consuming and competing for resources than ever before, magnifying the effect of humans on the environment (Institute

for Population Studies, 2010).

When the population of a region becomes too large to be supported by the available resources, overpopulation has occurred. According to the Environmental Protection Agency as cited by United Nations for Population Activities (UNFPA) (2008), overpopulation exists when an environment's carrying capacity has been exceeded. UNFPA (2008) pointed out that the three areas in which the environment suffers the most as a result of overpopulation are related to water, land and air. However, other areas which can be affected by overpopulation include food, housing, job opportunities, energy, health care delivery systems and education. Against this backdrop, this paper examined the health and social implications of overpopulation in the environment with a focus on issues raised above.

Overpopulation and Water Shortages

The amount of water that people in a country use depends not only on needs and availability but also on the level

of economic development and extent of urbanization. According to Briggs (2000), urbanization increases water use and coupled with this is the tremendous pressure on antiquated, inadequate water supply systems because of rapidly increasing urban population. Many people lack access to sufficient water for consumption, agriculture and sanitation because of high increase in population growth. In some places, many families still do their laundry, bathes and even drink from some rivers already polluted by their own activities, pollutants from factories or by some other human activities such as defaecation.

The resultant effects of water shortages and pollution according to Park (2013) include diseases such as trachoma, amoebiasis, cholera, schistosomiasis, viral hepatitis, bacillary dysentery, typhoid and paratyphoid fever. As a result of insufficient water available for consumption and domestic use, women and children especially suffer the pain to go and fetch water from wherever it is available. This of course affects the time they could possibly

have as leisure hours or result in lateness or even absenteeism of children in schools.

Overpopulation and Food Shortages

Growth in population places great amounts on food production (UNFPA, 2008). Overpopulation results in poverty and starvation when food production cannot keep up with population growth. When these happen, the results are hunger and starvation which invariably lead to nutritional disorders with the most vulnerable being children who may suffer from kwashiorkor, marasmus and other complications arising from such conditions. Overpopulation brings about poverty on the people and poverty can be the cause of sedition and evil (Institute for Population Studies, 2010).

Overpopulation and Land

With overpopulation, moreland is needed for more food production more industries and other agricultural processes. According to UNFPA (2008) changes in population size, rate of growth and distribution have a far reaching impact on the environment

and on development prospects and the key ingredient in food production is land. Also Population Institute (2008), asserted that as moreland is cleared to be cultivated to support the population, more damage is done to the environment. Soil erosion is an inevitable problem as clearing vegetation allows for rainwater to carry the soil and its nutrients away. The latter author stated further that additionally, a demand in food production decreases the fallow period of an area. Since the area must be farmed frequently, the vegetation does not have opportunity to grow and deposit more nutrients into the soil. In the end, this more intense form of agriculture increases the rates of soil degradation. When nutrient poor soil exists, it creates the need for fertilizers and in many developing countries, this fertilizer is found in animal dung. In many developing countries, animals are not adequately cared for and so there could be easy transmission of diseases from dungs to the farmers. Chemical fertilizers on the other hand can cause groundwater contamination which according to Sustainable Baby Steps (2013) has

been linked to gastric cancer, goitre and hypertension. However the collection and deposit of fertilizers means that more time and labour must be put into agricultural process. This puts financial stress on the farmers as they either need to employ more labourers or work longer days to cultivate a crop (Population Institute, 2008). In the end, overpopulation creates stress on the environment in terms of degradation and impacts negatively on the farmers.

The unplanned rapid growth of cities caused by migrants from rural areas is creating intense pressure on land acquisition (UNFPA,2008). From experience, some villages have merged into the cities and are now assuming urban dimension competing for land. Consequently there are issues or problems with land boundaries, disputes between individuals, communities versus communities and even among nations. This sometimes leads to communal clashes, violence and fighting in which people are either injured, maimed oreven killed. Worse still, the stresses of overpopulation and conflicts over land has resulted

even in wars among communities and nations. During conflicts and wars, many properties are damaged and many lives are lost, many people are displaced and many communicable diseases spread quickly among the people, resulting in outbreaks of diseases. All of these give a minus to the economy.

Forests are also resources being strained by the rapid growing population. Trees are felled indiscriminately by the people, more logging companies are springing up and more trees are felled frequently; all these activities lead to depletion or degradation of the forests with consequent erosion and flooding which can promote spread of communicable diseases, loss of shelters, extinction of wild animals and so on.

Overpopulation and Housing

With overpopulation, housing is a problem. There is a significant rise in cost of housing, overcrowding, development of urban slums and shanty towns without adequate shelter and basic services including clean water

and sanitations. Briggs (2000) observed that in many parts of the developing world, including Nigeria, the physical structure is insufficiently large for the number of persons per household. In Rivers state for example according to the same author, inadequate housing for the population (especially in Port Harcourt) has resulted in overcrowding in make-shift shanty tenements at the periphery of the city – the so-called “water house settlements”. These can culminate in easy spread of communicable diseases such as scabies and water borne diseases. Khan (2010) asserted that the health problems in urban slums are: increased prostitution and venereal diseases, increased alcohol and drug dependence, prevalence of malnutrition, unlimited proliferation and congestion, diseases transmitted by oro-faecal route, skin infections like scabies, ringworm, impetigo and leprosy, increased crime and violence, arthropod and rat menace and secondary infestations and infections, higher incidence of respiratory infections like common cold, tuberculosis, influenza, diphtheria, bronchitis, measles, whooping cough and etc.

Storey buildings and skyscrapers are built in some instances because of shortages of landspace. These block views, light and even air with resultant air pollution and all the ills that accrue from inadequate ventilation and illumination of the environment (Institute for Population Studies, 2010).

Overpopulation and Shortages of Outdoor Spaces

Apart from the problem of inadequate housing, shortage of outdoor spaces poses significant problems, difficulties and stresses for the citizenry (Institute for Population Studies, 2010). In densely populated areas, many market places and shopping areas are overcrowded and congested to the extent that a lot of hoodlums capitalize on this, cause mayhem and perpetrate all manner of evils. The victims of such hoodlums are thereby put in difficult situations of losing their belongings and freedom. These experiences are of course not palatable and can affect their health in the long run.

Lack of inadequate parking spaces and

traffic jams are inescapable consequences of overpopulation; too many people are buying too many cars, buses, trucks, tricycles etc; this situation is further exacerbated by bad roads resulting from heavy traffic on the roads day in day out. With all these, commuters pass through hectic times before getting to their various destinations. This is quite stressful and affects their health status and general well being.

Overpopulation, Education and Job Opportunities

Many individuals who would have wished to attend certain institutions are not able to do so in spite of the fact that they possess the requisite qualifications. Similarly, job opportunities are not adequate for the teeming population of qualified individuals for certain jobs. As a result of mass unemployment rate, thuggery and toutage thrive daily with all impunity in various communities, motor parks agencies, market places etc. Victims of toutage suffer untold anxiety, intimidation, oppression, violence, torture and extortion in the hands of their "predators". All these

can go a long way to affect the people's health (can result in raised blood pressure or even heart attacks). Sometimes even among those who are already working, there is no room for advancement because there are no vacancies. Some workers become stagnated in a particular position, post or rank for many years even though they work very hard. These are all counter productive. Such workers are not motivated, some feel frustrated and all these can amount to frictions, mental and social instability among individuals and within establishments.

Overpopulation and Health Care Delivery Systems

Experience in the workplace in the hospital reveal that accessing health services is sometimes cumbersome for patients. With increase in population, the health care delivery systems become inadequate. All the health care facilities are overstretched, drugs are inadequate with long queues of patients in hospitals, clinics and health centres. Sometimes when it is necessary to admit patients, beds are not available, therefore sometimes patients have to

lie on mattresses on the floor, patients are sometimes discharged prematurely so as to create bedspaces for new patients. In some instances, the situation is so bad to the extent that even in death, spaces are inadequate to preserve and keep corpses in the mortuary all as a result of overpopulation.

As a result of all these inadequacies in terms of space and infrastructures, attempts made to meet up with all these demands result in more buildings, more schools, more markets, more agencies, more establishments, more settlements and so on. All these result in more encroachment and stress on the environment which inevitably cause more pollution, more problems with shortage of water, energy and so on and with all the associated problems. So it is a vicious circle. Greenberg and Gold(1994) stated that whatever happens to one part of an ecosystem affects other parts. In other words, the parts of an ecosystem are interdependent if one part of an ecosystem is damaged, the environment in the ecosystem could become unhealthy.

Overpopulation and Energy

Institute for Population Studies (2010), affirmed that as population continues to rise, the need for energy also rises. This is evident in Nigeria as a lot of people depend on petroleum products such as fuel and kerosene for generating power to run their automobiles, generating sets, cooking stoves and so on, but today, the prices of these commodities are on the rise as too many people are purchasing them. From time to time, long queues are found in filling stations in a bid to purchase these products. The time and energy people spend or waste in this way is counter productive.

In terms of electricity, many transformers are overloaded and so the carrying capacity is strained because of the high rate of users, therefore people in such areas do not enjoy electricity. Those who use firewood or coal for cooking are not exempted. The unprecedented rise in population accounts for wood shortages giving the fact that trees are felled at random to create room for more farming, more food production, more houses, more industries and so on. The

Institute for Population Studies (2010) pointed out that women especially trek very long distances in search of wood for cooking. This according to the same author is quite tasking and sometimes they could be exposed to hardship and danger.

Overpopulation and Pollution

Following the increased human activities resulting from overpopulation there is also an increase in environmental pollution. Pollution occurs when substances that are harmful to living things contaminate the air, water or soil. According to United Nations Environment programme Collaborating on Energy and Environment (Uccee) (2006), one of the greatest problems that the world is facing today is that of environmental pollution, increasing with every passing year and causing grave and irreparable damage to the earth.

Buraimoh (2000) identified four types of environmental pollution: (i) air pollution (ii) water pollution (iii) solid waste disposal (iv) noise pollution. Air pollution is caused by the injurious

smoke emitted by cars, buses, trucks, trains and factories namely sulphur dioxide, carbonmonoxide and nitrogen oxides. Even smoke from burning leaves and cigarette are harmful to the environment causing a lot of damage to man and the atmosphere. Buraimoh (2000) noted that these affect man's health in various ways, high level of noise pollution above 85 decibels (db) can cause partial or permanent hearing loss pain, mental and emotional illness.

Also Insel and Roth (2004) affirmed that the potential health effects of loud or persistent noise in the environment include hearing loss and stress. Rahim (2008) corroborated this by stating that the health hazards of noise exposure can be simple auditory fatigue, temporary or permanent hearing loss, tinnitus (ringing noise) etc. Air pollution affects mostly the respiratory system through inhalation which leads to serious lung or pulmonary diseases such as pneumonia. Also the consumption of polluted water can cause epidemics such as cholera, diarrhoea and vomiting. Buraimoh (2000) also

pointed out that improper disposal of solid wastes can cause infection and render the environment unproductive and is capable of breeding vectors such as insects, rodents, pests and bacteria that can cause disease outbreaks in densely populated communities.

According to Uccee (2006), evidence of increasing air pollution is seen in lung cancer, asthma, allergies and various breathing problems such as bronchitis, along with severe and irreparable damage to flora and fauna. Chlorofluorocarbons (CFCs) released from refrigerators, air-conditioners, deodorants and insect repellents cause severe damage to the environment. This gas has slowly damaged the atmosphere and depleted the ozone layer leading to global warming which can be a precursor to the development of skin cancer as a result of being exposed to ultraviolet rays. Khan (2010), affirmed that ozone depletion can increase the amount of ultraviolet radiation reaching the earth where it damages crops and plants, it can also lead to increased incidence of cataracts. Increased ultraviolet radiation reaching the earth results in

global warming and consequent climate change. Population Institute (2008) indicated that two of the primary elements that drive global climate change are increases in population and patterns of consumption and that human activity is mostly to blame. According to World Health Organization (WHO) (2014), air pollution is a major environmental risk to health; by reducing air pollution levels, countries can reduce the burden of diseases from stroke, heart disease, lung cancer and both chronic and acute respiratory diseases including asthma.

Park (2013) posited that the social and economic effects of air pollution among others include damage of plant and animal life corrosion of metals, damage to buildings, cost of cleaning, maintenance and repairs and constitutes aesthetic nuisance. Greenberg and Gold (1994) opined that overpopulation and modern technology are creating land pollution and that an even greater land pollution problem is the accumulation of wastes that are produced and discarded by humans. The most common ways

people adopt in dealing with wastes is to dump the wastes as far as possible (open dumps) and these create breeding grounds for disease carrying insects and rodents. Today, as a result of overpopulation, with the enormity of the wastes being generated, finding a place to even dump the wastes is generating problems. Some wastes are burnt in incinerators; although this method reduces the amount of the solid waste but may pollute the air. Unfortunately these methods take up land that could be used for other economic purposes and none of the methods is actually completely safe for human and environmental health (Greenberg & Gold, 1994).

With rapid population growth accompanied by urbanization and infrastructural development, humans in their increasing number continue to generate more wastes, industries, factories and other different working environments spring up. These eventually lead to water pollution caused by large scale disposal of garbage and other household waste, industrial waste products released into lakes, rivers and other water bodies

which make marine life no longer hospitable. This affects people such as fishermen who earn their means of livelihood from the waters negatively.

Summary/Conclusion

The world's population is increasing rapidly, especially in the developing world. Overpopulation is causing numerous problems for humans and the environment. These problems include shortages of resources such as water, food, energy, environmental pollution and consequent associated health and social problems in communities, societies and globally. UNFPA (2008) declared that changes in population size, rate of growth and distribution have a far reaching impact on the environment and on development prospects. This threatens sustainable development and produces further deterioration in living standards and quality of life. Food and water security are becoming increasingly critical issues in many developing countries especially where poverty and environmental degradation are endemic. People remain undernourished due to poverty, political instability, economic

inefficiency and social inequity. The impact of personal and collective changes made by concerned individuals will help in checking the problems associated with overpopulation in the environment.

In conclusion, it is important that all and sundry should take the issue of overpopulation as crucial and work towards reducing some of the contributing factors to overpopulation and degradation of the environment.

Recommendations

With the vast array of problems associated with overpopulation in the environment the following are recommended:

1. All hands should be on deck; individuals should strive to protect themselves from environmental dangers and also protect the environment from the dangers human create to the environment.
2. People should be more sensitized or health educated on the need to constantly protect themselves and their environments by embracing family planning to check the ever

growing population.

3. Reduce exposure to indoor and outdoor air pollution.
4. Avoid too much exposure to loud noise.
5. Drink clean water.
6. Reduce pollution of the environment.
7. Embark on planting and growing trees to forestall erosion and flooding etc.

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