Community health, water supply and sanitation

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Abstract

Ethiopia is a developing country with a predominantly rural population. The health status of the people is very low compared with other low-income countries (largely attributable to potentially preventable infectious diseases and nutritional deficiencies) and a high rate of population growth. Widespread poverty along with general low income level of the vast majority of the population, low education levels, inadequate access to clean water and sanitation facilities and poor access to health services have also contributed to the burden of ill-health.The level of water supply and sanitation development coverage in rural and urban areas of the country continues to be low. According to official estimates, only 32% of the people have access to safe water supply. The sanitary situation is considered even worse, with only 17% having access to adequate latrines. The figure for waste disposal is still worse.

Community health

Any social service rendered in a given country is a direct reflection of the socio-economic system of that country. The health service that the Ethiopian people received has proved this truth.Ethiopia is a country sadly affected by frequent outbreaks of disease, drought, famines and conflicts and continues to suffer from its age-old challenges of infectious diseases, malnutrition and illiteracy.The health status of the people is very low accompanied with the high rate of population growth. An estimated 60 to 80% of the health problems are due to infectious and communicable diseases and nutritional problems. The health system is under-developed and able to provide health care to only about half of the population. Much of the rural population has no access to health care, leading to inability of the health care delivery system to effectively respond to the needs of the people.

The country remains one of the poorest nations in the world. As a result, life expectancy at birth is the lowest (54 years), and infant and under-five mortality rates are among the highest in the world (97/1000 live births and 140/1000 live births, respectively). The total fertility rate stands at 5.9 children per woman while the crude birth rate is 40%.

Acute respiratory infection, malaria, nutritional deficiency, diarrhoea and Human immuno-deficiency virus/Acquired immuno-deficiency syndrome (HIV/AIDS) account for the large share of the disease. HIV/AIDS has emerged as a major problem of public health posing a serious threat to the nation.

The health service coverage compounded by poor quality of services is very low (51.24%). Antenatal care coverage is estimated at 20.7%, while institutional delivery is about 10%. The number of health care facilities and the ratio of health personnel to population is very low. One hospital serves a population of 594,036 while a health centre covers an estimated population of 171,057. Similarly one medical doctor serves 47,976, one nurse serves 8460, and one health assistant serves 8847 people.

The uneven geographical distribution of health personnel and health facilities at all levels has exacerbated these conditions. Most facilities and health personnel are concentrated in urban centres at the expense of the health needs of most of the population that lives in the rural area.

Environmental health profile

Environmental health services have a long history in Ethiopia. But data on environmental health conditions and the magnitude of environmental health problems are scanty.

However, some studies, reports from various health units and experiences of health professionals indicated the seriousness of the problems. They attribute the problems to the occurrence of 60–80% of the communicable diseases that are prevailing in the country thereby resulting in high mortality and morbidity, especially among infants and children. In other words, about 80% of the diseases in Ethiopia are communicable in nature, which can be easily prevented or controlled by applying simple sanitary measures such as provision of safe and adequate food and water supplies, safe and adequate waste disposal system, vector control and the promotion of personal, family, neighbourhood and community hygiene and sanitation.

Other environmental health problems that Ethiopia faces are those emanating from both under-development and adverse consequences of developments. It is moving to situations of advanced pollution problems before control over the traditional pollution sources is achieved. Complex problems evolving from modern development schemes such as population growth, urbanisation, industrialisation, modernisation of commerce and trade, mechanisation of agriculture, uncontrolled uses of agro-chemicals, mining etc. are emerging. Another case in point is the pollution of water bodies by discharges of wastewater from industries, cesspools, septic tanks and solid wastes etc. Thus, the environmental and ecological problems continue to threaten the health, productivity and quality of life requiring an urgent need for devising comprehensive control measures against environmental pollution.

Water supply and sanitation

The water supply and sanitation situation in Ethiopia is very poor, as most of the population does not have access to safe and adequate water supplies and sanitation facilities. As a result, three-fourth of the health problems in Ethiopia are due to communicable diseases attributable to unsafe/inadequate water supply, and unhygienic/unsanitary waste

management, particularly excreta. Diarrhoeal diseases caused by improper management of water and sanitation is among the major causes of infant and child morbidity and mortality.

Water and sanitation programmes have a direct bearing on the prevalence of diarrhoeal diseases in the population. Projects, which are properly designed and implemented, have the potential of attenuating diarrhoea morbidity by approximately 25% and reducing diarrhoea-caused deaths by 55%. The combination of safe water supply, sanitation facilities and hygienic practices demonstrated a potential in contributing to a remarkable decrease in the prevalence of a child and maternal morbidity and mortality.

Despite the significant water resources available in the country, the status of water supply in the country is poor particularly in the rural areas. It was estimated that only 28.3% of the total population, 75.7% of urban population and approximately 19.9% of the rural population had reasonable access to adequate water supply. Adequate water supply is defined as 20 litres per capita per day made available within a range of one to two kms from the dwelling. Average per capita water consumption varies between 10 and 20 litres per day in some areas. However, in most rural areas of Ethiopia, depending upon seasonality and location of source and availability of water, daily consumption is as low as 3–4 litres per capita per day. Women and children particularly girls have to fetch water, often walking for 3–8 kms from their dwellings.

Lack of sufficient quantities of clean water critically impairs the ability of most rural populations to engage in appropriate personal, food and environmental hygienic practices which would greatly assist in stemming the tide of infectious diseases. The inaccessibility of protected and improved water supplies to about 80% of the rural population and about 24% of the urban dwellers clearly indicates that the health and well-being of the population, in general, and that of women and children, in particular, is at risk from a multitude of water-borne or water-related diseases. Although it is difficult to quantify morbidity and mortality related to unsafe and inadequate water supply because of lack of an effective monitoring and surveillance system and country-wide baseline survey, limited information on disease prevalence reported indicates that water-borne or water-related diseases are among the major causes of sickness and death. Women and children particularly girls as the main water carriers are in frequent contact with contaminated water. They are, therefore, the segment of the population most vulnerable to water-related diseases which, according to the World Health Organization (WHO) estimates, are accountable for 80% of all morbidity in the developing world. Among the major water related diseases is diarrhoea, which alone is accountable for 46% of under -five-child mortality. Therefore, the strongly held opinion of public health experts is that the provision of safe water is a prime importance to public health.

Sanitation, both urban and rural, has been accorded little importance in the promotion of environmental health programme in the country. The sanitation conditions of both urban and rural areas are very poor; the situation in the latter is one of the worst in the world. In the rural areas, the sanitation service is virtually non-existent in most parts of the country. Use of open field for defecation/urination is a common practice for almost all the rural population. National sanitation coverage is estimated to be 10.4%. The urban and rural sanitation coverage is estimated to be 46 and 3.9%, respectively. Even in the capital city, Addis Ababa, 30% of the populations have no sanitary facilities of any form, while 70%

have varying types of sanitation facilities. Only a portion of the city has an underground sewerage system with stabilisation pond treatment device serving only the smallest portion of the population in part of the city centre and some planned housing areas. Nonetheless, the current coverage is less than 1%. In the past, efforts had been made through external support from non-governmental organisations (NGOs) to provide pit latrines of various designs, such as traditional dry pit latrines and VIP latrines to the rural communities in particular in the form of demonstration and/or pilot projects. These efforts ended in failure in most parts of the rural areas once assistance has been withdrawn. Other major reasons include unaffordability of most of the community to replicate the technology; the insufficient provision of pre- and ongoing hygiene education to the beneficiary communities to enable them develop a latrine culture.

Many diarrhoeal diseases such as cholera, typhoid and hepatitis caused by poor sanitation conditions are serious threats to life, particularly childhood diarrhoea, which is a leading cause of morbidity and mortality in children under five years. The high prevalence of intestinal parasites among the population, especially worm burden in children is the direct results of faecal contamination of food and water.

Countrywide, solid waste management facilities coverage is estimated at 2%. Refuse disposal sites in urban areas are often insufficient and unorganised. As a result, in the urban centres including the capital city, solid wastes are not properly stored, collected, transported and disposed of, but accumulated in drains, on open lands thus providing breeding areas for disease vectors. In rural areas, solid waste disposal system of any form is almost non-existent. Indiscriminate disposal of waste-water (liquid waste) in both urban and rural settings is a common practice.

In summary, sanitation, both urban and rural, has never received the emphasis it deserves. It has not been seen as a priority area of concern. Policies on community participation, ownership, management etc. taking into account the special needs of women and children, have not been a focus for sanitation projects and this sustainability of interventions such as sanitary facilities has not been achieved.

In general, the sanitation sector has met with many setbacks in the past due to many varied reasons. A few of these reasons are:

- lack of or low awareness of the communities particularly the rural ones about health implication of sanitation practices; insufficient government commitment to the sector; lack of or insufficient government funding to the sanitation programme
- lack of or inadequate or not clearly defined sector policies, legislation, regulation strategies, guidelines, and standards to promote the sector services, programme and projects
- lack of integration and networking among key sectors such as health, water, education and NGOs
- inadequate or lack of support for research and experimentation on low-cost, affordable and sustainable sanitation technology options
- inadequate technology choice. No appropriate sanitation technologies, which take into account cost, weather, ground water level, availability of water, construction materials, culture/religion and special needs of women and children.

The level of hygiene education and general awareness of the communities concerning safe water and environmental hygiene is very low. Lack of awareness of the health implications of water and sanitation and hygiene practices particularly by the rural population have resulted in high water, sanitation and personal hygiene-induced morbidity and mortality affecting all ages. The low level of consciousness of communities is also responsible for the unsustainability of most of water supply and sanitation schemes developed in the past.

Safe water and adequate sanitation not only are the bases of life and health, but they also are essential contributors to human dignity. Improved sanitation and water supply must be an important goal if improved health and sustainable development in Ethiopia is to be ensured.