

Possible, Probable, and Preferred Futures in Promoting Health and Preserving the Environment

Anitha Joseph, B.S.
Suzy Pracht, B.S.
Kirsten Schmeling, B.S.

ABSTRACT

The possible, probable, and preferred futures in promoting health and preserving the environment depend on the actions of today. Human health relies on a clean and safe environment and the environment relies on responsible human behavior. Consequently, promoting education about preserving the environment and maintaining health has monumental importance. Issues affecting the environment and health range from air and water pollution to overcrowding and urbanization. Increasing health literacy, creating global partnerships, setting achievable goals, and working toward a sustainable future will put create the right path for ensuring a promising future.

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Issues Affecting Health Promotion and Environmental Preservation

There are many issues affecting the health of the planet and people who live on it. Nearly seven billion people live on the earth (World Health Organization [WHO], 2010a). With this ever-expanding population, the effects of population growth on the environment and health need to be examined to see what futures lay ahead. Having such a large population creates new problems for the environment and exacerbates old ones; natural resources are being depleted, water and air are being polluted, and forests are being destroyed along with much of the planet's biodiversity. The population's health is also affected; contaminated water and polluted air are increasing the risks of cancers, asthma, respiratory infections, and other diseases, overcrowding creates sanitation problems, and people are living less active lifestyles. These issues will all affect the health of the people and their environment in the future, but what the effect will be, will depend on how the population of the planet decides to respond to the issues.

As the population grows, so does the amount of people living in urban areas. The WHO (2010a) states that for the first time the majority of the population is now living in urban areas. Urbanization can cause many health problems for the people living in these areas. Sanitation is becoming a big problem in cities especially in areas of poverty due to overcrowding. People in poorer areas also lack access to public services, such as safe drinking water and health services (WHO, 2010a). There are many conveniences and opportunities for living in cities, but many unhealthy habits are found as well, such as

poor diets and inactivity. The WHO (2010) reports that the growing number of people in the urban areas have increased faster than the ability of the infrastructure (WHO, 2010a). Another issue that is caused by the growing population and overcrowding of urban areas is the problem of hazardous wastes. Disease has spread through cities in the past due to improper waste disposal, and through rodents and insects spreading disease. Moore (2007a) states that landfills are becoming overburdened which leads to ground water contamination and air being polluted.

Air pollution is another major issue affecting health promotion and environmental preservation. Moore (2007b) reports that the "good" ozone in the stratosphere is decreasing, allowing harmful UV rays into earth's atmosphere and causing health problems such as a higher risk for skin cancer. The decreased ozone also causes environmental problems. Whereas the "good" ozone is being depleted, the "bad" ozone is increasing in the layer of the atmosphere closest to earth's surface, the troposphere. This "bad" ozone is due to the increasing amounts of smog entering into the air that we breathe due to burning of fossil fuels by automobiles and industries (Moore, 2007b). These technologies and the growing population using them are altering the balance of the atmospheric gases and as a result, the ecology of the planet is being threatened. Moore (2007b) also acknowledges that air pollution causes acid rain and this is damaging the leaves of plants, taking nutrients from the soil, and changing the pH of bodies of water. All of these things are causing plants and animals in the forests to suffer (Moore, 2007b). The WHO (2008) reports that for the human population, air pollution is leading to higher rates of childhood asthma,

bronchitis, lung cancer, respiratory infections, and cardiovascular disease. Nearly two million premature deaths a year are due to air pollution (WHO, 2008).

Issues with water are another major concern for the future of the population's health and the environment. Water makes up 71% of the earth's surface, but only 3% of this is fresh water that can be used by people and other animals. The WHO (2010) states that this supply of fresh water is already being stretched to meet the demands of agriculture, industry, and the growing population. There is uncertainty when it comes to the future of water supplies (WHO, 2010). Nearly two billion people do not have access to safe drinking water. Like the air of this planet, the water is also being polluted. Moore (2007c) reports that the pollution comes from the uses of pesticides and fertilizers soaking into ground water, leaks in underground septic and storage tanks, and from landfills and other hazardous waste sites. Such contamination of water is increasing the risk of cancer and other diseases (Moore, 2007c).

Pollution of fresh water is not the only cause of concern. The earth's oceans are being polluted and the ecology of the oceans is being destroyed. According to the World Wildlife Fund [WWF], a majority of the waste that is produced will reach the ocean such as oil, fertilizers, solid products, and chemicals (WWF, 2010). Oceans produce 70% of the oxygen that we breathe and have a much larger range of diversity of plants and animals than land does, but with the pollution in the oceans, the biodiversity and oxygen producing phytoplankton are being destroyed (WWF, 2010). The British Petroleum (BP) oil spill in the Gulf of Mexico in April 2010 is increased the amount of ocean water pollution and destruction.

Human activities are upsetting the balance of atmospheric gases through air, water, and land pollutants. The combustion of fossil fuels, burning of forests, and destruction of phytoplankton are increasing the amounts of carbon dioxide in the atmosphere (Moore, 2007b). This shift in carbon dioxide leads to heat from the sun being "trapped" in the atmosphere, thereby causing the earth to warm annually on average .5 C or 1 F (Moore, 2007b). Climate change is one other major issue that is going to affect health and the environment. The WHO (2005) reports that with temperatures increasing so does the number of deaths due to cardiovascular and respiratory disease, and the amount of allergens in the air causing more cases of asthma. As the climate changes there has been an increase in natural disasters, droughts in some areas, and floods in other areas. Climate change, along with these disasters, affects the spread of disease by increasing the length of certain seasonal variations of air, water and vector-borne diseases (WHO, 2005).

Sustainability for Humanity and the Environment

Many countries around the world are confronting a vast array of health challenges, not just limited to environmental factors. International health care systems (strong and weak) must strengthen their prevention and sustainability strategies, to help prevent and control the current issues and face new challenges. Good health has been viewed as one of the most important assets known to mankind (Martins & Huynen, 2003). A pertinent question is, if health is such an important asset to humanity, why has so little been done to preserve and sustain the global health systems and ecosystems in which we live? Governments alone cannot ensure the future of health for our communities and our environment. It will take much more. Organizational partnership, international collaborations, political movements, and individual support from all, will be needed to better the future for our health. What lies ahead for the health of humanity?

Anyone can make a difference in the sustainability of health and the environment, by understanding and applying proper skills. WHO defines health literacy as the cognitive and social skills that determine the motivation and ability of individuals to gain access to health and to; understand and use information in ways that promote and maintain good health (WHO, 2010). Health literacy is more than the ability to read a medical brochure, take the proper medications, or talk with a healthcare provider. It is the ability to access the proper information and be effective in applying the information to better the health for an individual and the community in which they live.

There are an estimated 876 million illiterate adults in the world, approximately 25% of the world's population. Women and young girls make up the majority of this statistic (Kickbusch, 2001). Approximately 90% of global resources for health go toward helping developed countries (WHO, 2010). Healthy literacy plays an enormous role in a country's economic status. Individuals who do not have access to education are at high risk for being health illiterate. Unfortunately, for those individuals, they will have issues making proper health decisions, not only for themselves, but also for their families.

Health systems spend billions of dollars on medical payments because individuals with low health literacy do not understand proper care for themselves; let alone how to access the health resources to better their situations. The National Academy on the Aging Society, estimated that in the United States alone, additional health care costs were \$73 billion due to low health literacy rate (National Network of Libraries of Medicine, 2010). This figure only accounts for the U.S. population, which has one

of the best educational and health care systems in the world. Some of the poorest countries in the world, such as India, Nigeria, and Thailand, which have little access to good education and health care, would benefit enormously and preserve considerable financial resources if they had access to the proper resources. It is imperative that health literacy rates increase around the world. Such a colossal task will take years and billions of dollars in resources to increase just a portion of the world's population.

The future of human existence relies heavily on the ability of people to work together and create sustainable resources. The U.S. Environmental Protection Agency [EPA] defines sustainability as, "the calls for policies and strategies that meet society's present needs without compromising the ability of future generations to meet their own needs" (U.S. Environmental Protection Agency, 2010). Health care systems must design more enhanced policies to improve the overall quality of life for humanity and for the environment, in such a way that younger generations will not be affected negatively by serious crisis. Over the last decade many advances have been made toward making the earth's resources more sustainable for our future, however there is still much to be done. Accumulation of the proper knowledge toward cost effective medical and environmental treatments and technologies must be a vital role in any and all health care systems. Creating, maintaining, and increasing partnerships between worldwide health care systems and organizations must transpire to ensure the highest level of global sustainability. Individuals at federal, state, and local levels must work together to make communities efficient for all. World resource sustainability cannot happen unless population's world-wide can communicate and work together effectively. This is not a task that will be easy to ensure.

Past and Future Goals

Luckily, globalization has afforded the world an opportunity to bring people together and open lines of communication unlike never before. Such an opportunity came into fruition on November 21, 1986 in Ottawa, Canada. The first international conference on health promotion brought world leaders together to discuss the future of health and develop a call for action. Thus, a charter was created, the Ottawa Charter for Health Promotion, to achieve health for all by the year 2000 and beyond (WHO, 1986). According to the Ottawa Charter, health promotion is defined as "the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify

and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living" (WHO, 2009). From such a statement one can deduce that good health is a necessity, not a luxury, and therefore must be viewed as so by all people, especially those in power. To achieve health for all, certain prerequisites must be met including peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice, and equity (WHO, 2009).

Everyday people are struggling all over the world to attain such basic resources. The burden varies depending on where one lives in the world but the constant that we all share is the need for support from our peers. We must come together to support, enable, and mediate for those in need. The Ottawa Charter for Health Promotion outlines a number of health promotion actions that provide the basic framework for making achievable health a reality. Building healthy public policy is as important today as it was back in 1986 when the charter was first created. Policymakers have the power to make our everyday environments cleaner, safer, and more conducive to good health. At the same time they have the power to do the opposite. So we must push policymakers into promoting good health for all and point out the consequences when they do not do so. For example, the current national health crisis of childhood obesity can be thwarted if our policymakers address improved nutrition in schools, an emphasis on physical activity and health education. If policymakers fail to take any actions toward change, this crisis will continue to grow.

In addition to policymaking, creating supportive environments and protecting our natural and built environments must become a priority. We must take responsibility for man-made disasters and seek innovative ways in which such catastrophes can be avoided. The BP oil spill in April 2010 is one example of a man-made disaster that will have dire future consequences to our natural environment. In addition to our natural environment, the disaster will certainly have an impact on people who depend on the sea for their livelihood. In the event of such a calamity, a significant amount of money from the damage claims that BP has agreed to should go into strengthening the affected community. Bringing the community together as one and "setting priorities, making decisions, planning strategies and implementing them to achieve better health" (WHO, 2009) should be a focus of not just our government but for all governments whose people have obstacles to achieving and maintaining good health, whether it be in the wake of a disaster or just due to everyday

barriers such as low SES and gender inequality, among many others.

Furthermore, we must advocate developing personal health promotion skills and reorient health services toward preventive care and not just curative and palliative care. A brighter future awaits those who maintain their health and work toward avoiding preventable diseases and infections. Investing in one's health is the smartest choice anyone can make and it is important for public health workers to market that idea in innovative and novel ways.

It is now 10 years past the Ottawa Charter's goal of achieving health for all, and yet it still remains a vision, and not a reality. In the year 2000, world leaders realized that there was still much work that needed to be done, and once again held an international health conference. In September 2000 world leaders came to New York for an international United Nations Summit. The summit concluded with the development of a set of Millennium Development Goals, which aimed to alleviate poverty, improve human and environmental health, and enrich one's basic quality of life by the year 2015. Many of the Millennium Development Goals aligned with the Ottawa Charter's health promotion action means. The goals included eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality and empowering women, reducing child mortality, improving maternal health, combating HIV/AIDS, malaria and other disease, ensuring environmental sustainability, and developing a global partnership for development (United Nations Development Programme, 2006). The eight goals were comprehensive and broad while still flexible enough to be tailored to specific countries. These goals should still be used today as guidelines in preventing poverty, increasing positive development, and improving health. Because the deadline for the Ottawa charter goals have come and gone, we must use the Millennium Development Goals to further our original mission of preserving the environment and promoting health. Preserving our environment and promoting health may seem to be as daunting a task as any but it is a task we must choose to begin now to protect our future.

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ABOUT THE AUTHORS

Anitha Joseph (ajoseph1@health.usf.edu) is an MPH student in the Department of Community and Family Health, University of South Florida College of Public Health, Tampa, Florida, USA. Suzy Pracht (spracht@siu.edu) is an MPH student in the Department of Health Education and Recreation, Southern Illinois University-Carbondale, Carbondale, Illinois, USA. Kirsten Schmeling (kschmeli@health.usf.edu) is an MPH student in the Department of Community and Family Health, University of South Florida College of Public Health, Tampa, Florida, USA. An earlier version of this paper was presented at the 12th Annual Health Education and Injury Prevention Field Course and Conference, Cologne, Germany, May 2010. Copyright 2010 by *Umwelt und Gesundheit Online* and the Gesellschaft für Umwelt, Gesundheit und Kommunikation.

