

The Influence of Environmental Issues on Health Promotion: A Historical Journey and Contemporary Challenges

Ana Paula Milla dos Santos Senhuk¹; Tatiane Bonametti Veiga²; Angela Maria Magosso Takayanagui³

¹ Professor of the Postgraduate Program in Environmental Science and Technology-PPGCTA, Federal University of Triângulo Mineiro-UFTM, Uberaba - MG, Brazil. Orcid: 0000-0002-6004-5513. E-mail: ana.senhuk@uftm.edu.br

² Professor of the Postgraduate Program in Sanitary and Environmental Engineering-PPGESA, State University of Central-West Paraná-Unicentro, Irati - PR, Brazil. Orcid: 0000-0002-6919-4013. E-mail: tatianeveiga@unicentro.br

³ Senior Professor, Ribeirão Preto School of Nursing/USP, Ribeirão Preto - SP, Brazil. Orcid: 0000-0003-2232-4949. E-mail: ammtakay@errp.usp.br

Five decades after the Stockholm Conference in 1972 and three decades after Eco 92, the relationship between environmental issues and health promotion remains a topic of extreme global relevance. Since then, there have been remarkable advances in understanding the complex links between health and the environment. Science and research have provided solid evidence regarding the adverse effects of air pollution, water and wastewater contamination, poor solid waste management, biodiversity loss and climate change on people's health. These environmental problems can lead to the emergence of respiratory diseases, cardiovascular diseases, cancer, neurological disorders and a number of other health conditions.

In recent decades, many scientific advances have been made in this area, however, despite these advances and also the increased awareness by a part of society, many setbacks can be observed, and challenges persist. Pollution continues to affect the quality of the air we breathe in many regions of the world. The degradation of ecosystems, including forests, rivers and oceans, compromises the availability of food, drinking water and natural resources essential for the health and well-being of the population. In addition, climate change poses a growing threat, with increasingly evident impacts on public health, such as more intense heat waves, extreme weather events and the spread of vector-borne diseases. In the face of these challenges, it is critical to adopt integrated and sustainable approaches that promote human health and well-being while protecting and preserving the environment. This requires coordinated action at local, national and global levels, involving governments, the private sector, civil society and individuals. It is necessary to strengthen environmental health surveillance systems, ensure universal basic sanitation and promote environmental education actions to raise awareness about the importance of health and the environment.

Since 1946, new components have been incorporated into the classic World Health Organization (WHO) definition of health as a state of complete physical, mental and social well-being, and not merely the absence of disease, broadening the understanding of the influence of various factors and living conditions on people's health, such as the so-called social and environmental determinants of health.

Today, the process involving a healthy life and the transition to the worsening and development of disease is known as the 'health-disease process'. Today, the process involving a healthy life and the transition to the worsening and development of disease is known as the "health-disease process". This process is complex and influenced by a variety of factors, in which environmental conditions play an increasingly important role. At that time, the writings of the Hippocratic School already identified the relationship between endemic

and epidemic diseases and the location of cases, which led to hypotheses about the influence of the environment on the health of populations.

At that time, the writings of the Hippocratic School already identified the relationship between endemic and epidemic diseases and the location of cases, which led to hypotheses about the influence of the environment on the health of populations. The execution of such works raised questions about the effects of human actions on the environment. In this context, the relationship between health and environment became more evident throughout history, as environmental actions reflected in the better health conditions experienced by the population. In this context, the relationship between health and environment became more evident throughout history, as environmental actions reflected in the better health conditions experienced by the population.

In both Classical Greece and the Middle Ages, human impact on the environment was evident due to hydraulic works in Egypt and the growth of Roman cities. The execution of such works raised questions about the effects of human actions on the environment.

In this context, the relationship between health and environment became more evident throughout history, as environmental actions reflected in the better health conditions experienced by the population. This can still be observed today in historical works of sanitary engineering, such as Roman bathhouses and aqueducts.

The concern with environmental conditions has been gaining ground throughout history and was already present since antiquity in public health discourses and practices, which sought to find answers to the health conditions of populations. Several authors mention this correlation, such as Rosen (1994), who addresses the history of public health from ancient civilizations to the mid-twentieth century, already incorporating technological innovations.

Historically, until the 19th century, miasmatic theory predominated, requiring sanitary practices to focus on reducing or eliminating diseases caused by the environment. Diseases were believed to originate from infectious odors and fumes coming from the soil and dirt of cities. Therefore, the environmental influence on health was increasingly recognized in the causes of diseases and associated with inadequate sanitation conditions, especially in large urban centers, although at times it was emphasized and at others denied.

Hygiene was introduced as a sanitary strategy to control these diseases, with surveillance, control of urban spaces and monitoring of population groups, constituting the hygienist movement, which considered the environment as an object that could be sanitized. At the same time, the idea of sanitizing or making regions or places inhabited by the poorest or sickest healthier was instituted through regulations and standardizations. With this movement, the environment continued to be associated with the state of health and disease of individuals, so that if an environment was sanitized, some infectious diseases could be controlled.

Sanitarian movements were inspired by the work of Hippocrates and his followers who viewed the environment as the embryo for identifying and solving health problems. From the beginning of the 16th century to the middle of the 18th century, there were political and academic movements that demanded better health conditions for less favored groups, simultaneously discussing and defining the origin of communicable diseases as being caused by microorganisms, within the concepts and knowledge that existed until then.

While the miasmatic theory predominated, the concern with environmental conditions was accentuated between the middle of the 18th and 19th centuries, driven by the intense process of industrialization and urbanization, which brought new challenges to face health problems. The Industrial Revolution was undoubtedly a milestone, causing great influence

on the social structuring of all humanity and, consequently, on public health, with the appearance of several epidemic outbreaks caused by the precarious sanitary conditions to which workers were subjected.

However, the incorporation of actions regarding the environment was only introduced as part of health policies from the 19th century onwards, in England, through reforms in sanitation. This inclusion can be linked to the intensity of the impact of the Industrial Revolution on living and health conditions of the population, considering the pressure initiated by the working class for greater political participation.

The Sanitary Reform, which began in England, was born from the idea that disease caused poverty and entailed expenses for society, aiming to avoid popular revolts and the need to provide healthy workers for industry. One of the great advances from the Sanitary Reform is the obligation to provide water and proper disposal of waste, priority areas of sanitation for vector control, being considered one of the main strategies for the control of diseases related to the precarious sanitary conditions prevailing in the 19th century. The scenario revealed that economic development depended on healthy labor; in this sense, workers needed environmentally healthy conditions to maintain their health.

At the end of the 19th century and beginning of the 20th century, with the creation of the microscope and the understanding that diseases could also occur due to the presence of microorganisms, given the advances in bacteriology with the discovery of organisms that cause various diseases, attention to the relationship between health and the environment has already moved to the background in terms of its insertion in the public policies of the time.

The advances observed in Europe and the United States were related to industrial development, which generated an accumulation of income and allowed public investments in health policies and basic sanitation programs, with attention to the control of infectious diseases. However, health inequalities related to different socioeconomic and cultural levels persisted worldwide. Public investments in health in developed countries led to the prevalence of chronic diseases, unlike in developing countries, where a high rate of infectious diseases persisted.

After the beginning of the Industrial Revolution and the occurrence of several movements on the effects of exposure to new and different sources of health risk, environmental factors occupied, for a considerable period, the backstage of the health-disease process, being overcome by the developmentalist vision and economic-industrial progress in the country. From the beginning to the middle of the 20th century, some groups of researchers began to discuss the concept of health with a broader view, including new agents present in human daily life in the list of risk factors of the health-disease process.

Some global facts and events have made a major contribution to this reflection. From the 1960s onwards, studies on the health-disease process stood out, with a new conformation of the determinants of health, presented by Lalonde (1974), who considered four elements: human biology, environment, lifestyle and organization of health services, as risk factors for maintaining the health of individuals.

In this context, environmental factors began to gain prominence again in the health-disease process, from the mid-twentieth century, emerging a new field of knowledge, referred to as Environmental Health, which began to be incorporated into public and political agendas in different contexts.

Evidence of the strong influence of the environment on health led the WHO to define environmental health as the field of public health that deals with the forms of life, substances,

and conditions around human beings that can exert some influence on their health and the well-being of the population.

In addition, the concern with the expansion of economic development, combined with the predatory use of natural resources and the impact on health, in the twentieth century, resulted in major facts and world conferences, held between the 1970s and 1990s, and organized by the United Nations (UN) and WHO, resulting from an intense movement of researchers and authorities linked to the main international health and environmental bodies, discussing issues related to the environment and health. Among the most important are:

- Stockholm Conference - first World Conference on Man and the Environment, held in Sweden in 1972;
- First International Conference on Primary Health Care, held in Alma-Ata, capital of Kazakhstan, former Soviet Union, in 1978;
- First International Conference on Health Promotion, held in Ottawa, Canada, in 1986;
- Concept of Sustainable Development, presented by Norwegian Prime Minister Gro Harlem Brundtland in the Report "Our Common Future" in 1987;
- IPCC - Intergovernmental Panel on Climate Change, created by UNEP together with the World Meteorological Organization (WMO) in 1988;
- United Nations Conference on Environment and Development (UNCED), also called ECO-92 or Rio-92 Conference, held in Rio de Janeiro in 1992.

In the course of the reported history, there are still many developments resulting from the events mentioned and, among several other international conferences and meetings, four more important moments in which the UN marked global actions of fundamental importance, giving new guidelines to the governments of all nations of the world.

In September 2015, the UN, at the United Nations Summit on Sustainable Development, launched the 2030 Agenda for Sustainable Development, which is an action plan for renewing and expanding global commitments, comprising a set of 17 Sustainable Development Goals (SDGs) and 169 universal targets expected to be fully implemented by 2030.

The SDGs, adopted by government and state leaders from 193 countries, were built with the participation of civil society groups and took into account the outcomes of Rio+20, as well as the legacy of the Millennium Development Goals, composed of eight anti-poverty targets, which the world had committed to achieve by 2015.

The 2030 Agenda for Sustainable Development has expanded the goals and targets to be achieved, starting from the eight MDGs. Directly and indirectly, it has the human relationship with the environment; and this Agenda encompasses an action plan for poverty eradication and planet protection, as well as new themes such as global climate change, economic inequality, innovation, sustainable consumption, and ensuring peace, justice and prosperity, among other priorities, to direct the world to a sustainable path. The 2030 Agenda, with its 17 SDGs, reinforces that for the world to achieve sustainability it is necessary to adopt bold and transformative measures.

It is noteworthy that, in this proposal, the objectives are interconnected, that is, the success of an SDG involves combating issues that are associated with other objectives, constituting a task that requires the adoption of integrated, bold and transformative measures, with a view to leaving "no one behind".

The SDGs are considered an important step forward for the inclusion of the fight against poverty and the promotion of sustainable development in the global political agenda, and their greatest merit is to put the fight against poverty and the urgency of adopting more sustainable development models on the global political agenda, stimulating the participation of various non-governmental actors and society as a whole.

It is observed that, in the main events, documents and commitments assumed, and international Conferences reported here, sustainable development introduced in the 1980s, has been increasingly emphasized, that is, "meeting the needs of the present without compromising the possibility of future generations to meet their own needs".

The evolution of environmental health has been marked by periods of alternation between positive achievements and unsatisfactory results. If, on the one hand, environmental health has become one of the pillars of sustainable development, as it encompasses environmental issues as central axes, on the other hand, unbridled economic and technological development has exposed a large number of people to a series of environmental and social risks, interfering negatively in the health-disease process.

This movement of history, focused on issues related to health and the global environment, has been occurring at the same time that the planet is experiencing a serious environmental crisis, which is increasingly growing, threatening the ecosystems that provide the basis for the development of human and animal life on Earth.

There is no longer any doubt that environmental changes caused by anthropogenic action alter natural environments, causing pollution of the water, air and soil triad, interfering directly or indirectly with human health. In addition, history has revealed a change in the global health picture, due to the increased risk of exposure to contaminants, whether of chemical or biological origin, caused by environmental imbalance, bringing to light emerging and re-emerging communicable diseases, as well as chronic diseases.

Thus, it is already clear that global managers must assume the importance and the need to insert effective actions to achieve environmental goals, translated by the 17 SDGs, in public policy agendas. The development model based on the process of production and consumption of goods, as well as the current human lifestyle, must be urgently rethought, given the threat they have posed to the Planet and all humanity. The impacts on health, arising from the environmental problem, point to the need for a discussion among all nations, since the environmental crisis involves a heterogeneity of factors, whether social, ethical, cultural, political and economic, requiring changes in attitudes of all citizens.

As progress is made around the world, it is vital to remember that human health and the health of the planet are intrinsically intertwined. Caring for the environment means caring for our own health and that of future generations. By taking an integrated approach to health and environment, we can build a healthier, more sustainable and resilient world for all.

Bibliography

LALONDE, M. **A new perspective on the health of Canadians: a working document**. Ottawa: Minister of National Health and Welfare, 1974.

ONU. Organização das Nações Unidas. **Sobre o nosso trabalho para alcançar os Objetivos de Desenvolvimento Sustentável no Brasil**. Available at: <https://brasil.un.org/pt-br/sdgs>. Accessed on: 2023 Jul. 2.

SILVEIRA, A. C.; MACHADO, C. V.; MATTA, G. C. A atenção primária em saúde na agenda da organização panamericana de saúde nos anos 2000. **Trabalho, educação e saúde**, v. 13, n. 1, 2015. DOI: <https://doi.org/10.1590/1981-7746-sip00028>

PAIM, J. S.; ALMEIDA FILHO, F. Saúde coletiva: uma “nova saúde pública” ou campo aberto a novos paradigmas? **Revista Saúde Pública**, v. 32, n. 4, p. 299-316, 1998.

PHILIPPI JÚNIOR, A.; MALHEIROS, T. F. Integrando homem e ambiente. *In*: PHILIPPI JÚNIOR, A. (ed). **Saneamento, saúde e ambiente: fundamentos para um desenvolvimento sustentável**. Barueri: Manole, 2005. p. 3-32.

RIBEIRO, H. Saúde Pública e meio ambiente: evolução do conhecimento e da prática, alguns aspectos éticos. **Saúde e Sociedade**, São Paulo, v. 13, n. 1, p. 70-80, 2004.

ROSEN, G. **Uma história da saúde pública**. 2. ed. São Paulo: Hucitec; Rio de Janeiro: Abrasco, 1994. 400 p.

TAKAYANAGUI, A. M. M. Gerenciamento de resíduos de serviços de saúde. *In*: PHILIPPI JÚNIOR, A. (ed). **Saneamento, saúde e ambiente: fundamentos para um desenvolvimento sustentável**. Barueri, SP: Manole, 2005. p. 324-374.

VILELA, E. M.; MENDES, I. J. M. **Entre Einstein e Newton**: desmedicalizando o conceito de saúde. Ribeirão Preto: Holos, 2000.

IPCC. International Panel on Climate Change. **CLIMATE CHANGE 2023: Synthesis Report - Summary for Policymakers**. Available at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf. Accessed on: 2023 Jul. 29.

WHO. World Health Organization. **Ambient (outdoor) air pollution**. Available at: [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health). Accessed on: 2023 Jul. 1.