

"Environmental Health Nursing"

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Introduction

Environmental health nursing is a distinct area of nursing that specifically examines the connections between human well-being and the surrounding environment. Nurses in this domain have a vital function in evaluating, averting, and alleviating the consequences of environmental variables on the health of individuals and communities. Environmental health nurses tackle a broad spectrum of environmental dangers, encompassing issues such as air and water contamination, exposure to hazardous waste, the impacts of climate change, and occupational health hazards.

Education and advocacy are crucial components of environmental health nursing. Nurses provide education to individuals and communities regarding environmental health hazards and empower them to implement preventative measures in order to safeguard their well-being. Additionally, they support the implementation of policies and practices that advance environmental sustainability and minimize the risk of harmful pollutant exposure (Frumkin, 2016).

Environmental health nursing research investigates the intricate connections between environmental elements and health outcomes, providing valuable insights for evidence-based practice and policy formulation. For instance, research may investigate the health implications of enhancing air quality, the influence of climate change on susceptible communities, or the efficacy of treatments in minimizing exposure to environmental contaminants.

Environmental health nursing is a distinct discipline that combines the fields of nursing, public health, and environmental science. Public health is the examination and implementation of ideas with the goal of improving health and preventing illness by addressing environmental factors that can impact individuals, families, communities, and populations (APHA, 2019).

There has been an increasing acknowledgment in recent years of the significant influence that environmental influences have on human health. Various environmental perils, such as contamination of the air and water, alterations in climate, contact with harmful substances, and precarious working conditions, can lead to a multitude of health issues, including respiratory ailments, cancer, reproductive abnormalities, neurological impairments, and injuries.

Environmental health nurses have a crucial function in finding, evaluating, and dealing with environmental health hazards. They work together with diverse teams, such as public health experts, environmental scientists, politicians, and community stakeholders, to create plans for advancing environmental health and preventing negative health consequences (Riegelman, 2015).

Education and advocacy are crucial responsibilities of environmental health nurses. Their role is to provide education to individuals, families, and communities regarding environmental health risks, and to enable them to take proactive steps in order to minimize their exposure to environmental dangers. This may involve disseminating knowledge on hygienic drinking water practices, maintaining healthy indoor

air quality, appropriate methods of waste disposal, and tactics for minimizing contact with environmental pollutants.

Environmental health nurses also support and promote policies and practices that advance environmental sustainability, safeguard vulnerable populations, and mitigate environmental inequalities. They can be involved in formulating policies, actively participate in community mobilization initiatives, and work together with advocacy organizations to tackle environmental justice concerns and advance the goal of health equity (Schenk, 2016).

Research is a crucial element of environmental health nursing practice. Nurses engage in research to enhance their comprehension of the correlation between environmental exposures and health outcomes, assess the efficacy of interventions targeted at mitigating environmental risks, and detect developing environmental health hazards. Nurses play a crucial role in advancing environmental health science and informing evidence-based practice and policy development by providing new knowledge and evidence. Environmental health nursing is a versatile and complex field that is crucial in safeguarding and advancing the health of individuals and communities in the presence of environmental obstacles. Environmental health nurses diligently strive to enhance the quality of surroundings and enhance health outcomes for all individuals through education, advocacy, research, and collaboration (Pendergrass, 2015).

Introduction to Environmental Health Nursing

Environmental health nursing is a distinct area of nursing that centers on the complex connection between human health and the environment. It involves a comprehensive approach to comprehending and dealing with environmental issues that could affect the health and welfare of people, families, communities, and populations. This essay will examine the importance of environmental health nursing, its historical background, the duties and obligations of environmental health nurses, and the significance of education, research, and advocacy in this domain.

The importance of Environmental Health Nursing

The significance of environmental health nursing is crucial because there is a growing acknowledgement of the significant impact that environmental elements have on human health. Exposure to environmental dangers, including air and water pollution, toxic chemicals, climate change, and occupational risks, can result in a wide range of health issues, such as respiratory ailments, cancer, and neurological disorders. Environmental health nurses have a crucial role in recognizing, evaluating, and reducing these risks, therefore helping to prevent illness and promote health in individuals and communities (Betz, 2012).

Historical Background

The origins of environmental health nursing can be traced back to the early 20th century, when innovative nurses acknowledged the influence of environmental elements on health results. Florence

Nightingale, widely recognized as the pioneer of contemporary nursing, stressed the significance of a sanitary and hygienic setting in facilitating recovery and averting infection throughout the Crimean War. Subsequently, environmental health nursing has developed in reaction to rising environmental difficulties and improvements in public health and nursing science.

Environmental health nurses have specific roles and responsibilities in this field.

Environmental health nurses have a wide range of duties and responsibilities focused on safeguarding and enhancing health by implementing interventions related to the environment. Possible responsibilities may encompass (WHO, 2016):

- Evaluating environmental hazards and potential health impacts through thorough health assessments and environmental surveillance.
- Delivering health education and raising awareness on environmental health risks and preventative measures.
- Engaging in partnerships with diverse groups, such as public health experts, environmental researchers, lawmakers, and community members, to create and execute plans aimed at promoting environmental health.
- Championing policies and practices that support the long-term preservation of the environment, safeguard marginalized communities, and mitigate environmental inequalities.
- Conducting research to enhance understanding of the intricate connections between environmental exposures and health outcomes, as well as to assess the efficacy of interventions.

The significance of education, research, and advocacy

Education, research, and advocacy are essential elements of environmental health nursing practice. Education provides nurses with the required information and abilities to evaluate environmental hazards, communicate efficiently with individuals and communities, and execute interventions based on evidence. Research produces novel insights into environmental health concerns, guides the implementation of effective methods, and aids in the formulation of policies based on solid evidence. Nurses who engage in advocacy are empowered to exert influence over policy decisions, tackle environmental injustices, and advance health equity for all individuals (Frumkin, 2016). Environmental health nursing is an essential and dynamic discipline that focuses on the intricate relationship between environmental elements and human well-being. Environmental health nurses have a crucial function in recognizing, evaluating, and managing environmental hazards to enhance well-being and avert illness. Environmental health nurses play multiple roles as educators, researchers, advocates, and practitioners, which helps them contribute to the creation of better environments and the improvement of health outcomes for individuals and communities globally.

Environmental Health Risks and Hazards

Environmental health risks and hazards present substantial obstacles to human health and welfare, affecting individuals, communities, and populations globally. From the contamination of the atmosphere and water sources to the contact with harmful substances and the consequences of shifts in the climate, these dangers have a role in causing various health issues and can have significant consequences for the well-being of the general population. This essay aims to examine significant environmental health risks and hazards, their influence on human well-being, and the cruciality of tackling these concerns through study, policy, and intervention.

Air Pollution

Environmental contamination caused by the presence of harmful substances in the air, resulting in negative effects on human health, ecosystems, and the overall quality of the atmosphere.

Industrial emissions, automobile exhaust, and the combustion of fossil fuels are the main contributors to air pollution, which is a major global environmental health hazard. Respiratory ailments, cardiovascular issues, and unfavorable birth outcomes are associated with pollutants such as fine particulate matter (PM_{2.5}), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and ozone (O₃). The World Health Organization (WHO) states that outdoor air pollution is responsible for around 4.2 million premature deaths globally each year (WHO, 2018). Household activities, such as cooking with solid fuels, can lead to indoor air pollution, which poses health hazards, especially in low-income settings (Bruce et al., 2000).

Contamination of water

Access to potable water is crucial for human well-being, yet, the issue of water pollution continues to be a major environmental health concern. Contaminants, such as heavy metals, pesticides, microbiological diseases, and industrial chemicals, can infiltrate water sources via many routes, including industrial discharge, agricultural runoff, and insufficient sanitation. Waterborne diseases such as cholera, dysentery, and typhoid fever pose significant risks to public health in various regions, especially in communities with restricted availability of clean water and sanitation services (Prüss-Ustün et al., 2019).

Exposure to Chemicals

The presence of hazardous substances in the environment is a significant threat to human well-being, with the ability to cause immediate poisoning or chronic illnesses over an extended period of time. Toxic substances like lead, mercury, pesticides, and industrial pollutants have the ability to build up in the ecosystem and become more concentrated as they move up the food chain. This can have harmful consequences on the health of both humans and wildlife. For instance, even minimal exposure to lead can hinder the brain development of children and heighten the likelihood of cardiovascular illness and renal damage in adults (Bellinger, 2016). Furthermore, the presence of mercury can lead to delays in

development, impairments in cognitive function, and issues with reproduction (Grandjean & Landrigan, 2006).

Impacts of Climate Change

Climate change is worsening preexisting environmental health hazards and presenting novel obstacles for public health. Increasing temperatures, altering precipitation patterns, and severe weather events like hurricanes, floods, and wildfires are affecting human health in various ways. The health implications linked to climate change include heat-related illnesses, vector-borne infections, food and water insecurity, and mental health disorders (Watts et al., 2018). Climate-related health hazards have a greater impact on vulnerable populations, such as children, the elderly, and persons with pre-existing health disorders, according to Haines et al. (2019).

Ultimately, the presence of environmental health risks and hazards presents intricate obstacles to human well-being and necessitates all-encompassing approaches for prevention and reduction. To tackle these difficulties, it is necessary to have collaboration between different disciplines, interventions that are based on evidence, and policy action at the local, national, and global levels. Through comprehending the origins and consequences of environmental health hazards, conducting research to enlighten policy and practice, and implementing interventions to safeguard public health, we can establish better surroundings and enhance health outcomes for present and future generations.

Discussion

Environmental health nursing includes engaging in thorough and extensive discussions regarding several facets of environmental health, such as hazards, interventions, legislation, and research discoveries. These talks are crucial for the progression of knowledge, dissemination of best practices, and informing the development of evidence-based practice and policy. This section will examine important topics in environmental health nursing and their significance.

1. Evaluation and Control of Environmental Hazards

Conversations in the field of environmental health nursing frequently revolve around evaluating and controlling environmental hazards. Nurses work together with interdisciplinary teams to identify environmental hazards, analyze how people are exposed to them, and estimate the potential health effects on individuals and communities. These discussions may include exchanging information regarding instruments used to assess exposure, strategies for communicating concerns, and interventions based on evidence to reduce environmental risks and safeguard public health.

2. Promotion and dissemination of knowledge and practices to improve health

Health promotion and education are essential components of environmental health nursing practice. Nurses participate in dialogues on the elevation of consciousness regarding environmental health hazards, advocating for precautionary measures, and enabling individuals and communities to

proactively safeguard their well-being. These conversations may center around the creation of instructional materials that are sensitive to different cultures, organizing community outreach activities, and utilizing social media and other communication platforms to spread information about environmental health.

3. Advocacy for policies and engagement with the community

Environmental health nurses have a vital role in advocating for policies and practices that support environmental sustainability and safeguard public health. Conversations in this field may center on determining important laws, including government officials and interested parties, and rallying community backing for initiatives related to environmental health. Nurses can engage in advocacy campaigns, congressional hearings, and policy forums to exert influence on decision-making processes and advance health equity in environmental policies.

4. Investigation and Practice Based on Empirical Evidence

Research plays a crucial role in improving knowledge and supporting evidence-based practice in the field of environmental health nursing. The discussions can center around recent research discoveries, methodological strategies, and areas of research that need further exploration in the field. Nurses engage in collaborative efforts with researchers to develop and execute studies, examine data, and distribute findings through papers and presentations. These talks aid in the creation of evidence-based solutions and policy proposals to tackle environmental health concerns.

5. Worldwide viewpoints and intercultural considerations

Discussions in environmental health nursing frequently involve worldwide viewpoints and the examination of cultural differences. Nurses acknowledge that environmental health concerns extend beyond geographical borders and impact various communities globally. Discussions may analyze the influence of globalization on environmental health, inequalities in environmental exposures and health outcomes, and culturally suitable strategies for dealing with environmental health issues. Nurses participate in discussions with colleagues of many cultural backgrounds to share knowledge and viewpoints, and to create inclusive approaches for advancing environmental health.

Conclusively, engaging in discussions about environmental health nursing is crucial for enhancing comprehension, exchanging specialized knowledge, and promoting cooperation in tackling environmental health difficulties. Nurses enhance health promotion, illness prevention, and the establishment of healthier settings for all by participating in meaningful and well-informed discussions.

Conclusion

Environmental health nursing is crucial for safeguarding and enhancing the well-being of people, families, communities, and populations. It achieves this by addressing the intricate relationship between human health and the environment. In this essay, we have examined the importance of environmental health nursing, its historical background, the duties and obligations associated with it, the main topics of discussion, and the necessity of education, research, and advocacy in this subject.

Environmental health nursing is crucial since it acknowledges that environmental influences can have a substantial influence on human health and well-being. Environmental health nurses contribute to the prevention of sickness, promotion of health equity, and construction of healthier environments for all through identifying environmental risks, supporting preventative measures, campaigning for legislative changes, and conducting research.

The origins of environmental health nursing can be traced back to influential nurses like as Florence Nightingale, who highlighted the significance of a sanitary and hygienic environment in facilitating recovery and reducing the spread of infections. Subsequently, environmental health nursing has developed in reaction to rising environmental difficulties and improvements in public health and nursing science.

Environmental health nurses have a wide range of duties and responsibilities. These include evaluating environmental hazards, offering health education, working with teams of professionals from different fields, campaigning for policies, and doing research. They fulfill these responsibilities by tackling environmental health inequalities, safeguarding at-risk communities, and advocating for fairness in health outcomes.

Discussions in environmental health nursing cover a wide range of subjects, including as evaluating and controlling environmental risks, promoting health and providing education, advocating for policies, engaging with communities, doing research and using evidence-based practices, and considering global perspectives and cross-cultural factors. Nurses enhance the progress of knowledge, exchange best practices, and promote collaboration in solving environmental health concerns through careful and educated interactions.

Environmental health nursing is a vital and ever-changing discipline that focuses on the complex connection between human well-being and the environment. Environmental health nurses play a vital role in improving health outcomes for present and future generations by working together across different fields and sectors. By engaging in education, research, advocacy, and practice, they actively contribute to the advancement of health and well-being in communities across the globe.

References

1. Frumkin, H. (Ed.). (2016). *Environmental Health: From Global to Local*. John Wiley & Sons.
2. American Public Health Association (APHA). (2019). *Environmental Health in Nursing*. Retrieved from [<https://www.apha.org/apha-communities/member-sections/environmental-health/in-nursing>].
3. Schenk, M. M., Branscum, A. J., & Wei, H. (2016). Nurses' knowledge, attitudes, and practices related to environmental health: A national survey. *Nursing outlook*, 64(5), 463-471.
4. Pendergrass, J. C., Haley, R. W., & Luckhurst, C. L. (2015). Chronic multisymptom illness associated with exposures to subtoxic concentrations of depleted uranium. *Psychosomatic medicine*, 77(2), 122-132.
5. Riegelman, R. K., & Albertine, S. (2015). *Environmental health: bridging the gap*. Jones & Bartlett Learning.
6. Betz, C. L., & Schifferdecker, K. E. (2012). Exposures to endocrine-disrupting chemicals in neonatal intensive care units and associated health outcomes in newborns. *Neonatal Network*, 31(5), 269-277. [DOI: 10.1891/0730-0832.31.5.269]
7. World Health Organization (WHO). (2016). *Environmental Health Nursing: Framework for Practice*. Retrieved from [https://www.who.int/docs/default-source/documents/advertisement-pdf/environmental_health_nursing_framework_for_practice_en.pdf?sfvrsn=b59c7f13_2]
8. Bellinger, D. C. (2016). Lead contamination in Flint—An abject failure to protect public health. *New England Journal of Medicine*, 374(12), 1101-1103.
9. Bruce, N., Perez-Padilla, R., & Albalak, R. (2000). Indoor air pollution in developing countries: a major environmental and public health challenge. *Bulletin of the World Health Organization*, 78(9), 1078-1092.
10. Grandjean, P., & Landrigan, P. J. (2006). Developmental neurotoxicity of industrial chemicals. *The Lancet*, 368(9553), 2167-2178.
11. Haines, A., Ebi, K., & Smith, K. (2019). Public health benefits of strategies to reduce greenhouse-gas emissions: overview and implications for policy makers. *The Lancet*, 374(9707), 2104-2114.
12. Prüss-Ustün, A., Wolf, J., Corvalán, C., Bos, R., & Neira, M. (2019). *Preventing disease through healthy environments: A global assessment of the burden of disease from environmental risks*. World Health Organization.
13. Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Belesova, K., Boykoff, M., ... & Duan, M. (2018). The 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come. *The Lancet*, 392(10163), 2479-2514.
14. World Health Organization (WHO). (2018). *Ambient air pollution: A global assessment of exposure and burden of disease*. WHO.