

Advancing Planetary Health in Iran: Bridging Education and Practice for Nurses and Midwives

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PREFACE

A Call to Heal Our Planet and Ourselves

In an era marked by rapid environmental degradation and escalating health crises, the interconnectedness of human health and planetary health has become an undeniable truth. As the Earth groans under the weight of climate change, pollution, and biodiversity loss, the health of its inhabitants is increasingly threatened. This book delves into the critical role of nursing and midwifery in safeguarding both human and planetary well-being.

A Shared Destiny

The future of our planet and our species is inextricably linked. The air we breathe, the water we drink, and the food we eat are all products of a delicate ecological balance. When this balance is disrupted, the consequences are far-reaching, affecting not only the environment but also our physical, mental, and social health. From the rise of infectious diseases to the exacerbation of chronic illnesses, the impacts of environmental degradation are felt across the globe.

The Role of Nursing and Midwifery

Nurses and midwives, as the backbone of healthcare systems, are uniquely positioned to address the challenges posed by planetary health. Their holistic approach to patient care, combined with their deep understanding of human biology and behavior, makes them invaluable allies in the fight for a sustainable future.

This book explores the multifaceted ways in which nurses and midwives can contribute to planetary health:

- **Advocacy and Policy:** By advocating for policies that promote environmental sustainability and social justice, nurses and midwives can influence decision-making at local, national, and international levels.
- **Education and Awareness:** Through education and awareness campaigns, nurses and midwives can empower individuals and communities to make informed choices that benefit both human and planetary health.
- **Clinical Practice:** By integrating planetary health principles into their clinical practice, nurses and midwives can reduce their carbon footprint and promote sustainable healthcare practices.
- **Research and Innovation:** By conducting research on the health impacts of environmental change and developing innovative solutions, nurses and midwives can advance the field of planetary health.

A Love Letter to the Earth

This book is not only a call to action but also a love letter to the Earth. It is a celebration of the beauty and resilience of our planet and a recognition of our responsibility to protect it. By embracing the principles of planetary health, we can create a future where humans and nature thrive in harmony.

Let us embark on this journey together, inspired by the power of love, compassion, and collective action.

Introduction

The health of the planet and its inhabitants is increasingly at risk due to the degradation of global commons—natural systems essential for sustaining life. This deterioration exacerbates energy, food, and water insecurities while heightening the risks of disease, disaster, displacement, and conflict. Planetary Health serves as an interdisciplinary framework that examines the impacts of human activities on natural systems, utilizing complex systems science to identify solutions that protect both human and ecological health within Earth's limits. However, despite its importance, the understanding and application of Planetary Health principles among healthcare professionals remain insufficient. To effectively address these challenges, it is crucial to enhance education and awareness of Planetary Health within the healthcare community.

Climate change, a key dimension of Planetary Health, represents one of the most pressing global crises, significantly threatening human welfare and essential resources like food and water. Rising temperatures and extreme weather events exacerbate these challenges, disproportionately affecting vulnerable regions. Tackling these issues requires a unified effort from global health organizations, environmental agencies, and educational institutions, reflecting the interconnected nature of environmental health and the Sustainable Development Goals (SDGs). The SDGs serve as a comprehensive framework addressing poverty, inequality, climate change, environmental degradation, and social injustice, underscoring the need for interdisciplinary approaches to ensure both planetary and human well-being (see Figure 1).

Figure 1: Summarizing the environmental factors and actions related to each of the Sustainable Development Goals (SDGs)

Goal	Environmental Factors	Actions Required
Goal 3: Good Health and Well-being	Air and water quality, safe sanitation, hazardous chemical exposure	Addressing environmental health issues, ensuring healthy living environments
Goal 6: Clean Water and Sanitation	Water pollution, sanitation facilities	Addressing water pollution, ensuring proper sanitation facilities
Goal 7: Affordable and Clean Energy	Air pollution from energy sources	Transitioning to clean and sustainable energy, promoting renewable sources
Goal 11: Sustainable Cities and Communities	Air and noise pollution, waste management, green spaces	Creating sustainable cities, promoting healthy urban environments
Goal 12: Responsible Consumption and Production	Unsustainable consumption, waste generation, harmful chemicals	Promoting sustainable consumption, reducing waste, minimizing chemical exposure
Goal 13: Climate Action	Climate change impacts, air pollution, extreme weather	Mitigating climate change, adapting to its impacts, reducing air pollution
Goal 15: Life on Land	Habitat preservation, combating desertification, biodiversity loss	Protecting terrestrial ecosystems, preserving habitats, preventing biodiversity loss
Goal 17: Partnerships for the Goals	Collaboration among stakeholders, cooperation	Building partnerships, cooperation at all levels for SDG implementation

Promoting planetary health demands a global, collaborative approach that acknowledges the interdependence of human, animal, and environmental well-being. This interconnectedness transcends national borders, as shared resources and common environmental challenges call for collective action and knowledge exchange. By uniting resources and expertise, nations can bridge capacity gaps, enhance technology transfer, and implement effective strategies aligned with the SDGs. Such cooperation not only accelerates progress but also addresses disparities in environmental health impacts, ensuring equity in global outcomes.

However, insufficient interdisciplinary collaboration remains a significant barrier to advancing planetary health education. Fragmented efforts and inequities in educational access exacerbate global health inequalities, particularly affecting

healthcare students, including those in nursing and midwifery. A lack of integration of planetary health principles into global health initiatives and educational curricula leaves healthcare professionals unprepared for the complex environmental health challenges ahead.

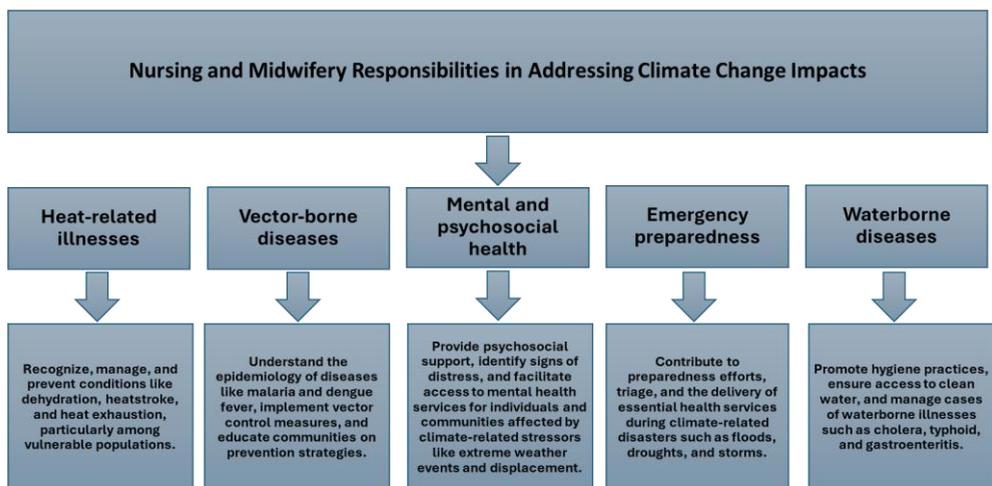
The consequences of inaction are dire: continued environmental degradation, accelerated climate change, biodiversity loss, pollution-related diseases, and escalating health threats globally. These cascading crises jeopardize both human health and planetary sustainability, reinforcing the urgency for unified, interdisciplinary solutions to safeguard future generations.

Populations in low- and middle-income countries are especially vulnerable to the effects of climate change due to limited resources, lack of planning, and insufficient investment in healthcare and environmental protection. Iran stands out as one of the most vulnerable countries to climate change due to its geographic, economic, and climatic characteristics. The World Health Organization's report on health and climate change for Iran highlights challenges such as rising temperatures, altered rainfall patterns, frequent extreme weather events, and worsening air quality. These challenges have direct implications for health, including heat-related illnesses, waterborne diseases, and food shortages. Addressing these issues requires targeted strategies such as reducing greenhouse gas emissions, strengthening healthcare systems, and adapting to climate changes.

Strengthening planetary health education among nursing and midwifery students in Iran is critical. These professionals play pivotal roles in addressing health challenges induced by climate change. Engaging medical students in advocating for and integrating climate content into education is a key step in preparing the profession to

tackle climate-related health threats effectively. Nurses and midwives are central to this effort, as understanding planetary health is vital for delivering comprehensive care. With increasing temperatures and extreme weather, nurses and midwives must be equipped to manage heat-related illnesses, waterborne diseases, and vector-borne diseases like malaria and dengue. They also need to address the mental health impacts of climate-related events, provide psychosocial support, and facilitate access to mental health services. As disasters become more frequent, these professionals play critical roles in emergency preparedness, triage, and crisis health services. Incorporating planetary health education into their curriculum ensures they are prepared for the multifaceted health challenges posed by climate change (see Figure 2).

Figure 2: Nursing and Midwifery Responsibilities in Addressing Climate Change Impacts: A Comprehensive Overview



At the national level, the insufficient integration of planetary health education into nursing and midwifery curricula presents challenges such as policy gaps, inadequate resource allocation, and lack of emphasis within professional standards. These barriers hinder consistent curriculum development and implementation, limiting the effectiveness of educational efforts.

In this book, we delve into a strategic framework designed to address planetary and environmental health challenges at both global and national levels, with a strong emphasis on collaboration and equity. At the global level, the focus is on enhancing interdisciplinary collaboration and increasing awareness of planetary health among nursing and midwifery students in the Iranian context. These initiatives aim to tackle resource disparities, enhance preparedness for emerging environmental health issues, and promote health equity. On the national level, the framework emphasizes adopting a systematic approach to climate change within health systems, advancing evidence-based research and practices, and integrating environmental health into healthcare delivery. Additionally, it highlights the critical role of the health workforce, particularly midwives, in addressing climate change and building resilience. By linking global and national efforts, this framework offers a cohesive approach to addressing urgent environmental health challenges.