

Janpadodhwansa and Environmental Health: Re-visiting Ancient Perception in the Modern Period

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Abstract

It seems that the Indian system of medicine, i.e. *Ayurveda*, has more to offer in addressing the epidemics and natural calamities from its concept of 'Janpadodhwansa', which means mass destruction of living beings resulted as a essay by environmental imbalances. This essay describes the traditional concept of *Janpadodhwansa*, links it to current environmental and public health problems, and suggests community-based integrative solutions. We also stress the enduring importance of caring for and sharing our environment, and how all people have an obligation to each other in this responsibility, which sustains civilisation, reinforced by a retelling that draws from both early scientific tradition as well as drawing upon contemporary science.

INTRODUCTION

Apocalypses are a familiar trope, wiping out people, overturning civilisations and rendering human life precarious for societies as far back in time as we can see. These are known to *Ayurveda*, the ancient Indian system of medicine, especially *Charaka Samhita*, as Janpadodhwansa, i.e. loss/wiping off of *Janapada* (Living communities or population) because of common environmental insults (1). Unlike personalised illness, that which is *Janpadodhwansa* occurs through pollution and imbalance of the *moolaprakriti* (basic environmental factors) -air (*Vayu*), water (*Jala*), land (*Desha*) and seasons (*Kala*)," for all irrespective of immunity, habits & constitution etc., including conditions or status in the community (2,3). The *Janpadodhwansa* side effects can still be observed today, such as the spread of pandemics, pollution, climate change, and natural calamities. This essay aims to link the old, pseudoscience-tinged wisdom of *Ayurveda* with up-to-date scientific knowledge to draw attention to the significance of environmental health for a sustainable civilisation.

The Traditional Concept of Janpadodhwansa

Meaning and Origin

Etymology The term *Janpadodhwansa* is composed of two Sanskrit words- *Janapada* (community or population) and *Udhwansa* (destruction). The massacre of the same people and destruction is to be simultaneous (1,4)." _The *Charaka Samhita* lists four Universal environmental factors:

Vayu (Air): No matter who you are, *Vayu* becomes polluted, and the spread of disease occurs.

Jala (Water): Illness is spread by water contamination.

Desha (Land): Deforestation, causing soil erosion and the reduction of fertility, leads to famine and disease; forests yield food only if they are left standing.

Kala (Season/Time): Communities are affected as a whole by aberrations in the weather and imbalances of season (1,5).

The(6) *Janpadodhwansa* is brought about by the vitiation of these, which would make tailored prophylaxis not work.

Janpadodhwansa in the Present Era

Air Pollution and Public Health

Air pollution is undoubtedly a very important cause of morbidity and mortality in the world, according to current science (7). According to the World Health Organisation, over 99% of the global population breathes unhealthy air, and urban air pollution has adverse neurological, cardiovascular and pulmonary health effects (8,9). Air is not just a vehicle for *Janpadodhwansa*, as in the 2013 "Airpocalypse" of China or Delhi's annual smog or California wildfires (10,11).

Waterborne Epidemics and Water Contamination

It is a fundamental human right, yet billions of people are without access to clean water (12). Cholera, typhoid and hepatitis outbreaks during natural disasters continue to inflict widespread suffering (13,14), particularly when the water supply is compromised. *Jala*-vitiation continues to be a worldwide worry; the Flint water crisis in the United States and annual monsoon flooding in South Asia are cases in point (15,16).

Migration, Famine, and Land Degradation

Land (*Desha*) is the source of agriculture, habitation and sustenance. Deforestation, desertification and soil pollution also lead not only to loss of food security but also rapid migration, poverty and social dislocation (17,18). There have been

modern examples of ancient warnings, like the continuous desertification in the Sahel and the Dust Bowl that was registered in the United States in the 1930s (19).

Seasonal Disorders and Climate Change

In *Ayurveda*, *kala* includes the climate and the season. Several consequences of climate change, including unpredictable weather patterns, heat waves, floods, epidemic breakouts of vector-borne diseases, as well as food insecurity, ensue (20,21). The impact of seasonal and climatic discord on health is also felt with the increasing spread of diseases such as dengue or malaria and the increase in natural disasters, such as hurricanes and wildfires (22, 23).

Pandemics, Epidemics, and Janpadodhwansa

In the age of global pandemics, it can also be said that *Janpadodhwansa* is prophetic. Specifically, we can look to examples where interacting environmental, biological and social factors have conspired together as precursors of widespread havoc such as HIV-1, SIVCPZ or more recently the emergence on COVID-19, the 1918 influenza pandemic which killed between 50–100 million people worldwide during two years (24), previous Ebola epidemics and multiple episodes of severe acute respiratory syndrome (SARS) (25). These events highlight the fact that, since these are not selective based upon one's constitution, we are all susceptible to their effects.

The Ayurvedic Viewpoint

Environmental and public health are intertwined in *Ayurveda* (27). Preventive aspect focuses on protection and purification of air, water, and land, along with following the seasonal regimen (*Ritucharya*) (28, 29).

Contemporary Methods in Public Health

Anthropogenic modifications and translocations of host organisms can perturb interactions in such a way that we require better integration of ecosystem animal and human health themes promoted by modern frameworks such as One Health and Planetary Health (30, 31). The management of risk involves a policy that addresses sanitation, climate adaptation, pollution abatement and disaster preparedness (32, 33).

Policy and Community Involvement

Both ancient and modern systems recognise the importance of good governance and community participation. Proactive interventions are crucial for all these, from cleanup efforts to public awareness campaigns and air and water quality regulations (34 - 35).

Although *Janpadodhwansa* has been mentioned in *Ayurveda* thousands of years ago, the term strikes a chord even today in the context of environmental fragility and world interconnectedness. The urgency of sharing responsibilities is clear in the COVID-19 pandemic, pollution crises, and climate emergencies. Only if we can coordinate both individual actions and community projects, as well as policy frameworks, can we stop or ameliorate the modern-day offenders of *Janpadodhwansa* (36,37,38).

Conclusion

There is a strong emphasis on environmental stewardship and group action in the concept of *Janpadodhwansa*. Ancient *Ayurvedic* wisdom in wellness. One of the roadmaps for sustainability, for public health and disaster preparedness is ancient *Ayurveda* when integrated with today's scientific understanding. As the world grapples with increasingly complex environmental threats, it cannot learn too soon that timeless *Ayurvedic* wisdom, when partnered with modern science, can help humanity tread a safer and healthier path into the future.

REFERENCES

1. The Samhita of Charaka. Chapter 3 of Vimanasthana. Chaukhambha Orientalia 2011 (Translated by Sharma P.V.).
1. 2.Sushruta Samhita, ed. Acharya YT. Sanskrit Sansthan Chaukhambha, 2014.
2. Dash B. Charaka Samhita, Vol. I. Chowkhamba Sanskrit Series Office, Sharma RK, 2013.
3. Lad V. Ayurvedic Textbook: Basics. Ayurvedic Press, 2002.
4. Tiwari P. Ayurvedic Epidemiology Concepts. AYU. 2011;32(2):152-156.
5. Dwarakanath C. Kayachikitsa Overview. Orientalia Chaukhambha, 2003.
6. 7.Cohen AJ et al. Global burden of disease due to ambient air pollution: estimates and long-term trends. 2017;389:1907-1918; Lancet.
7. WHO (World Health Organisation). Pollution of the air (2021). [https://www.who.int/news-room/fact-sheets/detail/health-and-ambient-\(outdoor\)-air-quality](https://www.who.int/news-room/fact-sheets/detail/health-and-ambient-(outdoor)-air-quality)
8. 9.Lelieveld J et al. Global and local health effects of industrial air pollution. 2015; 525:367–371; Nature.
9. Landrigan PJ et al, The Lancet Commission on Pollution and Health Lancet, 2018;391(10119):462-512.
10. 11Causes and Effects of Severe Haze Pollution in Northern China, Zhang Q et al. 2015;15:11417–11427; Atmos Chem Phys.
11. The Sustainable Development Goals Report 2022, United Nations.

12. Prüss-Ustün A and others made a retrospective analysis for the burden of diseases in LMICs caused by poor water, sanitation and hygiene. *Trop Med Int Health*, 2014, 19(8), 894-905.
13. J Am Water Works Assoc. 2010;102(9):55-64; Hunter PR et al. Diseases and the American Nation.
14. Waterborne diseases and microbial contamination (Saini R, Saini S). 2012;16(1):40–41; *Indian J Occup Environ Med*.
15. 16. Pieper KJ et al. Flint water crisis: Ground zero homes investigated after loss of corrosion control. *Environ Sci Technol*. 2018;52(4):2007-2014.
16. FAO. State of the World's Water and Land Resources for Food and Agriculture (SOLAW) – 2021.
17. Evaluation of the Millennium Ecosystem. Human Well-Being and Ecosystems. Island Press, 2005.
18. Worster D. Dust Bowl: 1930s Southern Plains. Oxford University Press; 2004.
19. Watts N. et al. Fossil fuels are bad for health: the Lancet Countdown report on health and climate change, 2022. 2022;400(10363):1619-1654; *Lancet*.
20. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC, 2022. The contribution of Working Group II to the Sixth Assessment Report.
21. 22. Patz JA et al. Infectious disease and climate change. Princeton University Press, *Infectious Disease Ecology: Effects of Ecosystems on Disease and of Disease on Ecosystems*. 2006.
22. Campbell-Lendrum D, Prüss-Ustün A. Noncommunicable diseases, air pollution and climate change. *Bull World Health Organ*, 97(2), 2019: 160-161.
23. Wu F et al. A new coronavirus from the respiratory disease in China. 2020;579:265 269 in *Nature*.
24. 25. Gates B. Fighting COVID-19: A Once-in-a-Century Pandemic? *N* 2020;382:1677-1679; *Engl J Med*.
25. 26. Taubenberger JK, Morens DM. 1918 Influenza: the mother of all pandemics. *Emerg Infect Dis*. 2006;12(1):15–22.
26. Singh RH. Ayurvedic medicine's holistic tenets. *Surbharati Chaukhambha*; 2011.
27. Ayurveda and water purification: a review, by Gupta SK et al. 2019;10(3):216–219; *J Ayurveda Integr Med*.
28. Waterborne diseases and microbial contamination (Saini R, Saini S). 2012;16(1):40–41; *Indian J Occup Environ Med*.
29. One Health: The Theory and Practice of Integrated Health Approaches, Zinsstag J [3]. CABI, 2020.
30. Whitmee S. et al. The Rockefeller Foundation–Lancet Commission on Planetary Health report: "Safeguarding Human Health in the Anthropocene Epoch." 2015;386(10007):1973-2028; *Lancet*.
31. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050, World Bank, 2018.
32. UNEP is the acronym for the United Nations Environment Programme. Inaugural Global Report on Environmental Rule of Law, 2019.
33. Pretty J. Theories, Principles and Evidence of Agricultural Sustainability. 2008;363(1491):447-465; *Philos Trans R Soc Lond B Biol Sci*.
34. UN Disaster Risk Reduction Office (UNDRR). Disaster Risk Reduction Report Card: Global Progress in 2022.
35. 36. Jones KE et al. Emerging infections in a global perspective. 2008;451:990-993; *Nature*.
36. Emerging infectious diseases: threats to human health and global stability, Morens DM, Fauci AS. 2013;9(7):e1003467; *PLoS Pathog*.
37. Ebola virus: from discovery to vaccine, Feldmann H et al. 2019;19:749–759. *Nat Rev Immunol*.