



ISSN: 0976-8031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 15, Issue, 07, pp.4836-4839, July, 2024

**International Journal of
Recent Scientific
Research**

DOI: 10.24327/IJRSR

Review Article

THE TACTIC OF ONE HEALTH IN AYURVEDA: A REVIEW ARTICLE

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DOI: <http://dx.doi.org/10.24327/ijrsr.20241507.0909>

ARTICLE INFO

Article History:

Received 13th June, 2024

Received in revised form 22nd June, 2024

Accepted 17th July, 2024

Published online 28th July, 2024

Keywords:

Ayurveda, One Health, Rasayan, Dinacharya, Achara Rasayan

ABSTRACT

Objective: One Health acknowledges that the health of humans, animals, and the environment are interlinked. Ayurveda emphasizes a harmonious relationship with the environment, promoting the well-being of animals, plants, and humans. Ayurveda provides better solutions for holistic health by including proper dietary management and modification, lifestyle advice, Panchakarma procedures, medications, and Rasayan. In the last ten years, Ayurveda has demonstrated its effectiveness in treating common lifestyle diseases. Ayurveda offers various regimens, including *Dinacharya*, *Panchakarma*, and *Rasayana* therapies, as prophylactics for lifestyle diseases. These Ayurveda regimens can be applied on a broader scale throughout the nation. The *Sadvrutta* (ideal routine) and *Aachara Rasayana* are important in maintaining healthy socio-physiological well-being. This article recognizes the interdependence of humans and animals on each other, environmental health offering preventive measures, herbal remedies, and environmental stewardship that support the interconnected perspective. As the world faces increasing health challenges, embracing Ayurveda's ancient wisdom can contribute to a more harmonious and sustainable approach to health, promoting the well-being of all living beings on our planet.

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INTRODUCTION

In nature, each microenvironment is supplied with the assets vital for the fitness care desires of the organisms dwelling there. It is widely accepted that Indian traditional knowledge plays a key role in health care. People believe that many of the health care questions arising in developing countries can be answered through a holistic approach. The "One Health Approach" is grabbing attention throughout the world, where the concept of health care is taught to all living beings in the environment. A welcoming approach towards the Indian system of medicine is getting the utmost attention regarding the safety and efficacy of the products used.^[1]

"One Health" as an integrated, unifying approach to stability and optimizing the fitness of people, animals, and the environment.^[2] Ayurveda's principle "*Swasthasya Swasthya Rakshanam, Aturasya Vyadhi Prashaman*"^[3] aligns with the perspective, focusing on prevention and holistic healing. It emphasizes a harmonious relationship with the environment, promoting the wellbeing of animals, plants, and humans.

Ayurveda recognizes that diseases can be transmitted between species and that ecosystem imbalances can impact human health.^[4]

Ayurveda has gained recognition in recent years for its potential to promote "one health." This concept emphasizes the interconnectedness of human, animal, and environmental health. Ayurveda, rooted in ancient Indian tradition, offers holistic approaches to health and wellbeing that align with the principles of Ayurveda for one health, which translates to "the science of life," over 5,000 years. It emphasizes the balance of mind, body, and spirit, viewing health as a dynamic equilibrium. In this holistic approach, Ayurveda recognizes that the wellbeing of humans is linked to that of animals and the environment.

MATERIALS AND METHODS

A detailed study of the classical text, Samhitas, and a meta-analysis of various published research works were studied, as were various presentations of the foresaid topic.

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RESULT

Environmental stewardship

The principles of Ayurveda include respecting and protecting the environment. This philosophy encourages sustainable practices and the conservation of natural resources. By doing so, it contributes to the overall well-being of all life forms, humans and animals included, and supports the goals of one health.

The Ayush systems and Ayurveda can contribute significantly to the One Health approach. Ayurveda believes that “*Loka Purusha Samyata Siddhanta*,” given by Acharya Charaka, means that all that exists in the universe also exists in an individual.^[5] It recognizes the interconnectedness of all living things and their environments and the importance of maintaining balance and harmony amongst the two. Its broad domains also include environmental health, veterinary science, and plant science. Research is about creating an ecosystem between humans, animals, and the environment through Ayurveda, *Pashuayurveda* (Ayurveda for cattle)^[6], and *Vrikshayurveda* (the science of plant life).^[7]

Ayurvedic medicine and natural remedies

Ayurveda is a traditional medicine system. It utilizes herbal medicine and natural remedies. Many ayurvedic herbs have antimicrobial properties that can be beneficial for humans and animals alike and work against antibiotic resistance. These remedies can serve as alternative treatments for various ailments, reducing the need for pharmaceutical interventions. Ayurveda’s use of natural substances aligns with the health principle of minimizing the use of chemicals that can harm the environment and all living organisms. Natural remedies, such as herbs and minerals, have minimal side effects and are more accessible and affordable for people of all communities. This can be especially important in addressing the health needs of rural or remote populations, where access to modern health care may be limited.^[8]

Concepts of Vruksha Ayurveda and Pashu Ayurveda

Traditional Indian literature, in the shape of the holy Veda, Purana, and Brahmana Granthas, has been inundated with data on human and animal fitness care. Though “Ayurveda,” “the technology of life,” is particularly taken into consideration to address people, in totality, it additionally offers animals (Pashu-ayurveda) and plants (Vriksha-ayurveda). Numerous illustrations of veterinary medicinal drugs primarily based on the holistic technique of Ayurveda have been referred to within the Garuda Purana, Agni Purana, Atri-Samhita, Matsyapurana, and lots of other historic works of literature. Epics, which include the Mahabharata, depict the remedy of heaps of injured animals through professionals, which include prince Nakula, who specialized in treating horses, and prince Sahadeva, who specialized in treating cows. Ayurveda treatises, particularly Charaka Samhita, Sushruta Samhita, and Harita Samhita, comprise many allusions to animal care and remedy. However, Salihotra, Palkapya, and Atreya had been some of the most admirable and well-appeared veterinary technology students who contributed specific works to growing *Ashwayurveda*, *Gajayurveda*, and *Gavayurveda*. These historic professionals have written diverse treatises on veterinary medicinal drug, surgery, and ethics and are nonetheless famous amongst students operating in *Pashuayurveda*.^[9]

Pashu Ayurveda

Pashuayurveda can play a pivotal role in reducing anti-microbial resistance through alternative solutions and improved care for the common diseases of animals. These practices have first-rate capacity because they make use of neighborhood resource-primarily based programs that are safe, efficient, cost-effective, and sustainable. Thereby, it helps to reduce the use of antibiotics for animal health and eventually helps to combat the growing threats of AMR.^[10] Many communities in India still use medicinal plants for the ailments of cattle. For instance, a case study highlights that the community selected under the survey in Tamil Nadu reports the use of a wide range of herbal plants for cattle ailments.^[11]

Research evidence suggests the effectiveness of herbal formulations in preventing and managing diseases such as bovine mastitis, foot and mouth disease, diarrhoea, udder pox, repeat breeding, bloat, indigestion, and maggot wounds, and reducing the use of antibiotics.^[12-14] It also helps in the reduction of antibiotic residues in the milk, contributing to food safety. The National Dairy Development Board Annual Report 2020–21 documents an average savings of 30 percent in drug costs and a reduction in medicine purchases, especially antibiotics, to the tune of \$1 million per month due to EVM use in Mastitis Control Popularization Project (MCP) regions throughout 9 states.

The treatment of animal diseases using Ayurvedic medicine has been mentioned in Garudapurana, Agnipurana, Atri-samhita, Matsyapurana, and many other texts. The Garudapurana is one of the important Sattvika puranas; the subject matter is divided into two parts, viz., Purvakhand and Uttarakhand. *Gavayurveda*, *Gajayurveda* narrated briefly and *Ashvayurveda* are described in detail in Purvakhand.^[15]

Gaja Ayurveda^[16]

The *Gautam Samhita*, *Ashva Ayurveda*, and *Hastya Ayurveda* are the simplest treatises on animal science available till now. Palakapya wrote *Hastya Ayurveda* or *Gaja Ayurveda* managing elephant medicinal drugs and committed them to Lord Ganesha. Elephant medicinal drugs and surgical procedures had been divided into 4 parts, viz., Maha Rogsthan, Ksudra Rogsthan, Salyasthan, and materia medica—weight loss plan and hygiene. *Hastya Ayurveda* also mentions the anatomy of elephants, the treatment of different kinds of diseases, the training of elephants, and the classification of elephants based on several characteristics.

Haya Ayurveda^[17]

Salihotra was highly skilled in treating horses. He composed a treatise called *Haya Ayurveda* or *Salihotra Samhita*, a work on the care and treatment of horses. *Haya Ayurveda* is stated to have found out about *Salihotra* with the aid of Brahma himself. Two other works, namely *Ashvaprasnsa* and *Ashvalaksana* sastram, are also attributed to *Salihotra*.

Vruksha Ayurveda^[18]

Vruksh Ayurveda was written by *Salihotra* around 400 B.C. It consists of twelve vast chapters, namely *Bhumi nirupana*, *Bijoptivithi*, *Padapavivaksa*, *Ropana vidhana*, *Nise canavidhi*, *Poshana vidhi*, *Drumaraksa*, *Taru Chikitsa*, *Upavanakriya*, *Nivas sanna taru Shubhashubha Laksahna*, *Taru Mahima*, and *Citrikarana*. All the chapters deal with numerous factors in plant science. *Vrikshayurveda* primarily addresses issues related to buying, storing, treating seeds and planting materials,

irrigation procedures, soil selection, the use of biofertilizers, and methods for maintaining healthy growth and productivity of plants and plant diseases, etc. It deals with agri-horticulture as well as home gardening. It was also suggested that the seeds should be exposed to medicated smoke, which can serve as an antimicrobial agent.

Prevention of Diseases

Ayurveda offers various regimens, including *Dinacharya* (daily regimen), *Ritucharya* (seasonal regimen), *Pathya-Apathya* (wholesome and unwholesome diet), and Yoga as prophylactics for lifestyle diseases.^[19] These Ayurveda regimens can be applied on a broader scale throughout the nation. Ayurveda therapies, along with *Panchakarma* (five procedures that help cleanse the body) and *Rasayana* (rejuvenation), can considerably contribute to the treatment, prevention, and fending off the recurrence of diverse diseases.

Ayurveda strongly emphasizes prevention and wellness. They view health as a state of balance and harmony and adopt a healthy lifestyle, a healthy diet, exercise, a code of conduct, and stress management to maintain proper balance in our bodies. By promoting preventive care and a holistic approach to health, Ayush systems can help reduce the chances of chronic diseases, which significantly contribute to the global disease burden.

The Food and Agriculture Organization of the United Nations (FAO), United Nations Environment Programme (UNEP), World Health Organization (WHO), and World Organization for Animal Health (WOAH) have collaborated to develop a One Health Joint Plan of Action mainly focused on strengthening and increasing capacities in six areas: food safety risks, antimicrobial resistance, emerging and re-emerging zoonotic epidemics, endemic zoonotic diseases, neglected tropical and vector-borne diseases, and the environment.^[20]

To be precise, Ayush systems can make a valuable contribution to the One Health approach by promoting prevention and wellness, using natural remedies that are accessible and affordable, addressing antimicrobial resistance, and promoting an environmentally responsible approach. There are unique and important areas under Ayush that can contribute significantly to the One Health approach.

Contribution of Ayurveda to One Nation, One Health System

Ayurveda and yoga have shown promising results in improving the health and immunity of the general public, reducing the mortality rate during COVID-19, and also helping to manage the long-term effects of COVID-19.^[21] Many countries praised the efforts of India and healthcare worldwide. The Ministry of Ayush has taken many important initiatives, formulated various strategies at various stages to combat COVID-19, and proved the strength of Ayush systems in the prophylaxis and management of such pandemics.^[22] There is hope that India is well prepared to fight future pandemics. Ayurveda has shown its efficacy in managing prevalent lifestyle disorders in the past decade, as lifestyle diseases such as hypertension, diabetes mellitus, dyslipidemia, overweight/obesity, and cardiovascular diseases are remarkably rising. Cardiovascular disorders, obesity, and diabetes continue to be the primary causes of mortality, representing about 30% of all deaths worldwide. Thus, Ayurveda can play a significant role in tackling such disease conditions with its holistic approach.^[23]

DISCUSSION

Ayush interventions, especially from Ayurveda, depict that it has the potential to be valuable tools in addressing health in all forms, including NCDs, AMR, and zoonotic diseases. However, in addition, high-effect studies are wanted to enlarge the clinical foundation and grow self-belief among healthcare carriers and the public. Integration of Ayush interventions into healthcare systems and national programs on a larger scale, such as the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS), can increase the outcomes of these programs. This may be achieved through the usage of Ayush infrastructure, human resources, and IT systems in One Health and disease and health surveillance at all three levels of health care. Awareness campaigns about the safe and effective use of antimicrobial drugs and consideration of alternative medications and therapies can be performed through Ayush institutions. In addition, another area of focus for enhancement is telemedicine, which has the potential to enhance animals' health and decrease the reliance on antimicrobials. Finally, Ayush Health and Wellness Centers and state dispensaries and hospitals can be utilized to monitor infectious diseases, NCDs, and occupational health and their management.

To ensure the secure and appropriate use of Ayush interventions, it is vital to successfully implement policies and guidelines. Incorporating Ayurveda or Ayush ideas into faculty training and fitness packages can sell their use. Additionally, referral structures and different mechanisms ought to be evolved to facilitate collaboration among Ayush practitioners and contemporary healthcare providers. There must be a detailed study and analysis of the things incorporated in *Vrukshaayurveda* as well as *Pashuayurveda*, and best practices should be introduced and propagated among communities.

Fourthly, to effectively integrate Ayush systems into mainstream health care, it will be necessary to address various barriers, such as lack of awareness and understanding, lack of resources, and regulatory and legal challenges. This can be performed by generating awareness, providing training, and promoting the use of Ayush-based *Dinacharya* and *Ritucharya*, traditional water purification, and diet preparation methods. It will be essential to continue to engage and seek input from a wide range of healthcare providers, policymakers, researchers, and community members to ensure that the integration of Ayush systems into the One Health approach is conducted in a manner that is all-encompassing, fair, and sensitive to the requirements of various populations.

CONCLUSION

Ayurveda's holistic approach to health and well-being aligns well with the one health concept. It recognizes the interdependence of humans and animals on each other, and environmental health offers preventive measures, herbal remedies, and environmental stewardship that support an interconnected perspective. As the world faces increasing health challenges, embracing Ayurveda's ancient wisdom can contribute to a more harmonious and sustainable approach to health, promoting the well-being of all living beings on our planet.

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How to cite this article:

Dorlikar Payal , Waghulkar (Talekar) Manisha and Suryawanshi Milind N.(2024). The tactic of one health in ayurveda: A review article. *Int J Recent Sci Res*.15(07), pp.4836-4839.
