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Article Received on
28 November 2023,Revised on 18 Dec. 2023,
Accepted on 08 Jan. 2024

DOI: 10.20959/wjpr20242-31045

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Ayurveda is an ancient medical science that has flourished from ages till date. It is the science that imparts all the knowledge of life. It defines health and aspects responsible for its maintenance and promotion. In today's era the world is undergoing a rapid change due to which the eco system, nature and living beings are under strong survival stress due to severe pollution, climate change, population rise, increase in natural calamities, wars and other socio-economic reasons. Maintaining the nature and human health is a big challenge in front of the world and it cannot be ignored. Ayurveda emphasizes on prevention and health promotion, and provides treatment for disease. Its main motive is to achieve desirable health and well-being through a comprehensive approach that addresses mind, body, soul, behavior, and environment. Ayurveda has the outstanding potential to reverse the worsening health status across the world and it would be the best

option to promote public health.

KEYWORDS: Ayurveda, Public health, Health promotion.**INTRODUCTION**

The primary aim of Ayurveda is "Swasthasya Swasthyarakshanam" and "Aturasya Vikaraprashamanam,"^[1] the context explains the importance of maintenance and promotion of health in healthy individual and treating diseases in case of diseased ones. "Swasthya" means health, "Rakshanam" means protection; "Aturasya" means of the patient, "Vikara" means disease, "Prashamanam" means alleviation. Ayurveda is an ancient Indian system of medicine, which emphasize on prevention of body ailments thereby maintaining health rather than simply treating pathological problems or symptoms "Health is a state of complete

physical, mental and social well-being and not merely an absence of disease or infirmity.”^[2] WHO definition of health is similar as per the concepts of “Swasthya^[3] mentioned by Acharya Sushruta which defines health on basis of physiological well being along with *Prasanna-atma-indriya-mana* which means social, mental and spiritual well being. The main concepts of Ayurveda are “Arogyam Mulamuttamam,”^[4] Ayurveda given most importance to Arogya (Health). Health is a fundamental right for every citizen as per the constitution and Public Health is used as an indicator for the development of a nation. Public Health is defined as “the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society” (Acheson, 1988; WHO).

To achieve the goal of public health for different ethnicities, their socio-geographical specificity should be kept at main stream along with individual specificities while framing the treatment guidelines and patient assessment for better outcome. Ayurveda considers *Purusham purusha vikshaya* i.e every person is different from another and hence should be observed as a different entity, as many variations in the universe, so many in the human beings and while treating a patient *desha* is considered as a part of investigation which means geographic distribution plays a pivot role. Health promotion concepts also enriched by an understanding of Panchamahabhutas, Tridosha theory, ecological health concepts, yoga and nutrition from Ayurveda. In Ashtanga Hridaya, it is well described that, *Dushya* (Dhatu - tissue and *Mala* - excreta), *Desha* (*Deha* - human and *Bhumi* - the locality), *Bala* (*Samarthya* - stamina), *Kala* (Diurnal and Seasonal time), *Anala* (Different state of *agni*), *Prakriti* (*Vata*, *Pitta* and *Kapha*), *Vaya* (Child, adult and old age), *Sattva* (Mind), *Satmya* (food and geographical compatibility), *Ahara* (Sweet, sour, etc.), *Avastha* (different phenomenal state), *Sukshmasukshma* (Minute observation), *Esham* (Diseases), and *Dosha Aushadha Nirupanam* (Deciding the *Doshik* involvement and drugs) are the fundamental principles to be observed and Ayurveda, there are two types of medicines: those which promote resistance of the body and promote vitality and those which cure disease.^[5]

Since the modern medical system enormously focus on molecule based medicines alone, gross aspects such as preventive, promotive and social health have been ignored. Public health today is gaining momentum all over, and is a good sign for traditional medical systems to get their place to fulfill the need of the day.

To attain the goal of public health for diverged ethnicities, their socio-geographical specificity should be kept at the core along with respective specificities while framing the treatment guidelines and patient assessment for better outcome.^[6]

With the increasing trend of poor health index of all age group across the world due to uncontrolled pollution and degradation of healthy eco system, the quality of life is falling to the new low, incidents of deaths are reported all over the world due to non communicable diseases and other diseases are at alarming rate. Life expectancy is falling in all ethnicities and countries, and this scenario is likely to get worsen; at this stage there is a dire need to look into the opportunities which are available in ancient medical systems, as described earlier, Ayurveda with a outstanding potential to reverse the worsening health status across the world would be the best option. Hallmark of Ayurvedic medicine is that its practices take into account an individual's total internal, social, and external environment when considering disease prevention, promotion and treatment. With this, it can be said, Ayurveda is the best option for achieving the goal of personal health along with public health.

Scopes: Ayurveda is widely used in India as a system of primary health care and flourishing worldwide in health promotion. Ayurveda intends at making a happy, healthy and peaceful society. Especially the simple regimens described in ancient classical texts are of immense use in handling public health problems faced by the present world today. Swasthavritta is personal hygiene; it consists of dinacharya (Daily routine) and includes tooth brushing, mouth wash, tongue scraping, bathing, exercising, eating, and sleeping and so on. Ritucharya are the regimens and diet which are to be followed in the different seasons of the year. Sadvritta is an orbit of social behavior and conduct of the individual based on religious rituals and practices. Rasayana and vajeekarana are the use of rejuvenating agents to prevent aging; they impart longevity, immunity against disease and assist in improving mental faculties.^[7]

1. Dinacharya – (Dina means Day and Charya means activity)

In today's era we get to see a disturbed circadian cycle amongst young individuals, due to their job pattern or their busy schedule. People are gaining better in terms of financial growth, but unfit to maintain health and self-satisfaction. Only way to become gratified is by adopting a healthy circadian cycle which can be achieved by following principles mentioned in Dinacharya. Dinacharya helps to establish balance in one's constitution (Vata, Pitta and Kapha). It also determines and regularizes a person's biological clock, aids digestion, absorption and assimilation and generates self esteem, discipline peace happiness and

longevity. Dinacharya is the collective information of all the practices for promoting health and preventing disease that the ancient sages followed. Practically following each and every step of dinacharya could be slightly difficult but some of important procedures can be followed easily as in.

- Waking up early in the morning before sunrise
- Evacuation – having a bowel movement first thing in the morning is a sign of good health.
- Tongue scrapping
- Brushing teeth
- Gargling/Oil pulling
- Rinse face, mouth, eyes with water
- Abhyanga (Full body massage) – Practicising this everyday could be a task but doing it every fortnight can help to alleviate vata dosha in body.
- Exercise – One should take out some time for self enhancement practices. This can be 15-20 minutes of pranayama, yoga, mantra uttering, praying or subtle visualization which soothes eyes, mind body soul. These practices calm the mind, increase sattva guna energize mind and transcends from physical level to higher level of consciousness ,reduce anxiety and depression gives confidence.
- Ear lubrication
- Nose lubrication (Nasya)
- Bathing
- Anjana
- Regular dietary patterns
- Regular sleep patterns

2. Ritucharya – (Ritu means Season and Charya means Activities/ Behaviour)

Ayurveda has also mentioned ritucharya which focuses modifications in lifestyle as per seasonal variations which leads to boost immunity thereby combatting seasonal diseases. It describes change in diet, day to day practices and specific measures to be taken in each season to maintain integrity between doshas in our body. Here are a few examples of lifestyle modifications according to season.

- Diet modifications mentioned in hemant ritu corresponds to modern data as both of these suggests to have frequent or heavy meals as basal metabolism rate is high in this season which tends to give frequent hunger pangs.

- Vaman chikitsa during Vasant ritu helps to alleviate Kapha dosha accumulated in body during Hemant and Shishir ritu.
- Likewise simply taking a nap in grishma ritu helps alleviate vata dosha in body maintain constitution of body.
- Simple body scrubbing in varsha ritu helps to get rid of several topical infections which are more frequent during this season.

3. Sadvritta

Ayurveda also describes Sadvritta which means codes of conduct which primarily describes helps to build mental, social and spiritual well being which is also mentioned in definition of health by WHO. Any variation in Sadvritta leads to Padnyaparadha which is main cause of manifestation of various diseases according to Acharya Charak. these codes are classified as-

- i. Vyavaharika sadvritta (Ethical codes of Conduct)
- ii. Samajhik sadvritta (Social code of conduct)
- iii. Manasik sadvritta (Mental code of conduct)
- iv. Dharmik sadvritta (Moral codes of conduct)
- v. Sharirika sadvritta (Physical code of conduct)

These are various regimens of right conduct - behaviour and maintaining them will not help individual to maintain health but also build a civilized society and nation. In terms of public health these codes of conduct should be taught in schools and colleges as young minds tend to attract values which are inculcated in early life. By utilizing this knowledge one can maintain physical and mental well being and prevent various psychological disorders which are seen today due to disturbed mental health.

4. Janopadodhwansa

It is one of the unique concepts mentioned in Ayurveda which literally means demolition of people or community. There are four factors which are responsible for Janopadodhwansa

- i. Vayu (Air)
- ii. Jala (Water)
- iii. Desha (Land)
- iv. Kala (Season)

Any abnormal alteration in these four factors can significantly influence individual, or community or environment or all of them together such as cyclones, earthquakes, endemic,

epidemic, pandemics etc. Ayurveda also mentions epidemic control measures thereby preventing transmission of diseases, treating disease, boosting immunity, community spread prevention and rehabilitation. One of the recent examples of Janopadodhwansa was Covid 19 which was due to vitiated Vayu (As its route was air borne transmission), vitiated Desha (Country of origin), Kala (S pikes of pneumonia were in winter season). At this instance several AYUSH advisory were issued as per Ayurveda Neti karma to combat local presence of virus, several immunity boosting medicines were introduced by AYUSH department to prevent secondary infections and further transmission.

5. Rasayan and Vajikaran

Swasthasya urjaskar is of medicines i.e Rasayan (Rejuvenation therapy) and Vajikaran (Aphrodisiac treatment). Rasayan drugs acts inside the human body by modulating the neuro endocrine immune system. The Vajikaran bestows contentment, nourishment, continuity of progeny and great happiness.

Rasayan – These drugs are better known as tonics or science of rejuvenation. Directly or indirectly they have anti-oxidant, anti-aging and anti-stress effect. Normally rasayan is a substance used for promoting rasa and allied saptadhatu.

Types of rasayan

1. **Kamya rasayan:-** It is aimed at maintenance and improvement of health. It is of 3 types – pranakamya, medhakamya, srikamya.
2. **Naimittika rasayan:-** It is specific to cure specific diseases and restoring body health. It is of 2 types - Vatatapika, Kutipravesika.

Ayurvedic treatment modalities are directed towards correcting the imbalance between the doshas in body and focus on enhancing the digestion and eliminate toxins out of the body. It follows an integrated approach to the prevention and treatment of illness and tries to maintain or re-establish harmony between the mind, body, and forces of nature.^[8]

6. Yoga

Yoga is an atomistic science which embraces physical, moral, social, mental and spiritual well-being. Yoga is an ancient practise that incorporates gentle exercise, breath control and meditation. One of the measures in preservation of public health is celebration of International Yoga day on every 21st June since 2015.

- AIM – International Yoga Day aims to develop the habit of meditation among youngsters so that they can enjoy more peace of mind and self awareness which is essential for a stress free existence.
- World Yoga Day aims to educate people about the various means of overcoming stress naturally without resorting to any artificial medicine.
- MOTO – Unite mind, body and spirit on Yoga day.

Contribution of international yoga day in maintaining public health is as follows

- Yoga practitioners believe that when a person connects with mother nature with both his mind and soul, he achieves a greater level of consciousness which helps him to be at peace with his surroundings.
- This level of consciousness would invariably lead to world peace as more and more people start practicing Yoga.
- Practicing yoga would lead to stronger bonds between people from different background, irrespective of caste, religion or language barriers. It would help to promote the feeling of communal harmony and create a conjugal atmosphere for global peace.
- International yoga day aims to make the practice of yoga popular among people living in different parts of world, so that people are able to have a correct opinion about this form of well -being, which is not only easy to practice but is also extremely effective on long term basis.
- In short World yoga day aims to bring different communities around the globe together through the practice of yoga, so that the can eliminate all types of negativity from their lives and gain control over their emotions as well as health ailments which often act as the major hindrance in our path of self development.
- Yoga helps to keep the internal organs in the body to function properly by increasing the oxygen and blood flow. Proper oxygen and blood supply to all the vital organs helps to diminish the occurrence of major diseases related to heart, lungs, kidneys and other vitals.

7. Panchakarma

This is one of the special modalities mentioned in Ayurveda. It encompasses all the three vitiated doshas in body. It can be all year round depending upon disease and vitiated doshas but in case of maintain health preserving body constitution one can go for elective Panchkarma therapy according to season.

- Vaman in vasant ritu – Helps to alleviate kapha dosha accumulated in Hemant and Shishir ritu
- Basti – Helps to alleviate Vata dosha in Varsha ritu
- Virechana – Helps to alleviate pitta dosha in sharad ritu.

All these procedures detoxify body and maintain health. Besides these procedures topical procedures are also of great value such as

- Nasya – Administration of medicated oil through nose
- Gandusha /Kaval – Oil pulling
- Anjana /Tarpan /Putapaka – Helps to alleviate eye disorders.
- Sthanika basti chikitsa – Such as manya basti, kati basti reduces localised vata dosha significantly thereby reducing pain.

Secondary prevention emphasizes on early diagnosis and treatment which can be achieved by various modalities of diagnosis such nadi pariksha (Examination of pulse), darshana (Inspection), sparshana (Palpation), and prashna (Interrogation) etc. and treatment modalities such shaman (Alleviation) & sodhana (Purification).

Ayurveda concerns chiefly with longevity, whose notion is not only limited solely to long-lasting life, but it circumscribes all the conditions to live in health and vitality in order to carry out a healthy death, meaning the natural final experience of the cycle of life.

According to Ayurveda, diseases manifest due to imbalances (Attributed to stress) in this healthy state of body and mind. Thus, in Ayurveda the concept of public health, even encompassing all ages, focuses fundamentally on the individual capability of healthy aging intended as complete fulfilling one's life.

Above mentioned concepts of Ayurveda helps in following ways-

1. Strengthen immune system- This is mostly achieved by rasyana medicines.
2. Detoxification – This is achieved by Panchkarma procedures such as vaman, virechana and basti. Simple Anjana karma (Collyrium application) on daily basis helps to wash away impurities from eyes and strengthen eye sight by improving tone of eye muscles.
3. Responsive inflammatory system.
4. Optimal metabolic system.
5. Maintains hormones at optimal level.
6. Enhanced regenerative system.

7. Maintain mental health.
8. Free radical scavenging or anti-oxidant.

Ayurveda contributions in public health^[10]

Establishment of Health and wellness centres has already been initiated by Govt of India under Ayushman Bharat Scheme. This shift from selective approach to comprehensive range of services denotes the current need of public health. The holistic principles of Ayurveda plays a pivot role in catering these needs. Ayurveda encompasses multidimensional care for example preventive, promotive, curative, rehabilitative and palliative care. If we strengthen host it would less likely flourish disease, reduced disease burden on a country provides better chances of its economic development.

A. Healthy growing

Strengthening the host would include salutary factors like immunomodulation through various regimens of Ayurveda e.g., some daily regimen procedures like nasya, abhyanga, kavala, gandusha etc.; decade-wise rasayana therapy and following other codes of conduct. Though the paramount substance of health preservation and promotion through healthy lifestyle lies in prevention and management of non-communicable diseases, the association of preventive and health promotive measures with reduced COVID-19 incidence and better quality of life among police personals has already been showcased. Inculcation of such activities in day-to-day life of school going children would certainly help raise a physically, mentally and socially healthier generation who will be less prone to diseases and contribute to the country's overall growth efficiently. Such regimens definitely have potential to offer quality improvement of cure and care in healthcare set-ups. Administration of Suvarna prashan in all school going children can help to build a strong immune system.

B. Prakriti specific Diets and Therapeutic ayush diet

Genetic material determines all the functions in the body. The concept of nutrigenomics appraises that nutrition modifies the extent to which different genes are expressed and thereby modulates whether individuals attain the potential established by their genetic background. Specific dosha/prakriti type based Ayurvedic therapies and foods have been advocated in Ayurveda, mass education programmes and diet modules for personalized nutrition can be framed.

C. Pre-Conceptional and Antenatal care

Providing new horizons to obstetric care through Ayurveda, Garbhadhan samskara and garbhini paricharya are the tools which shape up the statement “The objective of antenatal care should be not only to discover or even though diminish the incidence of abnormality in pregnancy and parturition but also to secure normality and a high standard of mental and bodily fitness”. A module including cleansing therapies, use of rasayan and vajikaran herbs before conception, general dietary guidelines and month-wise specific dietary regimen, lifestyle modifications, mental relaxation techniques; specific yoga, pranayama and dhyana practices should be implemented for a healthy gene passage and healthy future community.

D. Mental health

Use of Medhya Rasayana, Achara Rasayana, Yoga and Pranayama practices etc. raise the strength of sattva and hence promote mental health of an individual.

E. Preventive seasonal purificatory therapies

Shodhana chikitsa in Ayurveda fulfils preventive as well as curative aspects. If an individual does not follow appropriate daily and seasonal regimens, diseases manifest. For seasonal disease prevention, different shodhana therapies have been advocated for healthy individuals. If an individual pro-actively undergoes these shodhana therapies, the accumulated dosha expel out from the body and he remains healthy. Provision of such procedures at Health and Wellness Centres may help improve community health and decrease incidences of seasonal diseases.

F. Tertiary Prevention and Quality of life enhancement

As a part of rehabilitative therapies, to shorten the duration of disease process and to pace up the recovery process; many immunomodulatory herbs and yogic procedures do wonders. It is evident now that ayurvedic formulations like AYUSH Kwath, rasayana like Chyawanprash and procedures like Oil pulling, yoga and pranayama helped people recover early and better from a deadly infective disease like COVID-19 also. So the current era demands to utilize this science in welfare of public health.

Challenges

- The major challenge ahead of health promotion by Ayurveda is to produce competent Ayurveda medical practitioners -perhaps the existing system has not been completely successful in producing confidence among Ayurveda graduates for practicing pure

Ayurveda. There may be several motives attributing towards this, including student's inability to understand basic principles and concepts of Ayurveda practice, improper infra-structure in Ayurveda institutions, unskilled teachers, etc.

- Another important provocation is the lack of adequate practical exposure in clinical practice.
- Economical or financial hurdles – As the treatment would cost a more expense following it on a mass basis could be challenging
- Lack of social awareness -India is a developing country where inculcating such values in low socio economic strata can be difficult due to low wages therefore measures should be taken to built cost effective treatment through Ayurveda.

Several other factors might contribute to such issues & discrepancies, for example:

- Lack of standardization and quality control of the herbal drugs used in clinical trials and use of different dosages of herbal medicines.
- Inadequate randomization in most studies, and patient's batch not properly selected.
- Difficulty in establishing medicines as conventional medicines may not have palatable taste and aroma etc.
- Wide disparity in the duration of treatments using herbal medicines.
- Misconception among public regarding delayed effect of Ayurvedic drugs.
- Media creation of toxic effects of Traditional Medicines due the use of minerals and metal

Despite these formidable obstacles many significant intellectual efforts can take to promote Ayurveda towards public health promotion.^[11]

1. Create awareness about Ayurveda and Ayurvedic treatment principles.
2. Standardization and quality control of the herbal drugs with proper clinical trials.
3. Describe the line of treatments that are available to overcome stress and stress related disorders.
4. Evaluate the treatment methods with available scientific evidence and easy to take medicine by people.
5. Demonstrate their usefulness to address public health issues.

CONCLUSION

Public health today is gaining momentum all over, and is a good sign for traditional medical systems to get their place to fulfill the need of the day. Public health as a direction is mainly

seen as a part of or an alike stream to community medicine. But the ancient texts of Ayurveda also describe certain principles of public health in its own idioms. Though the classical texts of Ayurveda describe many principles such as infectious disease, immunity, nutrition etc. which are very common issues in public but the present document is focus on the notion of public health and health in brief. Ayurveda is the greatest choice for achieving the goal of personal health along with public health.

REFERENCES

1. Acharya YT, editor. Charaka Samhita of Agnivesha, Sutra Sthana; Arthedashamahamuliya. Varanasi: Chaukhambha Orientalia, 2011; 187: 30-26.
2. Acharya YT, editor. Susrutha Samhitha of Susrutha with Dalhana Tika. Varanasi: Chaukhambha Orientalia; (Sushrut, Sutrasthan, 1992; 15-48.)
3. Constitution of the World Health Organization Am J Public Health Nations Health, 1946; 36(11): 1315–23. doi: 10.2105/AJPH.36.11.1315.
4. Acharya YT, editor. Varanasi: Chaukhambha Orientalia; Chraka Samhita of Agnivesha, Sutra Sthana; Arthedashamahamuliya, 2011; 187: 30-26.
5. Paradkar HS, editor. Varanasi: Chowkhamba Krishnadas Academy; Ashtang Hridaya of Vagbhata, Sutra Stahna; Doshabhedhiya, 2006; 207: 12, 67-68.
6. <http://www.ayujournal.org/text.asp?2015/36/1/3/169005> accessed date:1st March 2019
7. Acharya YT, editor. *Dirghajivitiya*. Varanasi: Chaukhambha Orientalia; Chraka Samhita of Agnivesha. Sutra Stahna, 2011; 22: 1-123.
8. Acharya YT, *Rasayan -abhayamalakadi*. Varanasi: Chaukhambha Orientalia; Chraka Samhita of Agnivesha.Chikitsa Stahna, 2011; 1: 123.
9. Eriksson M, Lindstrom B. Antonovsky's sense of coherence scale and its relation with quality of life: a systematic review. J Epidemiol Community Health, 2007; 61(11): 938–44. doi: 10. 1136 / jech. 2006. 056028
10. info@ayurworld.org | www.ayurworld.org – 9th world ayurveda congress 2022
11. https://apha.confex.com/apha/134am/techprogram/paper_133135.htm, Last accessed date 28 February-2019