

A Review on Traditional Systems of Medicine

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ABSTRACT

In 21st century, people are mostly dependent on medicine for lifestyle diseases. There are different kinds of systems such as the allopathy, the Ayurveda and the Homeopathy in the whole world. People rely on these according to their needs and faith. Medicine can be described as proper defined balance of body's chemistry and biological aspect to treat, diagnose and prevention of various severe, non-severe, fatal disease without any surgery requirement. Medicines are further classified into two categories, traditional and modern. Ancient medicinal approaches have been able to regain people attention and popularity due to natural origin and less side effects. Reported research also supports and validates the effectiveness of traditional medicine system.

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Received: November 07, 2022; **Accepted:** November 15, 2022; **Published:** November 22, 2022

Keywords: Medicine, Prevention, Treatment, Traditional medicine system

Introduction

Ancient system found in South Asian parts includes Siddha Unani and Ayurveda, as per mentioned in manuscripts and holy books (Vedas) [1]. Ayurvedic concept developed between 2500 and 5000 B.C. Ayurveda relates to science of healthy life and longer lifespan. It is a complete package of well-being lifestyle. Food is major source of nutrition, but due to growing modernization the traditional methods of self-care. The modern lifestyle lacks its nutritional value and choice of unhealthy food, lack of vital micro and macro nutrients accepted in relation of nutritional full diet [2]. Due to its high nutritional values and lower side effects, use of traditional medicine shows huge increment in the last 10 years. In North Asian countries including China 2 out of 5 persons are treated with traditional method and medicine [3]. In India 65% population especially the one belonging to rural areas use Ayurveda and other traditional system [4]. Methods in manuscripts and holy books as per Veda are very effective as they are used in various treatment methods to lower the risk of side effect and increase in effectiveness of severe or non-severe disease [5].

In Central, Southern and Eastern Africa countries, the first aid treatment was done by traditional method on 13 out of 20 people which include children too, for its safety and efficacy [6]. There are two main obstacles for the rationale use of traditional medicines, first is the lack of qualified practitioners and second is lack of organised network. A strategy paper on traditional medicine was provided by WHO in 2002 which included pharmacological action as per in Ayurveda, Unani, Arabic and indigenous medicine systems. It is hard to accept in some country the health care sector is growing by showing high efficacy, lower risk due to its ancient

methods used in medicines [7].

Evolution of Medicines

Medicines were still used by human beings in prehistoric times. Pre-historic time even they don't know how to speak well and used basic sign language. The pre-historic people used medicinal herbs as medicines [8]. Some of the medicinal herbs are, Yarrow (*Achillea millefolium*) an astringent for contraction and stop bleeding. Mallow is used for colon therapy. Rosemary a herb rich Fe, Ca²⁺ and vita. B6. Along with use in muscle pain, hair growth promotion, digestion improvement etc. it is also used now for cancer disease in Ayurveda treatment. Modern medicine is based on pre-historic Greece methods, according to them god heal them while visiting in their dreams, later found the human bodies composed of different organic and inorganic molecules in a definite proportion [9]. Any disturbance in the proportion leads to deficiency that may lead to a severe disease. Some theories suggest that Hippocrates is the founder of western medicines. He found that illness is related to both physical and rational practices. A natural way of treatment was followed by him. In 19th century several hospitals were established [10]. From then on use of chemicals as medicine started such as chemical mustard gas which reduced WBC, insulin for diabetes. Also, penicillin was produced. The first polio vaccine was also licensed during this period. Prozac medicine was also developed during this period which helped in disease related to mental illness [11].

Ayurveda

It belongs to South Asian country, Indian origin which means in Sanskrit language longevity + science. The Shusruta Samhita and Charaka Samhita are some of the influential works on traditional medicine [12]. Ayurvedic treatments include as per its literature herbs, vegetables, asanas, flowers and a natural method for cure.

Ayurvedic treatment is a way of auto healing process as it uses herbs, vegetables and flowers. It's a way of treatment depending on five elements of human body which are water, earth, air, space and fire. According to ayurveda, body mind and spirit are connected to each other. This method aimed at root cause of disease and permanent cure. Immune system is considered as centre of wellbeing so ayurveda is all related to immunity building. We can say that Ayurveda is father of all medicine systems, other medicine systems are derived from ayurveda, which includes isolation of hypersensitive alkaloids like sarpagandha, ashwagandha plants. sarpagandha is one of the first alkaloid extracted and used in treatment. Nutrition is the key for growth and development of body. Food is source of nutrition which is composed of five elements discussed earlier [13].

Different combinations and permutations of panchmahabhutas make humour which are psychological entities. Treatment depends on maintaining equilibrium and avoiding factors responsible for disequilibrium by use of different procedure, medicines, suitable diet etc. Supported suitable diet, exercise and medicine are important supporting parameters in treatment. With these three supporting parameters, with accuracy usage act as antagonist for disease to act on body, this leads to lower infection, that further lead to a healthy human being. These two ways are known as Vipreeta and Vipreetarthkari respectively. It is showed that ayurveda has no/minimal side effect, if not followed well it shows side effects. It is assumed that ayurvedic medicines have no side effect it has but not that, much. There is bit of side effects if the regimen is not followed accurately. Main drawback of this system is the time period it takes to cure [14].

Siddha System

The term Siddha means achievement and this method has roots in Southern India. It is basically therapeutic in nature and mostly practiced in Tamil area. Siddha medicine differs from Ayurvedic medicine on basis of its goals. While Ayurveda is oriented to disease but Siddha is oriented to the health. Due to south-indian specific land approach of Siddha system, it has not gained that much popularity in world [15]. It consists of basic 5 elements earth, water, fire, air and sky. The drugs and diet that are to be taken must be made by combination of these five elements. In this system, the three humours, seven tissues and waste of body are also given importance. Imbalance of equilibrium of these five elements leads to disease. Siddha system is particularly helpful in treating skin problem, UTIs, and hepatic and GIT infections [16].

Unani

Ibn-e- Sina, commonly known as Avicenna, was the one of great scholar of unani medicine. He described Yunani medicine system as 'it is the science in which we learn various states of the body in health and when no in health and the means by which health is likely to be lost and when lost, is likely to be restored.' It is an herb amino- mineral in origin [17]. It contains ample of concepts and idols of medicinal origin that is based on greece and statement of Hippocrates and Galen. Arabs introduced Unani medicine system in India. It took firm roots soon as scholars of Unani system were provided patronage and also employed as court physicians. But after British takeover this system suffered a setback. The three families, Sharifi in Delhi, Azizi in Lucknow and Nawabs in Hyderabad made their complete efforts to hold the mass use of Unani medicines. It provides with primitive, preventive and curative healthcare. Temperament is given great importance. Its treatment is related to all organs of the body such as disease of skin, liver, reproductive tract etc. some unique features of this system includes, use of optional intoxicates, aphrodisiac organ

specific analeptics, temperament of specific medicaments, food and level of digestion in human body are of great importance in Unani medicine system. During treatment specific dietary regimens are recommended. Proper diets are assumed to produce good health [18].

Homeopathy System

Discovered by German physician Samuel, it is based on idea that 'like cure likes' and so the name 'homeo' for similar and 'pathy' designating disease. Main principle of homeopathy is similia. It can be defined as gestful, integrated and conservative system of individual drug efficacy, its pharmacological action, as per the law having its capability to treat disease, that can be treated well lowering the system of untreatable disease [19]. Medicines are given in small concentration, it attacks on the base root cause of disease and encourages symptoms of healing, psychological, and other details of patient are given importance. This will help you aware of the patient and find out which treatment is most appropriate. These medicines are non-toxic. Also they enhance the immunity power of the body. Treatment considers curing disease as per their individual needs. It is very effective in conditions such as headache, infections, allergies etc. It also gives importance to yoga and meditation. The two main disadvantages are long time treatment and no use in emergency cases [20].

Allopath system

Allopathy derived from Greek words meaning 'other than disease'. It is based on western therapeutic framework. It is basically based on three pillars 1) postulation 2) investigation 3) and result of experiment. This system concentrates on symptoms and not the cause of disease. The medicine cures the disease and not the root cause. They are really effective during emergency cases [21].

Traditional Middle Asian (Chinese) Medicine

It is a traditional system of improving health care and verdure used in whole china. It looks at your entire wellbeing. There are two central ideas behind TCM.

Qi= life energy/vital energy. It is assumed that Qi flows through whole body and TCM based on this to maintain the proper flow.

Yin & Yang: they describe these qualities of Qi although they are different in nature. Yin- night, dark, cold, negative, female. Yang- day, light, warm, positive, male. When these two are balanced one feels healthy.

Acupuncture: Acupuncture is a health care technique in which trained person stimulate specific muscle, points on body with fingers/needles. It is said that pressing those points will stimulate the release of natural painkillers of the body. According to TCM, there are 2000+ specific points for acupuncture for specific action on body [22].

Tai Chi: It consists of combination of certain body position, firm movements, meditation, breathing in and out, relaxation. Study done by researcher continuously practising shows a huge improvement in balance and stability, and on person suffering from Parkinson's like disease [23].

Moxibustion: It is a technique involving burning insane sticks of mugwort root to facilitate healing. This leads to stimulation of flow of Qi and expel wind and cold out of body [24].

Tui Na massage: Tui Na (contains three 1) massage 2) acupressure and 3) manipulation) has been used in centuries in China.

Practitioners use plant-based compresses, ointments and heat to enhance the massage.

Chinese herbs: Most commonly used substances come from roots, leaves, flowers and seeds of plant such as ginseng, ginger, liquorice etc. The medicinal plants converted in to formulation that latters dispensed in various forms like tea, capsules and liquid extract [25].

Table 1: Some Drugs or Compounds Isolated from Chinese Herbal Medicines

Sr No.	Plant Origin	Drugs or Compounds	Therapeutic effect	Reference
1	<i>Artemisia annua L</i>	Artemisinin	Anti-malarial	[26]
2	<i>Corydalis yanhusuo</i>	Tetrahydropalmatine	Analgesic	[27]
3	<i>Paeonialactiflora</i>	Paeoniflorin	Analgesic	[28]
4	<i>Peurarialobata</i>	Peurarin	Diabetes	[29]
5	<i>Gastrodiadlata</i>	Gastrodin	Anti-convulsion, analgesic	[30]
6	<i>Saussurealapa</i>	Costunolide	Anti-gastric ulcer, antispasmodic	[31]

Traditional Japanese Kampomedicine System

kampo medicine system dates back upto > 1500 years. The term 'kampo' means 'methods based on herbal system of China and Japan period i.e., 260 BC to 220 AD of conventional China'. Shang Han Lun was a treatment manual for using herbal recipes. Yoshimasu Todo wrote in. "In clinical medicine, you need to trust what you actually observed when you see a patient." Abdominal palpation as diagnostic procedure as described by him had a very great efficacy on patients as it is based on herbal system of China and Japan that used till now [32]. Although it is based on China traditional methods but it is not seemed as modern traditional medicine. Japanese kampo favours diagnostic methods related to symptoms, bypassing speculative concepts. Since 1971, herbal method of treatment and prescriptions are been included in National Health Insurance drugs. Till date, around 150+ kampo herbal prescriptions were recorded. According to survey done through Journal Nikkei Medical more than 7/10 follow kampo meds right now. Biggest society for kampo medicine with 8600 members and 2600 certified board members is Japan Society for Oriental Medicine. The Ministry of Education of Japan has included kampo med. System in its "education Curriculum" to better develop the student's brain in health care sector too [33].

Due to enormous increase in kampo usage, many ready to use modern forms developed. Kampo is an individualised treatment system in which over all condition of patient and their constitution are considered very seriously. The aim of treatment is to relieve symptoms and restore harmony in bodily functions. The physical examination includes abdominal tenderness, tongue inspection and pulse recognition for any abnormality. Ki (vital energy), ketsu (blood) and sui (body fluids) are three important parameters. By gathering the amount and distribution of these, additional information regarding disease can be collected. It may happen that patient with same diagnosis given different prescriptions or patients with different diagnosis given same prescriptions [34].

Korean Medicine

Korean medicine system is collaboration of allopathic and traditional medicine. It originates from pre historic times sharing its origin with Chinese and Japanese medicine. Korean medicine has uniconcepts and research, with four postulates and Saam acupuncture. In recent years, the Korean health care system has become a part of the Koren medical system, and its application continues to spread nationwide. It focuses on self-discipline and 3 valuable points (essence, qi, mind). In 1951, western and Korea are 2 new introduced combined operation for two independent healthcare systems, In South Korea, all physician need to have sufficient knowledge of either Western symptomatic treatment

and specialties of Korean health care system of medicine. Korean med. incorporates modern allopathic medicine, with conventional and compatible outlook working together to treat patients with few or no side effects [35].

The Korean Medical Code is managed by the department law. First, select "Main condition code". If the medical practitioner determines that the traditional Western medicine code is not suitable, the traditional med. code that uses the KDC's U code is selected. In addition to the essential and non-essential conditions that occur during the healthcare period also, they also affect the treatment of the patient. This system is seen as an important contribution to establishing evidence-based personalized medicine and improving the traditional approach of the Korean healthcare system [36].

Traditional Arabic and Islamic Medicine

The origin and advancement of Arab medicines occurred by 3 levels. The first phase involved translation of medical work of various manuscript and books of (Hippocrates and Galen, Plato and Aristotle) into Arabic. In later phase of translation is done by European students into latin and accepted in those country too. Traditional Arabic medicine is the submit of ancient Greek and Roman, North Asian country, Ayurvedic principles and practices [37]. The basic origin of the medicine system have direct effect on the religious aspect at the 7th century of Arab and Islam which include plant based drugs involves herbs, food practise. In the ancient Islam system we had seen the rules of fasting and consuming zam water during fasting period and include meditation. In medication includes over 250+ herbal plants and consume as syrups, herbal tea, topical medicaments. Commonly known as black seed, *Nigella sativa* used both as herbal med. and oil for respiratory health, immune system support etc [38].

Advancement in Traditional Systems of Medicine

Bhasma means Ash is a unique Ayurvedic herbo-mineral-metallic compound in size of 5-50 nm, so called nano dimensions. These are products of classical Indian literature, the 'Ayurveda Rasa Shastra', used to treat some chronic illnesses [39]. Bhaskararana is systemic and elaborated manufacturing process. In this the metal are excited from zero valance state to higher oxidation state and remove its toxicity of metal. These are integrated with biological molecules having better functionality, bioavailability, absorption, stability and effectiveness. Also, these are safe and economical in comparison. They have some common properties like Rasayana, Yogavahi, Alpamatra, Rasibhawa, and Shigavyapi. These are biocompatible, nontoxic and non-antigenic. For B chronic lymphocytic leukaemia, Swarabhasma used. In another

study, nano particle size of Bhasma was confirmed and proposed that nano particles are responsible for its fast and targeted action. *Cuscutachinens* is genereallyused as TCM tonic for liver and kidney. Its oral administration was limited due to poor water solubility therefore nano particles were developed. By using of precipitation method Polylactic acid nano particles of lipophilic anticancer herb Cucurbitacins were developed. Development and characterisation of SLNs for TCM also been carried out for targeted drug delivery system. Triptolide loaded poly (DL lactic acid) nano particle developed by Liu et al [40]. This helped to reduce the problems like lower solubility and excess toxicity [41]. For delivery of Curcumin for cancer cells A new natural occurring, self-building-polymer, methoxy poly palmitate was developed by Sahu et al [42]. under physiological conditions, camptothecin was hydrolysed. So to prevent this, Min et al. developed hydrophobically modified glycol chitos and nanoparticle encapsulated camptothecin. Polymeric nanoparticle formulations, polylactic acid or polylactic-co-glycolic-acid were developed Hypericin. A nano lipid vehicle loaded with curcumin was developed by Sou et al [43]. for delivery to tissue macrophages. Liposomal formulation encapsulating tea catechins were studied by Fang et al [44]. Bioavailability of silymarin increased using buccalcavity route of adm. by Samaligy et al [45]. Anti-inflammatory and transdermal drug delivery capacity were studied by Mei et al [46]. and he prepared triptolide incorporated solid phase nano particles. For epidermis for treatment of genital warts, podophyllotoxin loaded with solid lipid nanoparticle prepared by Chen et al [47]. Curcuminoids were degraded by acidic and alkaline hydrolysis, oxidation, so curcuminoid loaded solid nanoparticle in cream were studied by Tiyafoonchi [48].

Table 2: Characteristics of Several Important Traditional Medicine Systems

Sr No.	Name	Origin and Developing Nation	Characteristics of Theory and Application	Modern Research	Reference
1	Traditional Chinese Medicine	China Thousands of years ago.	TCM is based on yingyang and Wuxing concept. A classic formula is composed of four elements: monarch, minister, assistant and servant according to their roles in the formula.	In recent years, many TCM and compound-based therapies have been discovered. Much effort has been made to elucidate the underlying molecular mechanism of TCM.	[49]
2	Ayurveda	India Pre vedic epochs (4000 BC – 1500BC)	Ayurveda uses natural elements to eradicate the main course of disease. The philosophy is to live a healthy life. Many herbs are combined together for ideal therapeutic action.	Pharmacologically active compounds of ayurvedic medicine and their effectiveness in treatment have been increasingly recognised.	[50]
3	Unani Medicine	India Derived from Geo Arabic medicine dating back to 2500 years and developed during Arab civilization.	Treats person mind, body and soul as one. A person's temperament plays a vital role.	Many bioactive molecules are derived from mangrove plants used in Unani medicine system.	[51]
4	Kampo	Japan Kampo was introduced from china via the Korean peninsula.	Kampo treats every human being as a complete and self controlled whole in which body and mind impact mutually. Diseases are thought to originate from the disorders of psyche and soma.	kampo Formula is manufactured by a certified pharmaceutical company under strict quality control standards. Attention was also paid to study the effectiveness of the Campo formula and to explore related mechanisms.	[52]
5	Traditional Korean Medicine	Korea Mid 19 th century	Holistic Theoretically similar to personalized medicine	He has made many important achievements related to constitutional diagnosis, constitutional susceptibility to disease, and genetic research.	[53]

Conclusion

Medicines are used in treatment of diseases and relive pain. Ancient and modern methods are two types of ways adopted by people based on their preferences. Both types have their own benefits and weak points. The ultimate goal of all medicine system is to make a person live happy, healthy and symptom free life. A correct amount and right method of taking a dose can minimize the side effects. Ayurveda, Siddha, Unani, Homeopathy, Traditional Chinese system are some of the famous traditional medicine systems practiced all over the world. Recently herbal formulations have been getting more attention but various problems related to them are Low solubility, low bioavailability, low oral absorption, toxicity, etc. To overcome such problems, nanoparticle formulations of herbal drugs are being made. Different nano particles such as polymeric nano particles, leptosomes, solid lipid nano particles, micro emulsions are developed to showcase potential utilization.

Author's Contribution

VV researched and wrote this review. NK, LS and KA design it. PKV provided guidance, critical review and revision of the manuscript. All authors read and approved the final manuscript.

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