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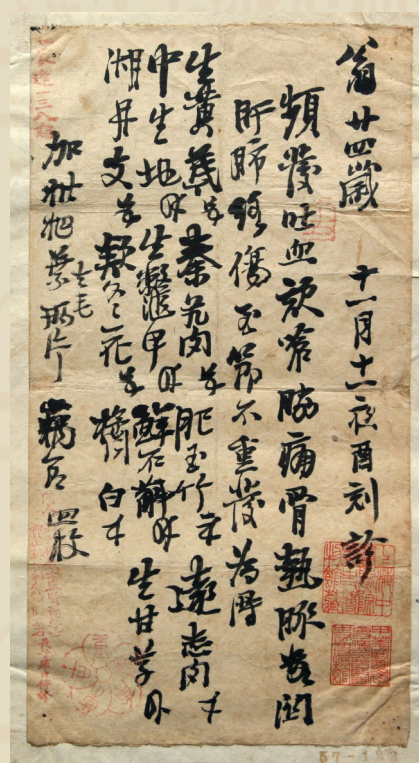
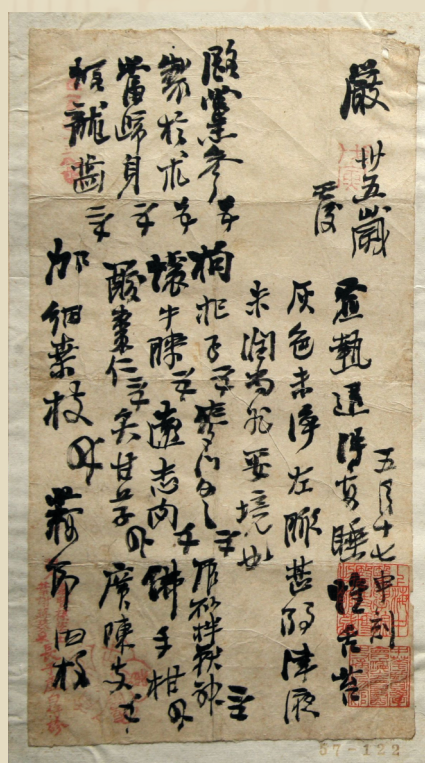
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***Chinese Medicine and Culture* was Selected in New Journal Project of High Starting Point in 2019 Chinese Science and Technology Journal Excellence Action Plan**



According to the *Notice on Organizing and Implementing the Project Declaration of the Chinese Science and Technology Journal Excellence Action Plan* (Association for Science and Technology Issue (2019) No.41) issued by CAST (Chinese Association of Science and Technology), Ministry of Finance, Ministry of Education, Ministry of Science and Technology of the People's Republic of China, National News Publication Bureau, CAS (Chinese Academy of Sciences) and CAE (Chinese Academy of Engineering), *Chinese Medicine and Culture* has been selected in New Journal Project of High Starting Point in 2019 Chinese Science and Technology Journal Excellence Action Plan. It is of great significance to establish *Chinese Medicine and Culture* and build professional journals with Chinese cultural characteristics to fill the international academic gap.

Chinese Medicine and Culture is hosted by Shanghai University of Traditional Chinese Medicine, and supervised by Shanghai Municipal Education Commission. Its editorial department is affiliated with Institute of Science, Technology and Humanities of Shanghai University of TCM. Centred on “Interpreting TCM comprehensively from the source of culture to show the profound humanity of TCM to the world, thus enhancing the exchanges between TCM and other medicines across the world to ensure the medicine can be shared by mankind”, the journal is committed to publishing original research paper ranging from the history of Chinese medicine to related documents, comparative study of eastern and western medicine, philosophy of Chinese medicine, evidence-based medicine, Silk Road medicine and medical anthropology, actively promoting the international exchanges of Chinese medicine. At present, the resources from the journal have been included in multiple databases, such as EBSCO Publishing's Electronic Databases, Ex Libris - Primo Central, Hinari, Infotrieve, Netherlands ISSN Center, ProQuest, Google Scholar, Exslibris, Journal Gide, TDnet, CNKI, Baidu Scholar and Wanfang Data.

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Homeopathic Medicine Versus Traditional Chinese Medicine: An Analytical Overview

Sheikh Faruque Elahee¹, Huijuan Mao², Fatema Zohra³, Sheikh Muhammad Bin Faruque⁴, Xueyong Shen^{1,5}

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Abstract

Conventional homeopathy and traditional Chinese medicine (TCM) are two popular alternative systems of medicine, which are practiced also in many countries outside the countries of origin. Homeopathy originated in Germany in the 19th century and spread throughout the world in spite of antagonism by the orthodox practitioners. It is a holistic medicine based on the principles of treatment where the remedy and the disease have similar symptoms, applies a single potentized medicine at a time, in minimum dose. TCM, also a holistic medicine originating in ancient China about 3000 years ago, has been developed and practiced through centuries till today as one of the most popular alternative medicines in the world. Both the systems of medicine have many differences in theories, principles and practices, but they have some important aspects in common. Both are holistic in approach, treating the whole patient, not the affected organs only; focusing on stimulating the intrinsic life principle to bring order, and on homeostasis and balance in the organism. In therapeutics, they may advantageously be applied as adjuvant to each other, producing synergistic effects.

Keywords: Chronic Miasms, homeopathy, potentization of medicine, Samuel Hahnemann, traditional Chinese medicine

INTRODUCTION

There are many systems of medicine which are discovered and practiced in the world since the primitive ages, for the purpose of maintaining wellness and treating illness of man. Some of the systems became obsolete with the advancement of science and technologies, but some have remained till today.

The systems of medicine practiced in the world may be categorized into (1) Conventional medicine, such as Allopathy. (2) Alternative medicines, such as traditional Chinese medicine (TCM), traditional Indian medicine or Ayurveda, Unani/Arabic medicine, naturopathy, osteopathy, chiropractic, and homeopathy.

All the systems of medicine have contributions in the field of therapeutics, and one may be used as a complementary to the others. In most countries, Allopathy is practiced as the conventional medicine along with indigenous, traditional

medicines. For example, in China, TCM is practiced besides conventional homeopathy. Western medicine in India, traditional Ayurvedic medicine is practiced besides conventional Western medicine. Some of the traditional medicines, for example, TCM and Ayurveda, have gained popularity worldwide, beyond the countries of origin.

Such is the case of homeopathy, the German alternative medicine, which was discovered by German medical scholar Dr. Samuel Hahnemann in the early 19th century. Originally, a conventional physician, Hahnemann could not accept the prevalent practices of allopathic medicine of his time, such as blood-letting, application of leeches, use of strong purgatives, emetics, large doses of mercurial preparations, then in vogue.

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He also differed on the question of the causation of diseases and therapeutic principles. He started experimenting and at last discovered a new treatment with very small doses of single medicines, selected according to symptoms similarity with the patients. He named it homeopathy, coining the phrase as “*similia similibus curentur*” or “let likes be cured by likes.”

HAHNEMANN, HIS LIFE, AND WORKS

Early life

Hahnemann was born in a small German town Meissen in the Electorate of Saxony on April 10, 1755. His father was a porcelain painter with modest income and a large family. He studied in Prince's School of Meissen, where he learned many foreign languages. He was extraordinarily talented, but his poor father took him away from the school and wanted him to be employed in some petty jobs to help the family. His teachers prevented this by awarding him free tuition. In 1775, he finished the high school with honors, writing a dissertation in Latin entitled “The wonderful construction of human hand.” He became proficient in a number of foreign languages, including English, French, Italian, Greek, Latin, Arabic, and Hebrew.

Hahnemann decided to study medicine but had no monetary support from the family. At last with a little money from his father, he went to Leipzig University to study medicine. He utilized his great knowledge of languages to help earn his living by translating foreign language books into German. He also gave private tutoring to a rich young Greek in his study of French and German. After studying 2 years in Leipzig, he went to Vienna for further study and at last obtained his “Doctor of Medicine” degree from Erlangen University in 1779. His doctoral thesis was entitled “*A view of the causes and treatment of cramp*”.

Early medical career and birth of homeopathy

After qualifying MD, Hahnemann started medical practice. He moved to Dessau where his interest in chemistry brought him in contact with local pharmacist Haseler, marrying late on his stepdaughter Johanna Henriette. In 1781, he was appointed Medical Officer of Health of Gommern, later moved to Dresden where he worked in Forensic Medicine for 4 years. He returned to Leipzig to exercise his expertise in scientific pursuits. Leipzig as the seat of a big University and book-selling trade was one of the intellectual centers of Germany. But soon, he was disgusted with the conventional treatment in vogue, such as blood-letting, leeching, purging, vomiting, and blood cleaning so he gave up medical practice. His growing family had to be supported by translated books of medicine, biology, chemistry, etc., from different languages. He was then esteemed as an accomplished translator which earned him honor of being elected as distinguished fellows of many scientific societies of Leipzig.

In 1790, he was translating an English book “A Treatise on Materia Medica” by British physician William Cullen. While discussing the treatment of intermittent fever with Peruvian bark Cinchona, Cullen opined that the efficacy of this bitter

remedy was due to its tonic effect on the stomach. Hahnemann criticized this opinion saying that there are many remedies that are bitter and has tonic effect on the stomach, but do not cure intermittent fever. He decided to experiment the effects of Cinchona on his body, he took four drams of its tincture twice daily for a few days. He was surprised to have developed almost all the symptoms of intermittent fever with chill, fever, sweat, etc. From this experiment, he hypothesized that Cinchona cures intermittent fever not due to its bitter taste or tonic effect on the stomach but by its property of producing similar symptoms of intermittent fever in a healthy body. He then started experimenting with other remedies known to cure certain diseases and surprisingly had the same experience as that of Cinchona. He then deduced that a remedy cures a disease by its inherent property to produce similar symptoms in healthy body. He named such experimenting of drugs in healthy human as Drug Proving. He continued further provings with different drugs and recorded the symptoms. He then started applying them in patients with similar symptoms as a way of clinical experiments, deducing at the end a principle of treatment as “*Similia Similibus Curentur*” or “likes cure likes.”

In 1796, Hahnemann published his new experience in *Hufeland's Medical Journal* as “*Essay on a new principle for ascertaining the curative power of drugs*,” he also published “*Medicine of Experience*.” In 1806, he published “*Fragmenta de viribus medicamentorum positivis*,” in which he added all the proving reports with a symptoms index. He also devised a unique method of preparation of drugs by serial dilution with liquid vehicle, at the same time, strongly shaking the container. He claimed that this procedure reduced the toxicity of drug, at the same time, potentiating its therapeutic effects more and more. He called it “Potentization of drugs.” In 1810, he officially announced his new system of medicine “Homeopathy,” by publishing the epoch-making book “*Organon of Medicine*.” As expected, the orthodox medical community fiercely opposed and criticized the principles and practice of the new system.

Homeopathic career

Hahnemann decided to join a University faculty to teach the new system of medicine. He shifted to Leipzig and applied to the Dean of the Medical faculty of Leipzig University to join as a faculty. He was required to submit a dissertation and defend it in front of the faculty members to qualify himself. He did it successfully and joined the faculty in June 1812. He officially started a course of homeopathy and lectured twice weekly. His lectures attracted many students, doctors, even faculty members. Many doctors from the surrounding districts used to travel a long way to listen to his lectures. However, after the initial enthusiasm, the crowd was gradually fading because of (1) Hahnemann's criticism of the prevalent methods of treatment, which the new doctors did not want to give up. (2) Allopathic professors of the faculty did not like the students attending Hahnemann's lecture. (3) Students who followed Hahnemann were ridiculed, mocked and criticized by the others.

However, in spite of this, Hahnemann was able to create a small circle of faithful students around him. He tutored them even in his house and employed them in drug proving. Their devoted work enabled Hahnemann to write the *Materia Medica Pura* of homeopathic medicines. He also had an ever-growing medical practice in spite of antagonism of the orthodox physicians. This made his opponents jealous, trying hard to discredit him. They instigated the apothecaries (pharmacists) to complain against him to Leipzig Council as he prepared and dispensed his own medicines to the patients. In spite of this rivalry, many royals and high-ranking government officials used to come to Hahnemann seeking his treatment. Even Prince Schwarzenberg, the celebrated Austrian General who fought against Napoleon, when suffered a stroke, sought Hahnemann's treatment, coming all the way from Austria. Then, the orthodox practitioners instigated the pharmacists to file a second complaint to the Saxon government against Hahnemann's homeopathic practice. At last, Hahnemann was compelled to leave not only Leipzig, rather the state of Saxony in 1821.

When Hahnemann was contemplating where to go, the Duke of Kothen Prince Ferdinand extended an invitation to him to serve as a Physician to the Duke. He also allowed him the right to practice homeopathy with self-dispensing. Kothen was a small princely state in the middle of Germany, 50 kilometer from Leipzig. The Duke was suffering from a serious health problem which Hahnemann treated and cured him of. Since then, the Duke and Duchess remained ever faithful to Hahnemann and used to comply to all the privileges he asked for. Hahnemann was elected the Privy Councilor of Kothen. Here, he published a very important medical work "Chronic Diseases, Their Peculiar Nature and Homeopathic Cure," but it drew fierce criticism and ridicule from his opponents. In Kothen, Hahnemann's wife Johanna Henriette died in 1830. They had 11 children, 2 sons and 9 daughters, one son qualified MD from Leipzig University and practiced homeopathy.

Hahnemann had a busy practice in Kothen, patients coming even from outside Germany. In late 1834, a young French woman named Marie Melanie d'Hervilly came from Paris to consult him for her lung problem. She stayed in Kothen for some time to continue her treatment. Having been cured of her lung problem, she became interested to learn homeopathy, which ended up loving the aging widower Hahnemann and they got married in January 1835. After marriage, they lived in Kothen for 6 months, then decided to shift to Paris in June 1835, so that homeopathy might get a wider exposure to the outside world [Figure 1].

Last life in Paris and death

Homeopathy had already spread in France before Hahnemann arrived. Hence, the German master was welcomed most cordially by the French Homeopathic Association in an extraordinary congregation, where Hahnemann was elected the Honorary President for life. The French Minister of Health appreciated Hahnemann's arrival and awarded him a Royal

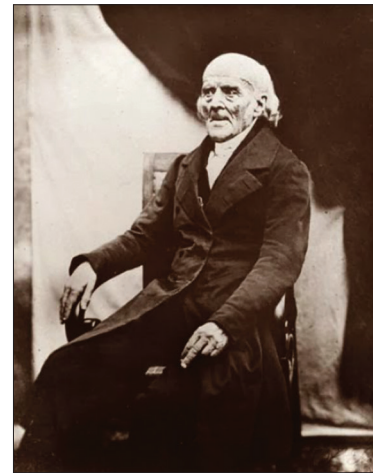


Figure 1: Samuel Hahnemann (1755–1843) at the age of 87 years

decree to practice homeopathy in France. Hahnemann started medical practice in Paris which soon became very extensive. Many Royals from France, Britain, and other European countries started coming to Paris to seek his treatment. He was even invited to England to treat Queen Adelaide but Hahnemann sent his German disciple Dr. Johann Ernst Stapf (1788–1860)^[1] to England to treat the Queen. Many allopathic doctors from different countries came to him to learn homeopathy. Even in this high profile, busy professional life, Hahnemann continued his literary writing and prepared the 6th edition of *Organon of Medicine*. However, he could not publish it due to his death next year on July 2, 1843, at the age of 89 years. He was buried in the cemetery of Montmartre hill of Paris. But later, his remains were shifted to the famous Pere Lachaise cemetery of Paris with a magnificent tomb on it by the initiative of Hahnemann Medical College of Philadelphia, USA and International Congress of Homeopathic Physicians in 1898 [Figure 2].^[1-3]

HAHNEMANN'S LITERARY WORKS

Hahnemann wrote a number of books, booklets, and many essays of which the following are the main ones:

Organon of medicine^[4]

Regarded as "Bible" of homeopathy, this is the fundamental book of theories, principles, and practice of homeopathy. First published in 1810, this was edited by Hahnemann up to the 6th edition in 1842. This discusses the mission of a physician, definition of health and disease, comparison of homeopathy with Allopathy with many references from ancient physicians, mechanism of action of remedy, classification and nature of diseases, drug proving, homeopathic case-taking, selection of remedy, preparation of homeopathic medicines, the mode of administration.

Materia Medica Pura^[5]

It is a compilation of symptoms collected from proving reports of medicines, systematized, and arranged in anatomical schema into six volumes. The 1st volume containing 12 drugs were published in 1811, the 2nd volume with 8 medicines published

in 1816, the 3rd with 8 medicines in 1817, the 4th with 12 medicines in 1818, the 5th with 11 medicines in 1819, and the 6th with 10 medicines in 1821. There are 61 medicines in 6 volumes of *Materia Medica Pura*.

The chronic diseases, their peculiar nature, and homeopathic cure^[6]

This book had two editions, and the first edition consists of four parts while the second comprises five parts. Part I contains the general theoretical principles of the new theory about chronic diseases; Parts II-V contain a detailed description of the most important anti-miasmatic remedies. The 1st edition was published in 1828 and the 2nd edition came out in 1835.

The lesser writings^[7]

Hahnemann's important writings in the form of journal articles, letters, booklets, etc., were collected, compiled, and translated into English by British homeopathic physician Dr. R E Dudgeon. It was published in New York in 1852.

SPREAD OF HOMEOPATHY IN THE WORLD

In spite of relentless antagonism from the allopathic practitioners, homeopathy spread from Germany to the whole of Europe, America, and Asia during the lifetime of Hahnemann and afterward throughout the world. Having observed its superior therapeutic efficacy, many conventional practitioners learned and were converted to homeopathy. It earned government recognition in many countries and was practiced as the prime alternative medicine. Hereafter, the development of homeopathy in some countries is described.

United States of America^[8]

Homeopathy reached American soil mostly by immigrant German homeopathic physicians, of whom Dr. Constantine Hering (1800–1880)^[9] was the foremost. Hering studied medicine in Leipzig University, graduated in 1826. A faithful disciple of Hahnemann, he went to Surinam of South America on a biological exploration in 1827, and later went to Philadelphia, the USA in 1833 and settled down. In 1835 he founded “North American Academy for Homoeopathic Healing” in Allentown

which was the first educational institution of homoeopathy in the world. Later, he founded Hahnemann Medical College in Philadelphia in 1848, the largest ever academic institution of homeopathy in the world. He served there as Professor of *Materia Medica* till 1869. The college had its own hospitals and extensive polyclinics, where more than 70 professors and lecturers were at the disposal of hundreds of students. In the hospitals and polyclinics more than 50,000 patients and 6,000 accident cases were treated every year, which afforded the professors abundant material for clinical instruction to the students. It was so famous that students from other parts of the world came to study. Hahnemann Medical College was followed in 1850 by the homoeopathic college in Cleveland, in 1857 in St. Louis, in 1859 in Chicago, and in 1860 in New York and so on. All the colleges had state grants and were recognized by the Universities.^[1]

Before the First World War, there were in the United States 56 homoeopathic general hospitals with 35–1400 beds each, nine hospitals for women (inclusive of midwifery) with 30–100 beds each, 13 mental asylums with 150–2000 beds each, nine children's hospitals with 30–100 beds each, etc.^[1] Germany was the birthplace of homoeopathy, but in its propagation in USA had far outpaced Germany. Constantine Hering was regarded as the Father of American Homeopathy. Also at that time, the USA produced many world-famous homeopathic physicians who upgraded the new system by writing many important books and teaching many students from the USA and other parts of the world. They were Drs J T Kent, Carroll Dunham, E A Farrington, T F Allen, H C Allen, E B Nash, Elizabeth Hubbard, etc. [Figures 3 and 4].

Homeopathy in Britain

Homeopathy reached Britain during the lifetime of Hahnemann. He was invited to treat British Queen Adelaide in 1835, but he sent his German disciple Dr. Johann Stapf, medical councilor of Saxony, to England in his stead. Stapf stayed in England for a few months to treat the Queen. When coming back to Germany through Paris, he reported to his master Hahnemann.^[1] In 1835, Dr. Harvey Quin (1799–1878)^[10] of England came to



Figure 2: Hahnemann's tomb in Pere Lachaise Cemetery, Paris



Figure 3: Dr. Constantine Hering (1800–1880)

Paris to learn homeopathy. He stayed with Hahnemann and after learning from the master, went back to England and started practicing homeopathy. He was so famous that he was appointed Homeopathic Physician to King Leopold II of Belgium. Dr. Quin owned a high profile homeopath of Britain, by popular support he founded the London Homeopathic Hospital (LHH) in 1849, one of the largest homeopathic hospitals of the world. LHH was awarded Royal Charter in 1949 and became Royal LHH (RLHH). This hospital became the center of excellence for homeopathic education and training for the medical graduates of Great Britain and other countries of the world.

Homeopathic treatment was favorite in the British royal family since Hahnemann's time. In 1925 King George V appointed British homeopath Weir (1879–1971)^[11] as the Royal Court Physician. Since then, the tradition has continued through King Edward VIII, King George VI, and up to Queen Elizabeth II, the present monarch of Britain. The royal family always favored the development of homeopathy in Britain. Hence, there have been many homeopathic hospitals in Britain after the RLHH. Britain also produced some world-famous homeopathic physicians such as Drs J C Burnette, J H Clarke, Margaret Tyler, Thomas Skinner, and Margery Blackie, who contributed by teaching and writing many books on homeopathy which became textbooks of homeopathic colleges [Figures 5 and 6].

Homeopathy in India^[12]

Homeopathy was introduced into British India by John Martin Honigburger, a German disciple of Hahnemann, in 1837. He was invited to India to treat King Ranjit Singh of Punjab for stroke with hemiplegia, which the local Unani and Ayurvedic practitioners failed to improve. He was ordered to prepare the medicines in front of the king. He did the same and administered it to the king, whose health started improving satisfactorily within a few days. The happy king proposed Honigburger to stay in his kingdom as a royal physician. He agreed and stayed in India for a few years. At that time an epidemic of Cholera was raging in Kolkata, the then capital of British India. Honigburger traveled to Kolkata and cured many patients of cholera with homeopathic medicine. This raised the interest of the local people in homeopathy; many learned it from him and started treating others. However, until 1867, no qualified Indian physician came to learn homeopathy, when Sarkar (1833–1904)^[13] became interested to learn it. He was the first MD of Kolkata University and President of the Indian Branch of the British Medical Association. He declared allegiance to homeopathy and gave up the allopathic practice. By his influence and encouragement, many medical doctors were converted to homeopathy. Dr. Sarkar died in 1904 but by that time homeopathy had been established on a solid foundation on Indian soil. The Indian government recognized homeopathy as one of the state medicines and established more than 100 University affiliated homeopathic medical colleges and hospitals throughout the country. Now India became the hub of homeopathic medicine in the world. Many doctors



Figure 4: Hahnemann Medical College of Philadelphia (Founded 1848), now Hahnemann University Hospital



Figure 5: Dr. Margery Blakie and Dr. Sir John Weir, Homeopathic Physicians to the British Royal Family



Figure 6: The Royal London Homeopathic Hospital, London

from the Western countries come to India every year to learn homeopathy.

CARDINAL PRINCIPLES OF HOMEOPATHIC MEDICINE

Every system of medicine is based on certain principles and rules of practice, so is homeopathy. It is based on the following fundamental principles and rules of practice.

The law of similars

The word homeopathy came from the Greek words “Homoios” meaning like or similar, and “Pathos” meaning suffering. Hence, homeopathy means similar sufferings, that is, to treat the sufferings of a patient by a drug which can produce similar sufferings in a healthy person. That’s why, Hahnemann conducted drug provings of many medicinal substances to know what symptoms they could produce in healthy humans, which indicated their inherent capability to cure such symptom complex in patients. This natural law was coined as “Similia Similibus Curentur” (Likes cure likes). This was also known to Hippocrates, who proposed two principles of treatment, namely (i) Similia Similibus Curentur and (ii) Contraria Contrariis Curentur (Unlikes cure unlikes). Hahnemann rediscovered and established the 1st principle as the true principle of cure. The 2nd principle was followed by medical stalwart 2nd century Cornelius Galen and his followers and later became the allopathic principle of medicine, treating sufferings by drugs which produce opposite symptoms.

In *Organon of Medicine*, aphorism 26, Hahnemann stated that “A weaker dynamic affection is permanently extinguished in the living organism by a stronger one if the latter (while differing in kind) is very similar to the former in its manifestations.”^[4] By this, he means that each individual case of disease is most surely, rapidly, and permanently annihilated and cured if the symptoms of the medicine chosen are similar to the disease symptoms but superior to it in strength.

The law of simplex or single remedy

This means to treat a patient, only a single medicine should be applied at a time (Aphorisms 272–274, *Organon*). According to Hahnemann, a person becomes ill by the disorder of his vital force, manifested by symptoms. To cure the disorder, vital force needs to be stimulated by the drug which produces similar symptoms known by proving. Hence, it should be a single, simple, proved medicine, not by a complex mixture of different drugs. So in homeopathy, a patient is always treated with a single remedy at a time.

The law of minimum dose

The curative effect of the medicine does not depend on the crude quantity of drug material, rather on the quality of similarity to the symptoms of the patient. As the homeopathic medicine acts on the dynamic level of vital force, only a minute quantity of the medicine is enough to stimulate the dynamically deranged vital force to bring the curative response. Moreover, as homeopathic medicines are similar symptoms producers, if applied in larger doses, it will bring medicinal aggravations. Hence, it is needed to reduce the material quantity of the drug by serial dilution process, known as potentization. In this way, medicines become stronger in healing effect without producing medicinal aggravations.

Doctrine of drugs proving

Drug proving is an investigation of the disease-producing ability of a drug, by applying it to healthy human beings until symptoms of illness appear. Drug provers are instructed to

carefully observe and note all finer sensations, feelings and emotions, or any subtle deviations in the normal functioning of various organs and parts of the body. After proving is concluded, symptoms reported by the provers are collected, carefully assessed, evaluated, and classified. These proving reports are compiled in a systematic order in the homeopathic *Materia Medica*. Hahnemann suggested only such proved remedies are to be prescribed to treat patients, as these remedies have confirmed symptoms to treat cases having similar symptoms.

It is a prerequisite, to choose healthy volunteers for conducting drug proving because if a drug is proved on a diseased person, the symptoms of the disease will merge with that of the drug and a mixed picture will emerge. Drug proving also needs to be done exclusively on human beings as they can describe subjective sensations and feelings precisely and in detail. They can describe the exact locations, precise sensations and modalities (aggravation and amelioration) of the produced symptoms. They can also give a vivid picture of changes in mental state during proving and can describe their dreams, which denote the subconscious mind. These symptoms can never be elicited by proving on animals as they are not bestowed with intelligence and ability to communicate in the way a human can. Hahnemann proved 99 drugs in his lifetime and recorded the proving symptoms in *Materia Medica Pura*. After Hahnemann, his followers proved many more medicines which were compiled in the 12 volumes of *Encyclopedia of Pure Materia Medica* by Allen.^[14] At present, more than 4000 homeopathic remedies are in use.

Theory of vital force

Hahnemann gave a vivid description of vital force in aphorisms 9–10 of *Organon* as, “In the healthy condition of man, the spiritual vital force, the dynamics that animates the material body (organism), rules with unbounded sway, and retains all the parts of the organism in admirable, harmonious, vital operation, as regards both sensations and functions, so that our indwelling, reason-gifted mind can freely employ this living, healthy instrument for the higher purposes of our existence.”^[4] “The material organism without the vital force is capable of no sensation, no function, no self-preservation; it derives all sensations and performs all functions of life solely by means of the immaterial being, the vital force which stimulates the organism in health and disease.”^[4]

Thus vital force is the intrinsic life principle, the essence of the individual that animates the organism in health and disease. In health, it governs the life, coordinates all the bodily functions and maintains an equilibrium, a homeostasis. When a person becomes ill, it is only this spiritual vital force we call disease. And this vital force is primarily deranged by the dynamic influence on it of a morbid force (disease causing agent) inimical to life that furnishes the organism with disagreeable sensations and incline it to irregular processes, which we call disease. Hence, disease is nothing but a disordered state of vital force which leads to the manifestation of symptoms in various parts of the body. Hence, to cure a disease is to act on the vital

force by a medicinal agent which has the capability to produce symptoms similar to the disease symptoms.

Doctrine of potentization of drugs

Hahnemann experienced that giving a drug to the patient according to law of similars, brought aggravation of symptoms of the patient, so he started reducing the dose of the drug by diluting with water along with some shaking. He kept reducing the dose by more and more dilution, which brought an unprecedented experience to him. He found the more he dilutes the drug, the less the aggravation of symptoms but more is healing effect. In this process of serial dilution of drug substance, a point arrived when no drug molecule remained in the solution but still the effect of drug remained. Hahnemann named this ultra-molecular process of preparation of drugs as dynamization or potentization of drug.

This created a controversy in the medical and scientific community that how a preparation of drug without a molecule of the original substance can act on a patient and cure a disease. This controversy continued from the time of Hahnemann till today. Many clinical trials have been conducted by homeopaths, Allopaths, and other scientists with these so-called potentized homeopathic drugs on various diseases, with positive outcomes in many instances. The latest scientific research on Hahnemann's theory of potentization was conducted by a famous French immunologist, Prof. Jaque Benveniste.^[15] In this multi-center trial conducted in four countries, Benveniste found that highly diluted and potentized anti-IgE retained its effects in the absence of any molecule in the solution. He hypothesized that when a drug substance is diluted in water with strong shaking, the drug molecules make an impression on the labile molecules of water. These imprinted water molecules then carry the property of the drug in serial dilutions. However, many did not agree to this explanation, and they would rather choose to await an explanation from the scientists of molecular Physics.

Theory of chronic diseases^[6]

A few years after starting homeopathic practice, Hahnemann noticed that some diseases recurred after initial cure and would not get cured permanently by the well-selected homeopathic remedies. He began an extended inquiry and research on this problem for 12 years from 1816 to 1828 and in the end published his findings in the book "*Chronic Diseases, Their Nature and Homeopathic Treatment.*" He said that in the past thousands of years, man had been suffering from chronic diseases caused by infection of some deep acting morbid agents, which he named "Chronic Miasms" as there was no better term in that time to signify these chronic infectious agents. After infecting the body, they manifested first by some eruptions or excrescences, such as itch vesicles, warts, or ulcers on the surface of the body. These, after suppressive local treatment, disappeared from the surface and went inward affecting the vital organs and then continued in different forms of diseases years after years, generation after generation. They often manifested by acute episodes in the name of different diseases and again became suppressed by high doses of allopathic treatment.

He classified these chronic diseases into three categories, such as (i) Psora, (ii) Sycosis, and (iii) Syphilis. He also described the symptoms of these chronic diseases in details and sorted out relevant remedies having similar symptoms complex from the material medica. He classified these remedies also into three groups as (i) anti-psoric, (ii) anti-sycotic, and (iii) anti-syphilitic remedies.

"Totality of Symptoms" as true picture of disease^[4]

When the vital force of a person is disordered by a morbid agent, it will manifest symptoms of suffering in every sphere of the organism, such as mental, general and particular organs/ parts of the body. According to Hahnemann, the totality of all these symptoms from all spheres of the patient collectively represents the true picture of the disease. This he called the Totality of Symptoms, which should be collected carefully during case-taking. This symptom complex is then to be matched with a drug of the homeopathic materia medica which has similar symptoms complex. It is not necessary to match all the symptoms; at least, the leading prime symptoms are to be similar. This well-matched remedy if administered to the patient will help remove his sufferings and restore the health.

The law of cure^[16]

Formulated by Dr. Constantine Hering and published in 1865, the law of cure is regarded as Hering's law of cure. It states that after homeopathic treatment of a patient, the cure will follow certain directions, such as the disappearance of the sufferings from inner to outer spheres, from more vital organs to less vital organs, from above downward and in the reverse order of the appearance of the symptoms, the last ones will disappear first.

COMPARISON OF HOMEOPATHY WITH TRADITIONAL CHINESE MEDICINE

TCM is a system of medicine of at least 23 centuries old that aims to prevent or heal disease by maintaining or restoring yin-yang balance. A person is healthy when harmony exists between these two forces. Illness, on the other hand, results from a breakdown in the equilibrium of yin and yang.^[17] One of the earliest known written records of Chinese medicine is the Huang di Nei Jing (The Yellow Emperor's Inner Classic) from the 3rd century BCE. This takes the theories of yin-yang, five elements, zang-fu organs, meridians and collaterals, mentality and spirit, qi, blood, body fluid, seven emotions, and six exogenous pathogenic factors, as the basic knowledge of TCM, and acupuncture and moxibustion as the main therapeutic techniques.^[18] TCM may be compared with homeopathy in the following aspects.

Origin of homeopathy and traditional Chinese medicine

Homeopathy is a new system of medicine, discovered and founded by German physician Dr. Samuel Hahnemann in 1810 and has been practiced since a little more than 200 years. On the other hand, TCM practice began more than 3000 years ago by traditional Chinese healers, later on officially launched by the Yellow Emperor. He commissioned to compile an official text on the basis of shorter texts from different medical lineages,

which is known as Huang Di Nei Jing (Inner Canon of Yellow Emperor), in the 3rd century BCE.

Basic principles of homeopathy and traditional Chinese medicine

Homeopathic medicine and its practice is governed by certain cardinal principles and doctrines, which are as follows: Law of similars, law of simplex or single remedy, minimum dose of medicine, doctrine of drug proving, theory of vital force, doctrine of potentization of drugs, theory of chronic diseases, totality of symptoms, Hering's law of cure, etc., which have been explained above. On the other hand, TCM is based on certain theories and principles, which may be enumerated as the theory of yin-yang, the theory of five elements, four body humors such as essence, Qi, blood and body fluid; Zang-fu organs, meridians and collaterals, TCM etiology and diagnosis, differentiation of syndromes, etc.^[19]

TCM considers humans at the center of the universe as a sensor between celestial and earthly elements. Wood, fire, earth, metal, and water are the five elements of the material world. The world is a single unit and its movement gives rise to yin and yang, the two main antithetic aspects. The actual meaning of the term "yin and yang" is "opposites but interconnected," such as positive and negative. However, TCM considers that yin and yang is not absolute but relative. Consistent with the modern view of homeostasis, yin and yang is interchanged to meet the view that "yang declines and yin rises" or "yang is raised to produce a decline of yin." The four body humors (essence, qi, blood and body fluids) and internal organ systems (zang-fu) play an important role in balancing yin and yang in the human body. The proper formation, maintenance and circulation of these energies are essential for health. When the two energies fall short of harmony, the disease gains momentum. The physician takes into account this concept while treating patients. Herbs, acupuncture and moxibustion are usually used to correct this imbalance of yin–yang in the human body.

There are some resemblances between the vital force theory of homeopathy and Qi, essence, and yin-yang theory of TCM. Vital force is the spiritual, intrinsic dynamics that animates the whole organism, retains all the parts in harmonious coordination, controls all the functions, and sensations of the organism, without which it is incapable of self-preservation and existence. When the vital force is disordered by a pathogenic force, a person falls ill manifesting various symptoms. For treatment, it is required to stimulate the vital force by a potentized similar drug, which restores order and removes the sufferings. Qi and essence also act such as vital force, controlling and regulating all the functions of the organism such as promoting function, warming function, and defensive function. As long as, the balance is maintained between yin and yang the organism remains in health, whereas their imbalance leads to disease. The goal of treatment is to bring order and balance between yin and yang, thereby bringing back the Qi in order. In this way, both homeopathy and TCM are holistic medicines, treating the whole patient, not merely a part or organ of the body. Homeopathy's dictum "Treat the patient, not the disease" is also true for TCM.

Etiology of diseases

Homeopathy classifies etiology into the following (1) acute miasms, such as of sporadic diseases, endemic diseases and epidemic diseases; (2) chronic miasms, such as of psora, sycosis, and syphilis. Causation of diseases is also categorized as exciting causes, maintaining causes, and fundamental causes which are the chronic miasms.^[4] On the other hand, TCM classifies the etiology of diseases as (1) six external evils such as wind, cold, summer heat, damp, dryness, and fire, that are the six climatic changes found in nature and pestilent qi; (2) Endogenous pathogenic factors, which are seven emotional factors such as joy, anger, melancholy, worry, grief, fear, and fright; (3) improper diet, overstrain, stress, and lack of physical exercise; (4) traumatic injury, insect, or animal bites; and (5) pathological products, such as phlegm fluid and stagnant blood.^[17]

Diagnosis

Homeopathic practitioners rely on two types of diagnosis, such as (1) nosological diagnosis or diagnosis of the disease. It is done according to the procedures followed in conventional medicine. (2) Therapeutic diagnosis or diagnosis/selection of the remedy. It is done by detailed case-taking, sorting out the characteristic individualistic symptoms to constitute the totality of symptoms, and finding out a remedy from the materia medica, which bears the similar symptoms complex. On the other hand, TCM applies four diagnostic methods, namely, inspection, auscultation and olfaction, inquiring and palpation, to record the clinical data of the patient. These are analyzed to determine the causative factors and nature of the disease, thus providing basis for further syndromic differentiation. This enables the practitioner to determine at which stage the disease has progressed, its location and the degree of opposing force between antipathogenic qi and pathogenic factors, on the basis of which treatment is determined.

Treatment

Homeopathic treatment requires selection of the remedy and its potency, administering the remedy singly in one or divided doses, and the follow-up of the patient to see if there is any aggravation of symptoms, the appearance of new symptoms or no change in the existing symptoms. According to the follow-up observations, the practitioner makes the second prescription and continues as such till full recovery of the patient. In TCM, treatment is given according according to syndrome differentiations. The general principles of treatment are regulation of yin and yang; strengthening antipathogenic qi and eliminating pathogenic factors, distinguishing the primary from the secondary; treatment of diseases according to climatic and seasonal conditions, geographical locations and individual conditions.^[17] The modalities of TCM treatment are herbal treatment, usually of multiple herbs; acupuncture and moxibustion; tuina massage therapy; regulation of diet and regimen, etc. All these modalities follow the theories and principles of TCM and may be given alone or in combination.

There are resemblances between clinical indications of many homeopathic remedies and that of acupuncture points. For

example, indications of Taiyuan (LU9) resembles that of homeopathic remedies Sanguinaria, Carbo veg, and Ammon carb in respiratory complaints; Shenmen (HT6) resembles homeopathic remedies Crataegus and Aconite napellus in heart and mental complaints etc.^[20] However, the indications of TCM herbal remedies and homeopathic remedies are for opposite conditions. Homeopathic remedies are prescribed on the basis of symptoms similarity with the disease, for example, a patient of diarrhea needs a homeopathic remedy which also causes diarrhea, say Podophyllum. However, in TCM, herbs in most cases are applied with opposite properties to the patient. For example, to clear off heat in a patient, TCM needs a cooling herb, say Shi Gao (Gypsum) [Figure 7].

CONCLUSION

Homeopathy and TCM, differ vastly from one another as in time span and region of origin, years of practice, principles and philosophy, etiology and diagnosis, preparation of medicines, techniques, and modalities of treatment, yet they have also many aspects in common.

Both homeopathy and TCM are holistic medicines; they treat the patient wholly, not partly or only locally. Both acknowledge that there is an intrinsic and inherent life principle in the organism which controls the functions of all the organs and parts of the body in a unique coordination among them. This intrinsic principle is known as vital force in homeopathy and Qi in TCM. This keeps the organism in health, promotes growth and development, maintains its defensive power against pathogenic agents, but when disordered by morbidic, noxious forces, the organism falls ill. In order to cure illness and restore the organism to health, it is the vital force or Qi which needs to be potentiated or balanced by a similar remedy in homeopathy and herbs or acupuncture-moxibustion in TCM.

There is another important aspect where both homeopathy and TCM coincide and it is the individualistic approach to treatment. Homeopathy says the disease is general but the patient is particular, which means a disease has many common symptoms found generally in all patients but still every patient



Figure 7: Homeopathic globules and acupuncture needles

has some individualistic symptoms that belong to him only. Therefore homeopathy selects medicine according to this individualistic aspect, so patients of a viral fever, dysentery, or headache though suffering from the same complaints need different remedies, the same is true for TCM.

In conclusion, it may be added that both of these holistic medicines may act as an adjuvant to each other in treating patients, acting synergistically. There may be randomized clinical trials to evaluate their efficacy alone or in combination in future.

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Conflicts of interest

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Development Ideas for the Multidisciplinary Integrative Diagnosis and Treatment System of Pelvic Floor Medicine

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Abstract

With the rapid growth of the aging population, pelvic floor dysfunction (PFD) has become a new type of high-incidence disorder. This disorder can be caused by injury, functional deterioration, or coordination disorders of pelvic support structures, such as pelvic floor muscles, connective tissues, and pelvic floor muscle fiber. The symptoms can include dyssynergic defecation, fecal incontinence, overactive bladder, urinary incontinence, pelvic organ prolapse, hemorrhoids, sexual dysfunction, chronic urinary retention, and chronic pelvic pain. PFD often presents itself as a combination of symptoms involving urological, gynecological, anorectal, and psychological aspects. Under such circumstances, the development of multidisciplinary integrative diagnosis for PFD has become a trend.

Keywords: Construction of diagnostic and treatment system, multidisciplinary integration, pelvic floor

The great development stages of traditional Chinese medicine (TCM) and Western medicine are in the era of agricultural economy and industrial economy, respectively, consistent with the support provided by the relevant disciplines and industries of the two periods. The relationship between technology and economy is shown in Figure 1.

The rapid development of modern life science and technology has led to a trend of convergence among the medical and pharmaceutical systems. Modern medicine is gradually taking shape due to the changing trends in the outlook on world development, consumption, and healthcare concept, as shown in Figure 2.

The trends of the concepts of world development, consumption, and medical care (called “three concepts” for short in the rest of the article) reflect the trend of humans returning to the nature all over the world, that is, human beings are now pursuing people-oriented sustainable development and good quality of life characterized by individuality and diversity, and have started to pay attention to the human immunity and holistic health care.

The driving forces of the change in medical care concept are the limitations of the existing healthcare models, demographic

changes, new disease challenges to humanity, development of the world economy, and especially the demand for innovation in the human society. Such forces have also led to the worldwide rise of traditional and herbal medicines, among which is the Chinese medicine, in particular. The changes of these three concepts have brought about the change in medical model, as well as the change in perceptions about diseases and their etiology. Gradually, people are putting more emphasis on maintaining or boosting their immunity and have begun to accept and appreciate “good quality of life” as the ultimate medical goal. In addition, the impact of these concepts has been felt in every aspect of human life. Social, economic, technological, and cultural activities have all been affected by these changes. Thus, the gradual convergence of modern medicine will become a better way to solve health problems in the future society.

Currently, the medical model has been changing from the traditional biomedical model to a modern biopsychological-social medical model, which was proposed in 1977 by O. L. Engel, Professor of Psychiatry and Internal

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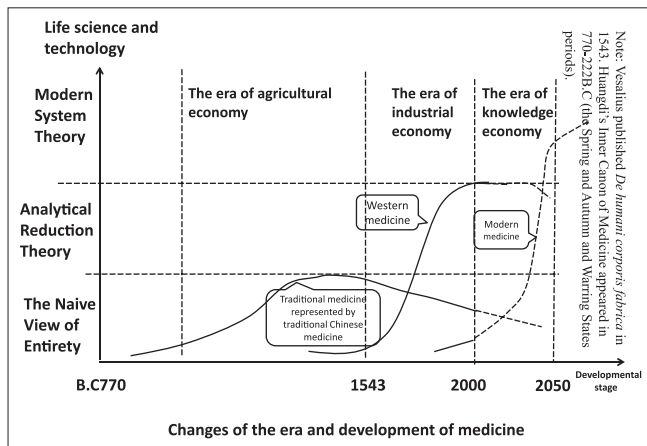


Figure 1: Changes of the era and development of medicine

Medicine of the Medicine School of the University of Rochester.

The biomedical model is based on the biological science from the late 18th century to the early 19th century, and it reflects the medical and methodological aspects of the pathogenesis, host, and natural environment. The main defect of this model is that it only focuses on the biological property of the human body but ignores its social property; it only focuses on the physiological activities of human beings but neglects the role of psychological activities in the development of diseases and their prevention, treatment, and rehabilitation. In other words, this medical model only analyzes people from a biological and reductive perspective, abandoning the psychological and social factors of people; it focuses on diseases instead of patients; its goal mainly is to cure a disease but not necessarily to restore the wellbeing. Therefore, the use of this medical model for disease treatment has resulted in incomplete clinical diagnosis, inappropriate diagnostic measures, ineffective treatments, unnecessary hospitalizations, rising medical costs, and longer time for treatment in practice.

In contrast, the bio-psychological-social medical model focuses not only on human biology but also on the sociality of human beings, fully recognizing the comprehensive effect of social and psychological factors on health. It serves as a correction and supplement to the biomedical model because it not only looks into the biological individuals but also takes into consideration the social factors that influence the health of individuals and groups, as well as their psychological and mental state. The clinical diagnosis and treatment in this model value integrity and people-oriented principles.

In fact, “people-oriented” is the very core value of multidisciplinary integrative diagnostic and treatment services. This mode of diagnosis and treatment is different from the traditional medical service model in that it aims to provide efficient, convenient, and comprehensive services for patients with “treatment centering on diseases,” “doctors centering on patients,” “hospitals centering on curative effects” principles in mind.

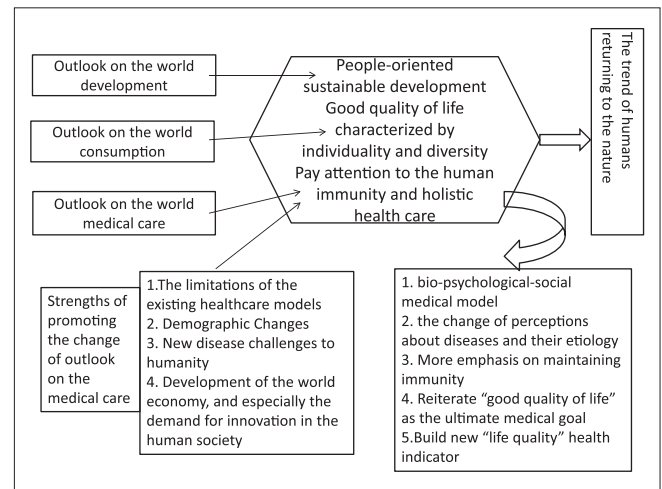


Figure 2: Outlook on the world development, consumption, and healthcare concept

REASONS FOR THE ESTABLISHMENT OF A MULTIDISCIPLINARY AND INTEGRATIVE DIAGNOSIS AND TREATMENT SYSTEM FOR PELVIC FLOOR MEDICINE

The establishment of the patient-oriented model, the “pelvic floor center,” in the same clinical system for patients, medical practitioners (many specialties), researchers, etc., has become a consensus

Mac Lennan *et al.*^[1] found that the incidence of urinary incontinence was 4.4% in males and 35.3% in females; the anal incontinence rate was 6.8% in males and 10.9% in females; the incidence of hemorrhoids was 19.9% in males and 30.2% in females, which are proportional to age and number of women giving birth. Hampel *et al.*^[2] found that the incidence of overactive bladder in men was 15.6% and in women was 17.4%, which is proportional to the age. The incidence of defecation disorders is 15%–20%, with 2.2 times more women than men over the age of 65.^[3] The American Health Survey found about 40% of women aged 50–79 years have varying degrees of organ prolapse.^[4] Chronic pelvic pain affects 15% of women aged 18–50 years, with pelvic floor pain affecting about 9 million women in the United States.^[5] Pelvic floor dysfunction has high clinical incidence, complicated etiology, long course and overlap of symptoms, causing physical pain, mental depression, adverse drug reactions, and financial burdens; and the patients’ quality of life is seriously affected, which has attracted increasing attention in China.

Based on the clinical pathway concept, a multidisciplinary approach to the diagnosis and treatment of these diseases has been adopted. The idea of establishing the “pelvic floor center” model centering on patients, with patients, multidisciplinary healers, and researchers in the same system [Figure 3], has become a consensus, which is one of the most active research fields all around the world in recent years. Since 2000, many “pelvic floor centers” have been established, mainly in colorectal surgery, gynecology, urology, or

rehabilitation [Figure 4]. Lots of research, standardization, training, and dissemination of a series of diagnostic and treatment techniques had been conducted.

Multidimensional diagnostic model and personalized comprehensive treatment need to be standardized and deepened on a multidisciplinary and integrated platform

Multidimensional diagnostic and assessment techniques have evolved over the past two decades. Morphological diagnosis techniques include defecography, barium enema, dynamic pelvic magnetic resonance imaging, and three-dimensional dynamic ultrasound; functional diagnostic techniques include colonic transmission test, anorectal manometry, urodynamics, pelvic electromyography, and evoked potentials (pelvic nerve electrophysiology). PFD often presents itself as a combination of symptoms; some of the patients may abuse various drugs; some may have upper digestive and psychiatric symptoms; therefore, each case should be evaluated comprehensively based on the patient's medical history and symptoms to

complete detailed diagnosis and assessment of physical and mental health. These assessment techniques need to be standardized and deepened in a standard way [Figure 5].

Treatment techniques, in particular, need to be standardized. Every treatment technique is a research direction and needs to be refined [Figure 6]. Take the case of treating chronic constipation with acupuncture and moxibustion, for example, the studies to be carried out include^[6-11] treatment advantage type, treatment scheme design (acupuncture depth, stimulation quantity, moxibustion, acupoint, electroacupuncture parameters, and other aspects of the task), implementation (technical standards or specifications), and evaluation of efficacy (patient-reported outcome/doctor reported outcome), which can eventually help to showcase the advantages of each treatment method.

The multidisciplinary integrative platform can realize a virtuous circle of optimization, training, and promotion of diagnosis and treatment systems

To achieve a relatively stable diagnostic system on the multidisciplinary integration platform, a multicentered approach

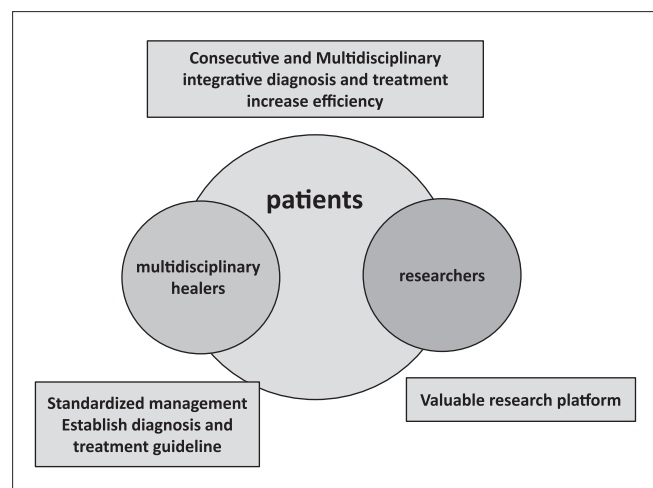


Figure 3: Clinical pathway of patient-oriented center

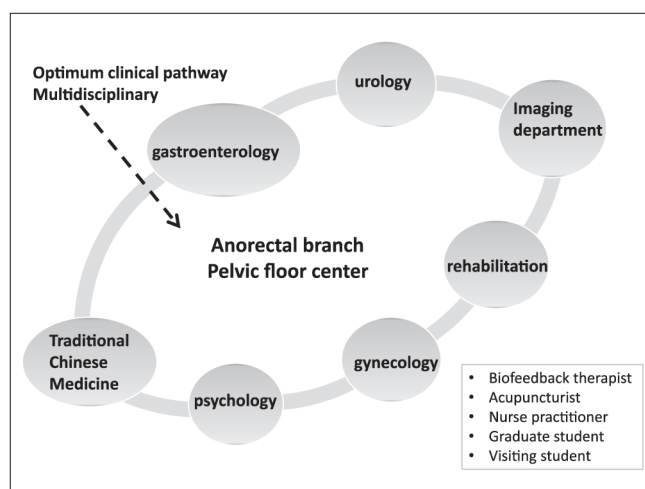


Figure 4: Multidisciplinary diagnosis and treatment model

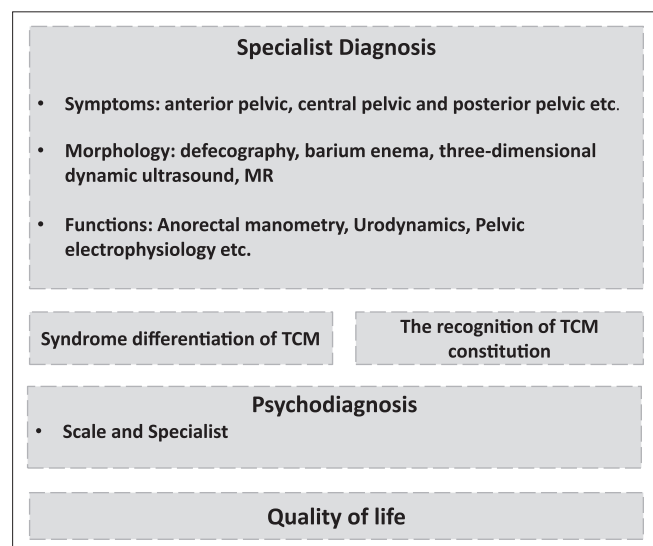


Figure 5: Multidimensional diagnostic and evaluation technique

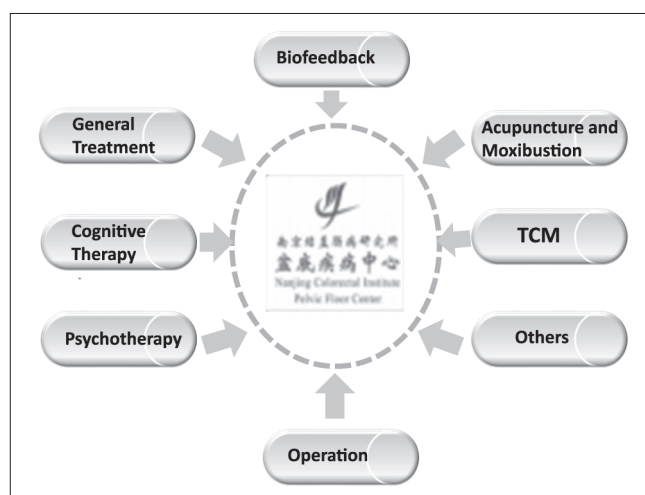


Figure 6: Comprehensive treatment technique of integrative medicine

needs to be taken to acquire more evidence-based medical evidences, and regional or national clinical guidelines need to be established to enrich specialist and disciplinary development and to optimize clinical practice to form a virtuous circle.

After realizing the relatively stable system of diagnosis and treatment technology, training and popularization of high technology should be carried out among the medical staff and the patients. Medical personnel having been trained in a professional system can accomplish many interdisciplinary tasks and can increase their work efficiency. For patients, patient cooperation and family support are also essential to improving long-term outcomes. Some noninvasive and safe diagnostic techniques, such as pelvic biofeedback therapy, can also be implemented remotely to gradually achieve chronic disease management.

Medicine of the 21st century will develop from the “disease medicine” to “health medicine,” from emphasizing treatment to emphasizing prevention, and from group study and treatment to that of individuals.^[12] The new medical reform introduced in 2009 regards disease prevention as the highest goal of medical treatment. In the new century, the advantages of informatization, networking, and wireless will be fully exploited by means of computer network technology to achieve premedical (prevention and monitoring), follow-up and service of medical and health process in medical treatment, and postmedical treatment (follow-up, customized service), thus extending the medical services outside of the hospital,

improving the level of medical service, and eventually forming the national network of medical centers for pelvic floor disease diagnosis and treatment [Figures 7 and 8].

CONTENTS OF THE MULTIDISCIPLINARY INTEGRATIVE MEDICAL PLATFORM

The integrative multidisciplinary treatment platform includes clinical pathway, regional medicine, and chronic disease management [Figure 9]. Based on a series of high-tech diagnosis and treatment techniques, this model takes on a patient-oriented approach, combines TCM syndrome differentiation with disease differentiation systems to improve the therapeutic effect, with the aim to establish disciplines ranging from prevention to treatment and from nonsurgical to minimally invasive treatment. It integrates TCM, acupuncture, spleen and stomach, preventive treatment, rehabilitation, related disciplines (gynecology, psychology, imaging, and pelvic physiology), nursing, and other divisions and disciplines

Clinical pathways: Standardized workflows

A clinical pathway is a written and standardized workflow. All essential inspections, treatments, and care procedures are standardized in accordance with the principles of evidence-based medicine by professionals from all disciplines. These standards are tabulated according to expected treatment and length of stay so as to optimize the sequencing and timing of treatments, inspections, and care activities. These standards make it possible for all patients to be treated and cared by following the standardized workflow. A clinical pathway is characterized by comprehensiveness, timeliness, professional cooperation, and measurable results.^[13,14]

The implementation of clinical pathways can promote multidisciplinary cooperation in the pelvic floor treatment community, guarantee the continuity of treatment and nursing, provide best services for patients, ensure rational and effective use of resources, and reduce waste of medical resources.

Regional medicine: Achieving a high degree of sharing and circulation

With the development of medical service, the regionalization of medical care is inevitable, and it also aligns with the mission of the medical service. The regional medical informatization is the most direct and effective embodiment of regional medical treatment,^[15] that is, by achieving a high degree of information sharing and circulation among regional residents, access to medical services will be facilitated and medical costs reduced.

Regionalization of PFD treatment mainly benefits three groups of people:^[16] (1) it provides convenience for patients as the online medical information system can enable remote registration bookings, remote medical consultation, or even remote medical group consultation; (2) it provides convenience for healthcare workers, for example, through the remote system, a doctor can have access to a patient's testing results and medical records taken at anytime and anywhere, which can help improve the accuracy of diagnosis and the

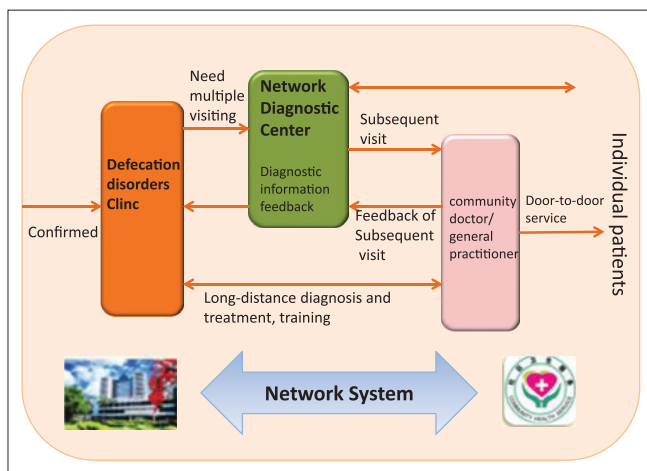


Figure 7: Follow-up visit and long-distance care of patients after treatment

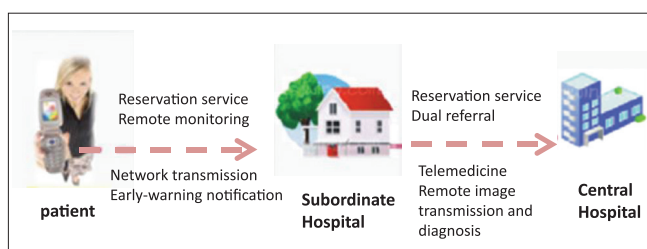


Figure 8: Family treatment and implementation methods

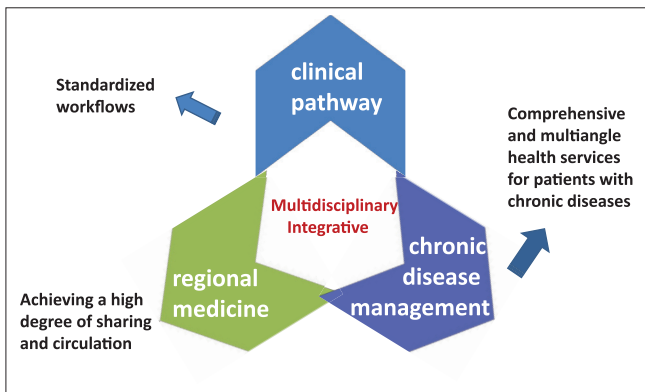


Figure 9: Contents for multidisciplinary integrative diagnosis and treatment platform

effects of treatment, and can also guarantee the continuity of treatment in “two-way referral,” (3) it provides convenience for medical service managers; the integration of regional medical data centers must also be based on a stable and efficient telemedicine network, enabling the health administration department to coordinate health resources better and reduce redundant construction and waste, bringing into full play the economic benefits, management benefits, and decision-making benefits of the regional medical information system.

Chronic disease management: Comprehensive and multiangle health services for patients with chronic diseases

Chronic disease management refers to the organization of chronic disease professionals and nursing staff who will provide comprehensive, continuous, and proactive management for people with chronic diseases, to improve health conditions, slow down disease progression, reduce complications, reduce disability rates, prolong life span, and improve quality of life. It is also a scientific management mode to reduce medical expenses.^[17]

Chronic disease management in PFD is a comprehensive intervention model based on the bio-psycho-social medicine model. It looks into the whole process of disease occurrence and development based on groups (management of high-risk people, clinical treatment for illness, health rehabilitation, prevention, and treatment of complications), emphasizing the importance of multidisciplinary cooperation to highlight evidence-based medical guidance and health education, prevent disease exacerbation, and promote a continuous process of monitoring and continuous assessment of improvement.^[18]

THOUGHTS AND OUTLOOK

The multidisciplinary model of pelvic floor medicine at present has optimized efficiency for patients, doctors, researchers, and managers. It also provides a good idea for improving patient satisfaction, chronic disease management, regional medicine, and development of TCM. Although in practice many problems still remain unsolved, such as controversies over medical expenses, treatment time, optimal staffing, and public welfare,

the holistic approach, the “people-oriented” direction, and the “multi-disciplinary integrative model” of pelvic floor medicine are bound to attract more professional integration and bring more fresh vitality.

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Conflicts of interest

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Tacit Knowledge Mining: The Key Traditional Chinese Medical Inheritance

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Abstract

Traditional Chinese medicine (TCM) is a treasure of traditional Chinese culture and a gift to the world. TCM tacit knowledge refers to the knowledge and experiences formed in the process of learning and practice of TCM. The objective of this study is to discuss the importance of TCM tacit knowledge in the inheritance and education of TCM. As the essence of the TCM, TCM tacit knowledge has the characteristics of massive, complicated, relativistic, highly individualized, constantly innovative, the dependence of cultural background and the regional environment, as well as difficult to explicate. It exists in every aspect of the TCM theory and the process of dialectical treatment. Besides the traditional master-apprentice, family-based, school-based, and inheritance and education methods, together with the inheritance based on the books, images, and network platforms, in the process of TCM modernization, a variety of modern theoretical models and computing techniques have also been used in the mining of the TCM tacit knowledge. In this study, we introduced the usage of SECI model, complexity adaptive system, latent variable model, and some of the data mining technologies in the TCM tacit knowledge mining. An accurate and efficient inheritance of TCM tacit knowledge is the key to maintain the vitality and innovative development of TCM. Under the reasonable application and combination of the traditional education methods, modern mining methods, and further the artificial intelligence, the explicit and inheritance of TCM tacit knowledge will get tremendous development, and it could extremely improve the efficiency and accuracy of the TCM inheritance and the TCM modernization.

Keywords: Inheritance, mining method, tacit knowledge, traditional Chinese medicine modernization, traditional Chinese medicine

INTRODUCTION

Knowledge, which includes the descriptions of facts and information, as well as the skills acquired in education and practice, is the outcome of human being's understanding of the external world through practice. The ancient Greek philosopher Plato (427–347 BC) believes that knowledge should be clear and can be expressed in words.^[1] However, the Hungarian-British physical chemist and philosopher Michael Polanyi (1891 – 1976) thinks that “we know more than we can tell.” In addition to Plato's explicit knowledge, there is tacit knowledge that can only be sensed but hard to be expressed. Traditional Chinese medicine (TCM) is a medical system formed and inherited by the Chinese nation through the exploration, accumulation, and practice of the relationship

between natural world and human bodies for 1000 of years. Based on abundant basic theories and clinical practices of TCM, the therapeutic methods of the TCM doctors are much more individual and flexible. In this view, TCM doctors accumulate plenty of individualized experiences with the characteristics of tacit knowledge. Thus, TCM tacit knowledge refers to the knowledge and experiences formed in the process of learning and practice of TCM; it is highly individualized,

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unspeakable, and difficult to be explicated. For the TCM, tacit knowledge is the foundation of explicit knowledge and the key to the clinical therapeutic effect of TCM. It also implies greater excavating and creating value in the inheritance of TCM.

CHARACTERISTICS OF TRADITIONAL CHINESE MEDICINE TACIT KNOWLEDGE

TCM tacit knowledge has some characteristics. First, massive, complicated, and relativistic. As the basis of TCM, tacit knowledge, which has a massive number, diversified forms, widespread ranges, and complex contents, exists in every aspect of the TCM theory and the dialectical treatment of each TCM doctor. Second, the dependence of cultural background and the regional environment. TCM was bred from traditional Chinese culture. The formation and development of TCM also are the miniatures and symbols of the evolution of traditional Chinese culture.^[2] The abundant and varied traditional Chinese culture plays an invisible and irreplaceable role in the formation and innovation of TCM doctors' outlook on life and value, thought patterns, and knowledge theories.^[3] Similarly, China is vast in territory from ancient times to the present. The climatic, natural, and humanistic environments of different regions vary greatly, which could come into different effects on the physical, physiological, and psychological status of the inhabitants.^[3,4] Thus, although with the same TCM syndrome, the treatment therapy and prescriptions used in different regions with distinctive geographical environments can be quite different. Third, highly individualized and constantly innovative. Based on the basic theory of TCM, with the deepening of the clinical experiences, the TCM doctors will summarize their own original experience and treatment methods in the clinical practice.^[3,5] These highly individualized and specific tacit knowledge are the source and essence for the innovation of TCM.^[2] Last but not the least, difficult to explicate. TCM tacit knowledge is formed gradually on the basis of imagery thinking (象思维 Xiang thinking) along with TCM doctors' own experience and understanding.^[3,5] Although some TCM tacit knowledge could be described in imagery words, its specific meaning still needs to be deliberated by the inheritors. What's worse is that sometimes the meaning expressed in words is quite different from the original intention, which could mislead the inheritors easily.

EXISTENT FORMS OF TRADITIONAL CHINESE MEDICINE TACIT KNOWLEDGE

Existent forms of tacit knowledge

Tacit knowledge is always generated in the subtle and difficult to be realized and expressed, but easy to be overlooked. The possible existent forms of tacit knowledge are as follows:^[6] (a) knowledge that subconsciously influenced by culture or region, which is similar to innate knowledge; (b) knowledge that could be perceived and stored into the long-term memory system but not be noticed by cognitive subject; (c) intentional knowledge which is not processed by language; and (d) the

subjective judgments that the cognitive subject formed about the things but are ignored by the cognitive subject. Although these knowledge mentioned above have not been noticed by the cognitive subject, they all have a potential impact on the behavior of the cognitive subject and become their tacit knowledge. The TCM tacit knowledge is consistent with these situations.

Tacit knowledge in traditional Chinese Medicine theory

TCM belongs to natural philosophy. The TCM theory is based on the holistic concept, which means that harmony exists between human and nature, and the human body itself is a unified entirety. Therefore, the physiological and pathological manifestations appearing in the human body can also be explained by matching them with phenomena occurring in nature. TCM is dominated by imagery thinking; in other words, it is that the thinking of classification according to manifestation.^[1,3,7] As *Yi Jing* (《易经》 *Book of Changes*) said that words cannot fully express all one's minds, the sage uses the image to express the meaning. The TCM theory expresses the physiology and pathology of the human body by applying the things or phenomena existing in nature. Such as the five elements (木、火、土、金、水 wood, fire, earth, metal, and water) are used to correspond to the five Zang organs (liver, heart, spleen, lung, and kidney), thus the characteristics of the five Zang organs could be expressed easily and visually. At the same time, the relationship between the five Zang organs both under the physiological and pathological conditions can also be well explained by the phenomenon of the five elements interacting with each other. Similarly, the four properties and the five flavors, as well as the meridian tropism, describe the property and efficacy of the Chinese herbal medicines well. All of them make the TCM theory much more understandable.

As the imagery thinking with the characteristics of tacit knowledge is the basis of TCM theory, in order to understand these imagery thinking adequately, it requires the inheritors to have sufficient cultural deposits, keen observation of nature, and a rich ability of imagery thinking.

Tacit knowledge in Traditional Chinese Medicine dialectical treatment

Different from the Western medicine, the basic treatment theory of TCM is dialectical treatment. In brief, all of the symptoms, signs, tongue manifestation, and pulse condition of each patient can be summarized as a syndrome. Then, the therapeutic methods will be made according to the overall analysis of the syndrome. Because of this, different therapeutic methods can be used to treat the same diseases, and the same therapeutic methods can also be used to treat different diseases. In this process, for the same disease in different patients, TCM doctors may give different syndromes according to their own experiences formed in the long-term practice. This makes the diagnosis of the symptoms highly specific. In addition, this is a strong proof that the tacit knowledge is integrated into the process of the dialectical treatment.

In the process of treatment, the importance of TCM tacit knowledge is extremely obvious. The usage of the treatment methods, including herbal medicine, acupuncture, cupping, and massage can also be different according to different TCM doctors. Each selected treatment method is also based on the individual knowledge and experience of TCM doctors. Further, for the usage of herbal medicines, much more tacit knowledge is included. Not only the prescription compatibility, but also the types and grams of the herbal medicines, all affect the therapeutic effect greatly. These tacit knowledge is gradually accumulated and passed down through varied methods. And, all of these are reflections of tacit knowledge in the dialectical treatment of TCM.

Tacit knowledge in traditional Chinese medicine writings

The tacit knowledge is integrated into every aspect of TCM theory and the ideology of TCM doctors. From earliest times to the present day, people are trying to summarize and inherit these highly individualized tacit knowledge by multiple ways. Medical books and medical cases are two common recording methods. Medical books can be not only the TCM doctors' understanding and annotation of other TCM classical books, but also a summary of the TCM doctors' personal experiences. These books are the gems of the authors' experiences, that is, the authors' tacit knowledge. Similarly, the medical cases in which the therapeutic effects have been confirmed are a comprehensive reflection of the TCM doctors' tacit knowledge in the treatment of diseases. Further, the TCM doctors' commentaries on the medical cases are much more precious, which could fully present the thinking of the doctors. Thus, the medical books and medical cases, compared to the experiences in oral, make much greater contributions to the inheritance of the TCM tacit knowledge.

INHERITANCE METHODS OF TRADITIONAL CHINESE MEDICINE TACIT KNOWLEDGE

Master-apprentice inheritance and family-based inheritance

The master-apprentice inheritance and family-based inheritance are two common inheritance methods of TCM from the early times.^[4,8] The knowledge is mainly transmitted vertically from person to person. The inheritor could always stay with the master and be familiar with the cultural background, dialectical treatment methods, as well as the prescribing habits of the master. Therefore, this is advantageous to the inheritance of TCM tacit knowledge. However, the disadvantages are also obvious. The inheritance efficiency is low, and some characteristic treatments spread only within the master and apprentice or the family, which makes them easy to be lost or misunderstood. With the development of the time, this inheritance mode is less or only used as an auxiliary method of other inheritance methods.

School-based inheritance

Since the Northern and Southern dynasties (5th century AD) in China, beginning with the appointment of Taiyi medical instructor and the establishment of medical school, the

school-based inheritance of TCM began. Up to now, the education of TCM tends to be systematized and large scaled gradually.^[4] By this way, a large number of young TCM doctors with basic knowledge of TCM could be trained in a relatively short time. However, in order to make it easy to understand, the knowledge has been compiled and summarized from the classics, what the students learned is the most basic part of the TCM.^[4,5] It requires the students to have a better understanding; otherwise, the tacit knowledge in the classics is really difficult to inherit by this way.

Inheritance based on the books, images, and network platforms

Tacit knowledge is integrated into every aspect of TCM theory and the ideology of TCM doctors. Whether in the ancient or the modern times, compared to the experiences in oral, books are a comprehensive reflection of the TCM doctors' tacit knowledge in the treatment of diseases and play important roles in the inheritance of the knowledge. And, along with the spread of these books, the tacit knowledge contained in them can be inherited from generation to generation.

At present, with the development of science, more modern technologies have been applied to the inheritance of TCM tacit knowledge. Such as images, which could preserve the information in the most authentic state. This helps the inheritors understand the original meanings of the masters better, and also is good for the realization of tacit knowledge hidden in them. Further, through the application of some inheritance-related network platforms, the TCM doctors' experiences and medical cases can be systematically classified and sorted.^[8,9] The inheritors could have a comprehensive understanding of each doctor's thoughts. In addition, through the spread of the network, the inheritors will be greatly increased. However, it is difficult to communicate between masters and inheritors, and the questions arising in the learning process cannot be answered properly. Some deviations may happen during the inheritance of tacit knowledge.

MINING METHODS OF TRADITIONAL CHINESE MEDICINE TACIT KNOWLEDGE IN MODERN TIMES

As the basis of TCM, tacit knowledge is a huge knowledge system implied in the theory and practice of TCM. As an important part of TCM modernization, in order to maintain the vitality and innovative development of TCM, it is urgent to explicate and inherit the tacit knowledge well and efficiently. By using the modern theoretical model and computer technology, some researches have explored the explicit methods of the TCM tacit knowledge from different aspects and here we made a brief summary.

SECI model

Socialization, externalization, combination, and internationalization (SECI) model was first proposed by the Japanese scholars Ikujiro Nonaka and Hirotaka Takeuchi, which is based on the Polanyi's theory of explicit knowledge and tacit knowledge. In combination with the practical situation of Japanese

enterprise management, the SECI model puts forward a new understanding of knowledge creation and knowledge management. In their opinion, relying on the background of social communication, four stages are needed to complete a cycle of the transformation between tacit knowledge and explicit knowledge, which are socialization, externalization, combination, and internalization. By continuing every process of knowledge transformation, a spiral evolution model will be formed, which constitutes a continuous self-improvement and transcendence process. Some researchers have introduced SECI model into the inheritance of TCM and the study of imagery thinking, and they tried to seek a general application model about imagery thinking in order to make it widely used.^[10] The SECI model also has been introduced into the management of TCM inheritance, which could come into the effects of improving teaching effect, promoting the inheritance and development of TCM knowledge and accelerating TCM cultivation of talents.^[11]

Complexity adaptive system

Complexity adaptive system (CAS) was first presented by John Holland, a scholar of Santa Fe Institute. CAS is one of the important research contents and main research methods of the science of complexity. CAS is a system that can describe the overall changes caused by small adaptive changes of individuals. The basic idea of CAS is to regard the elements of the system as an agent with adaptability. Each agent can improve its structure and behavior by interacting with the environment of other agents. As a result, the whole system will evolve. Some researchers believe that during the process of dialectical treatment, the basic elements of TCM can be defined as agents, and the interaction among these agents will make a CAS during the TCM dialectical treatment. From this CAS, some attributes and rules can be summarized, which can further improve the CAS. This can also be used in the evaluation and optimization of dialectical treatment effects. The whole process then will be much more helpful for the research of TCM theory.^[12] Furthermore, other researchers believe that the CAS can also be used in the hermeneutics of TCM classic literature, interactive expression in the inherited study, and knowledge “emergence” of individualized diagnosis and treatment in clinical practice. Moreover, these can be helpful in the explicit of TCM tacit knowledge.^[13]

Latent variable model

The latent variable, which is opposed to observable variable, refers to unmeasurable and unobservable variables. Latent variable model is a kind of statistical analysis method, which has some specific classifications. As we know, TCM syndromes are concluded from the information of the four methods of diagnosis and with the characteristic of unmeasurable. Thus, the latent variable model can be used in the study of TCM syndromes and symptom factors extraction.^[14] A summary of the application of the latent variable model in the TCM tacit knowledge mining is shown in Table 1.

Table 1: Application of latent variable model in traditional Chinese medicine (TCM) tacit knowledge mining

Model	Main study content	Study
Factor analysis	Analysis of TCM syndromes and symptom factors	Ma <i>et al.</i> ^[15]
	Analysis of prescribing patterns	Xiong <i>et al.</i> ^[16]
Latent class model	Analysis of TCM syndromes of different diseases	Scheid <i>et al.</i> ^[17]
		Wang <i>et al.</i> ^[18]
Structural equation model	Path analysis of Chinese medicine pathogenesis	Yang <i>et al.</i> ^[19]
	Compatibility of Chinese medicine compound	Huang <i>et al.</i> ^[20]
Item response theory	Quantitative model of TCM syndromes	Zhang <i>et al.</i> ^[21]
	Study of standardization of symptoms	Huang <i>et al.</i> ^[22]
		Chen <i>et al.</i> ^[23]

Data mining technology

Data mining technology refers to the process of searching hidden information from large amounts of data through the application of specific algorithms. As mentioned above, the amount of TCM tacit knowledge is huge, and most of them are complicated. In recent years, the data mining technology has been widely used in the in-depth studying and mining of TCM tacit knowledge.^[24] As shown in Table 2, the application of some common data mining technologies in the mining of TCM tacit knowledge have been summarized [Table 2].

CONCLUSION AND EXPECTATION

TCM is a treasure of traditional Chinese culture and a gift to the world. To fully explore, the TCM tacit knowledge is the key to its inheritance and development. Simultaneously, it is also an indispensable part of the TCM modernization. Nowadays, with the development of science and technology, some computational techniques have been applied to the mining of TCM tacit knowledge. Either in the analysis of the symptom factors and syndrome patterns, or in the exploration of the prescription compatibility regularity, people are trying their best to make the TCM tacit knowledge explicit and regularized from different aspects. However, it should be noticed that the most important thing to learn TCM is the communication between masters and inheritors, and most of the mining and inheritance methods cannot achieve this at present. Therefore, more intelligent methods should be introduced.

As one of the cutting-edge technologies in the 21st century, the artificial intelligence (AI) technology has been explored and used in the medical activities such as diagnosis and decision-making.^[60-62] It is helpful to improve the patient care by speeding up process and achieving greater accuracy.^[63,64] Based on this, we believe that AI technology will also play meaningful roles on the mining and inheritance of TCM tacit knowledge. However, it is undeniable that considerable challenges will be came across, and the cooperation of the

Table 2: Application of data mining technology in traditional Chinese medicine tacit knowledge mining

Technology	Main study content	Study
Decision tree	Study of TCM syndromes	Zou <i>et al.</i> ^[25]
	Diagnostic rules of TCM experts	Yu <i>et al.</i> ^[26]
	Predict of disease prognostic factors	Gao <i>et al.</i> ^[27]
Neural network	TCM intelligent diagnosis	Chen and Ma ^[28]
	TCM pulse diagnostic	Tang <i>et al.</i> ^[29]
	Analysis of relationship between syndromes and prescriptions	Li and Chen ^[30]
	Analysis of Chinese herbal medicine prescriptions	Lin <i>et al.</i> ^[31]
Regression	Study and comparison of TCM prescription compatibility	Song <i>et al.</i> ^[32]
	Analysis on TCM syndrome patterns and relevant symptom factors of different diseases	Wei <i>et al.</i> ^[33]
		Wang <i>et al.</i> ^[34]
		Liu <i>et al.</i> ^[35]
Association rule	Predict the hepatotoxicity of Chinese herbal medicines based on TCM theory (four properties and five flavors)	Song <i>et al.</i> ^[36]
	Regular application pattern of Chinese medicine herbs in particular disease	Zhou <i>et al.</i> ^[37]
	Evaluation of TCM therapeutic effect	Shi <i>et al.</i> ^[38]
	Analysis of prescriptions compatibility regularity	Chen <i>et al.</i> ^[39]
Clustering	Analysis of the relationship between TCM syndromes and Chinese herbs	Li <i>et al.</i> ^[40]
		Wu ^[41]
	Regularity and validation of TCM syndrome patterns	Liu <i>et al.</i> ^[42]
		Zhang <i>et al.</i> ^[43]
Bayesian classifier	Regularity of symptom factors	Lyu <i>et al.</i> ^[44]
	Analysis of prescriptions and compatibility regularity	Wu <i>et al.</i> ^[45]
		Yao and Shi ^[46]
	Analysis of the derivation law of classical and associated prescriptions	Lin <i>et al.</i> ^[47]
Support vector machine	Study of tongue diagnosis	Pang <i>et al.</i> ^[48]
	Analysis of the association between symptom and syndrome	Wang <i>et al.</i> ^[49]
	Research of TCM syndromes	Sun <i>et al.</i> ^[50]
Principal component analysis	Analysis of the relationship between clinical effect and pharmacological effect of Chinese herbs	Shen and Chen ^[51]
	Establish of TCM syndrome diagnosis model	Xu <i>et al.</i> ^[52]
	Regularity of symptom factors	Wang <i>et al.</i> ^[53]
Discriminant analysis	Analysis of TCM syndrome and symptom factors	Li <i>et al.</i> ^[54]
		Liu <i>et al.</i> ^[55]
	Analysis of syndrome patterns and differential diagnosis	Gan <i>et al.</i> ^[56]
Complex networks		Huang <i>et al.</i> ^[57]
	Analysis of the Chinese herbs' application regularity	Zhang <i>et al.</i> ^[58]
		Meng <i>et al.</i> ^[59]

researchers from multidisciplinary and multi-domains are desperately needed. We believe that under the reasonable introduction of AI, the explicit and inheritance of TCM tacit knowledge will get tremendous development.

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There are no conflicts of interest.

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Analogous Systems Principles and Concepts of Traditional Chinese Medicine and Congruence Couple Therapy

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Abstract

This article explicates the analogous principles and concepts between traditional Chinese medicine (TCM) and congruence couple therapy (CCT). Although originating out of vastly different times and places, TCM and CCT share a view of health based on systems understanding to facilitate the interconnections of the parts of an organism rather than focusing on eliminating symptoms. Both approaches aim to release Qi (气) and vitality by removing blockages through adjusting the interactions, adaptation, and balance of multiple elements and Yin-Yang energies. The goal is to liberate the Qi or life force through improved holistic balance and cooperation. While TCM focuses on interventions at the level of the body, CCT focuses on the attention, awareness, acknowledgement, and alignment of the four human dimensions consisting of the intrapsychic, interpersonal, intergenerational, and universal-spiritual. In light of the current trend toward increasing mental, substance use, and neurological disorders, in particular among countries of middle and low income, dialogue to explore these compatibilities between TCM and CCT is conducive to the continuous evolution of TCM and Western therapies to address not only physical health but also the exigencies of contemporary addiction and mental health care within a mind-body relationship matrix.

Keywords: Addictive disorder, congruence couple therapy, family therapy, mental disorder, substance use, systemic therapy, traditional Chinese medicine, Yin-Yang (阴阳)

INTRODUCTION

Traditional Chinese medicine (TCM) derives from a unified Chinese cosmology that situates the well-being of the human body within an inter-related universe. This unified cosmology represents the cumulative knowledge from generations starting in ancient times through observation, meditation, and contemplation on the workings of nature and the human body refined through philosophical debates.^[1] TCM healing principles are based on adjusting and righting the balance of all the intricately and subtly related component parts to free up the vital energy of the universe manifested as stamina and aliveness through the human body.

Congruence couple therapy (CCT) is one of the few systemic therapies providing an evidence base with a follow-up for its effectiveness in treatment of addiction and mental health.^[2] Systemic therapy is a form of psychotherapy that subscribes to

a theory of viewing psychological symptoms not as a problem intrinsic to individuals, but as a function of their interactions with their social contexts.^[3] The most immediate social context consists of one's spouse and family members. Systemic therapy therefore works with the symptomatic person in interaction with their spouse as a couple unit or together with other family members, although not all forms of couple and family therapy use systemic principles. Systemic formulation of a problem exposes the recursive or repeating escalating cycles of causality between symptoms and relationships.^[4] Systemic therapies therefore are defined by their conceptual lens of viewing the interactive nature or problems and their contributing parts, rather than by how many people are present in a room. Hence, systemic therapies can be applied to individuals, dyads, and groups. Through empirical research, CCT has delineated

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the interactive dynamics of couple relationships, adverse childhood experiences, and the development and escalation of addictive behaviors such as gambling disorder.^[5,6]

CCT was developed as a manual-based systemic form of therapy^[7] that conceptualized, theorized, and extended the ideas of family therapy pioneer, Virginia Satir (1916–1988). CCT provides a theoretical framework consisting of four integrative and iterative dimensions for interventions.^[8] A series of empirical studies have shown CCT to be effective with gambling, alcohol and substance use disorders in symptom reduction, improving mental health, emotion regulation, and couple relationships.^[9–11]

PURPOSE

This article explicates the analogous principles and concepts between TCM and CCT. Although evolving out of vastly different time and place, with TCM focusing on interventions at the level of the body, and CCT at the level of psychology and family relationships, this comparative examination reveals their compatibilities and correspondences in the principles and concepts of their interventions. Implications for the continuous evolution of TCM to address not only physical health but also the exigencies of contemporary addiction and mental health care and interventions within a mind–body relationship matrix are discussed.

MENTAL AND ADDICTIVE DISORDERS

Mental, neurological and substance use disorders are flagged as a growing global health concern that has been on the rise since 1990 and has increased by 41% by 2010, with the expectation to rise further.^[12] These complex disorders involve both social determinants and neurological impairments.^[13,14] Deaths and overdoses related to opioids in North America have reached alarming crisis proportions between 2016 and 2018.^[15,16] Despite documentation of social, health, and economic costs of mental health and addiction disorders, low-income and middle-income countries had allocated only less than 1% of the health budget to mental health.^[17] With changes in values, family structure and demographics, as well as global influences on supply and demand, an urgent priority exists for increasing resources for the prevention and treatment of mental, neurological, and substance use disorders in public health policy.^[18]

Addictive disorders are not restricted to substance use. The World Health Organization's International Classification of Diseases in 2018 officially named Gaming Disorder as a disease condition.^[19] The American Diagnostic and Statistical Manual of Psychiatric Disorder, 5th edition (2013), has established a classification of substance use and related addictive disorders, recognizing that in addition to substance use, certain behaviors can become addictive, for example, gambling. Further, addiction frequently co-occurs with psychiatric problems, most commonly mood disorders such as depression and anxiety and other more severe forms of psychiatric problems such as personality disorders.^[20–22]

What defines addiction is the phenomenon of the 3 C's: craving, compulsion and negative consequences. Individuals with addiction suffer from craving for their addicted substance or behaviour, to the extent that it interferes with their normal activities and commitments. Addicted individuals also develop a compulsion and loss of control over regulating their use of the substance or behaviour despite repeated attempts to curb the addiction which clearly has negative consequences. Negative consequences include compromising one's work or employment, the pursuit of education and career goals, damage to family relationships, financial problems, injury to one's integrity and reputation, financial troubles and crime and legal entanglements. Hence addiction is a condition that has broad health, societal, familial and legal ramifications.

DISEASE AND SYMPTOM FOCUS

The reduction of drug use is the primary and often the sole measure used to gauge the effectiveness of treatment for addictive disorders in Western research.^[23] This parallels Western medicine's focus on the removal of symptoms and symptomatic parts. Some addiction experts attempted to broaden the symptom and disease focus of addiction treatment to look at the patient's broader functioning, to include self-efficacy, psychosocial functioning, network support/social support, craving, and quality of life.^[23] However, controversy remains as to what factors are deemed to be important measures of treatment outcome due to the absence of a consensus. This dilemma reflects the limitations of an atomistic rather than systemic view of addiction that falls short of mapping all the parts that contribute to an addictive disorder as a symptom.

We now know from the last decade of research that in the background of people with addiction is frequently a history of childhood abuse, neglect, loss, and abandonment.^[24] Persons with addiction also have problematic marital and family relationships,^[25,26] intimate partner violence,^[27,28] and abuse and neglect of their children.^[29] In an atomistic view of disease and symptoms, it is difficult to link seemingly remote childhood experiences to problematic relationships in adult lives and addictive and mental disorders.

TRADITIONAL CHINESE MEDICINE AND CONGRUENCE COUPLE THERAPY'S UNDERSTANDING OF HEALTH WITH THE PRINCIPLE OF INTER-RELATEDNESS

TCM's and CCT's understanding of illness and addiction respectively follow the same principle of inter-relatedness. TCM views the body as a set of organs that are in interaction with one another in function, and that the body is in constant interaction with the environment. CCT's family system perspective views the individual as a complex four-dimensional system that is in constant interaction with the environment, and one dimension cannot be isolated from the other. The four dimensions of CCT represent a "house with four doors"

with the intrapsychic, interpersonal, intergenerational, and universal-spiritual dimensions in dynamic relationship.^[7,8] Hence, addiction is a symptomatic behavior that cannot be treated effectively in isolation without consideration of the four dimensions and their interactions.

A person's marital and family relationship is the natural context as well as a natural resource of existence and plays an important role in physical and mental health. Think of the number, frequency and intensity of verbal and nonverbal exchanges between a person and one's spouse and children on a given day. The quality of these exchanges can be either comforting and supportive that are conducive to well-being, or at the other extreme, can be conflict-ridden, blaming, or avoidant leading to impasses. The impossibility of resolving issues that arise on a day-to-day basis could lead a person to a feeling of helplessness, hopelessness and frustration due to the futility of one's efforts and bids for understanding. Emotions affect bodily functions. According to TCM, emotions are closely connected to the functions of one's vital organs.^[30] Hence negative emotions, or Qi that is stymied, can cause physical problems. One difference between TCM and CCT is that the former focuses on bodily functions to maintain health, while the latter works on changing human interactions, communication and behaviors to alter physiological and mental functioning.

PERSON-ENVIRONMENT ADAPTATION

Traditional Chinese Medicine

TCM believes that person and environment are both constantly changing and a person has to adapt to the seasons and changing environmental conditions to optimize health. The world as the big universe interacts with the human body as the small universe.^[30] Here, we see two systems in interaction. Life cultivation consists of adapting one's body functions and diet in response to the four seasons, an important principle in TCM.^[30] This balancing of Yin-Yang forces between types of food consumption, resting and activity in relation to each season helps to maintain a harmonious unity between nature and humans.

The human body is influenced by changes in weather and the pulse varies in its rate, rhythm, volume and tension according to the seasons.^[31] The food one takes in each season in turn affects different organs in the body. The body's functioning can be enhanced or damaged by one's activity and food intake. According to TCM, each plant or herb is classified to possess properties of being cold, heat, warm or cool.^[30] For example, chrysanthemum is considered cool and can clear away heat and reduce fire. Hot foods like ginger, garlic and mutton can strengthen yang and eliminate cold. Beans and grains are mild. Different tastes in food also have different effects on the body and need to be balanced with seasonal changes. The properties and efficacies of many types of food have a medicinal value which leads to the TCM view that food can be used a form of medicine.^[32]

Congruence Couple Therapy

CCT is a systemic therapy that works with addiction as an inter-related system of past and present relationships, intrapsychic experience and interpersonal expression. It aims to remove the blockages to a person's vitality by meeting universal-spiritual needs through hope and compassion.^[6,7] Congruence is defined by the 4 A's of attention, awareness, acknowledgment and alignment in oneself and with others.^[8] Thus CCT in its balancing of a person's interpersonal and intrapsychic functions features a remarkable analogy to TCM principles of balancing Yin-Yang functioning. CCT works on the rebalancing of self and other, past and present awareness, while TCM works with balancing the different body organs, harmonizing diet with the environment such as the four seasons, and opening up the body channels for enhancement of Qi to infuse the body with health and vitality.^[30,33]

Similar to the inter-relational principle of TCM, CCT does not target the symptoms of addictive and mental disorders. The systemic principle in CCT calls attention to the context in which the person functions, the most influential of which is the relationship with one's spouse and family. CCT focuses on resolving the impasses in couple interaction and its aforementioned four dimensions as a potent factor in recovery from addictive disorders. The couple is strategically the pivotal executive unit that acts as a prism reflecting one's family of origin patterns impacting children and work relationships.^[8,34] Patterns of perception, emotion regulation, beliefs, and communication that take place in the couple are transferrable to other contexts. As well, patterns from a person's early life formation in childhood are replicated in the present couple interaction. Problems arise when these patterns are unconscious to the individual and are adhered to with rigidity without a person's awareness, even as they produce negative interactions and emotions.

The therapist's role is to raise questions about the occurrence and validity of these patterns in the present form, and whether they serve the clients well in their functioning and in their physical and mental health. Further impacts of these patterns on one's offspring, extended family relationships, work and social groups are called to the clients' attention.

The improved relationship comes about when both partners in a system activate their choice and willingness to make a change. TCM situates the heart as the site of regulation of the entire system and the centre of energy release. The heart is not just a physical organ, but encompasses the soul, vitality and will of the human body.^[1] Similarly, CCT activates a person's spirit through inspiring hope and compassion to fuel the process of change. A careful and sensitive use of language by the therapist can help the client re-focus her attention from negative and repetitively hopeless situations to visualize and experience in the mind's eye, the possibility of a more peaceful and joyful outcome. This quickens the heart, the will, and spirit in cooperating with the therapist and one's partner toward a collaborative set of goals.

The therapist is instrumental in facilitating a new set of person-to-person or person-environment interactions

in changing the client's perceptions, expectations and communication with her significant partner through awareness and aligned communication in the sessions. New patterns that are set in place and practiced daily create a ripple effect for changes in communication and relationships with one's children and co-workers. These changes have been demonstrated in empirical studies.^[34]

YIN-YANG BALANCE

TCM attributes diseases to conflicts between the person and nature, and between parts of the body.^[1] It also recognizes that these relationships are never static, but are in dynamic interactions that require rebalancing as internal and external forces are in a state of flux. Adaptations to rebalance these Yin-Yang forces are an ongoing task. The "whole will"^[1] receives information about these changes and guides the movement and rebalancing of the entire system.

As discussed, TCM is derived from ancient Chinese cosmology of natural processes and classifies substances and body organs into binary categories of Yin-Yang. One gives rise to the other and one elicits the other, and when both exist in balance, good health results. When there is an excess of one energy, yin or yang, disease occurs. The remedy according to TCM is to rebalance the energy in the system using foods or herbs classified as yin or yang to tone up or down the functioning of body organs in relation to each other and in response to seasonal changes in the external environment.^[30]

Similarly, CCT rests on a Yin-Yang principle of attention to oneself and to others. This requires awareness of others in balance with what is experienced in oneself. Making changes and corrections as to how to conduct oneself accordingly improves harmony within self and with others in the environment according to different contextual factors.^[7]

In CCT, a typology of communication illustrates the kinds of relationship and emotional disturbance that can occur when the natural Yin-Yang of the self-other binary in relationship is thrown off balance.^[7] Every interaction consists of the subjectivity of self and the empathically perceived objectivity of other. Self and other both incorporate an internalized sense of each other through empathy, similar to the Yin-Yang symbol with the yin embedded in the yang and vice versa. Self-other imbalances can be typed as follows:

Superior

Too much of the self at the expense of others gives rise to a communication posture that is domineering, critical, blaming, condescending, and, in the worst case, abusive of the other.

Inferior

Too much focus on the other and too little attention to one's own feelings, needs and preferences gives rise to communication that is overly agreeable, apologetic, placating, and aimed only to please.

Fixing

The fixing posture ignores the dynamic contributions of self and other as the agents of change but focuses on the mechanics of a situation or problem. These solutions are often not long-lasting because they lack the willing cooperation and mutual contribution of the persons involved. They miss out on the good will, energy and creativity of the human agents that mobilize change.

Enmeshed

When the boundary or difference separating self and other is ignored or unclear, it could give rise to confusion and the dampening of excitement between self and other. Differences incite excitement and mutual learning, when partners in a relationship discover themselves and expand perceptions and options through differences.

Avoidance

Finally, when self and other have not successfully found a way to negotiate and balance with each other, over time despair sets in. The entire system can collapse into stagnation, withdrawal and energy depletion. This applies to the case with addiction, depression, and suicide when a person can no longer find the desire to engage with others and seeks an escape from living.

Congruence

When both yin and yang are acknowledged and aligned in a communication, problems can be solved and the context adjusted to favor well-being and harmony.

EMOTIONS

Although TCM largely focuses on dietary, medicinal and bodily activity to optimize health, it does acknowledge emotions as a major cause of diseases.^[30] TCM identifies seven emotions: joy, anger, anxiety, contemplation, grief, terror and fright as normal human emotions. When emotions are suddenly and drastically changed or become extreme or prolonged, damage can be done to the viscera.^[30] For example, excessive anger is said to damage the liver, excessive joy damages the heart, excessive terror damages the kidney. Further, excessive changes in emotions or their blockage can disturb the flow of Qi, an invisible life force that gives vitality to the body and helps with its repair and rejuvenation.

In cultivation of health, regulation of emotions is important for a person to maintain a normal mental state and harmony of Yin-Yang forces in the mind and body. Such harmony of mind and body prolongs life. The concepts of Yin-Yang, body, mind, Qi, and blood are interrelated in TCM.^[30,33]

Emotion regulation has received increasing attention in recent psychological literature as an important contributor to mental health and psychopathology.^[35] It refers to processes individuals use to modulate their emotions consciously and unconsciously to respond to environmental demands.^[36] Strategies of reappraisal, problem solving, and acceptance are theorized to be positive in protecting against psychopathology, whereas suppression of thought and expression, avoidance, and

rumination are considered risk factors for psychopathology. Training in emotion regulation is largely individually based on ways of coping with strong emotions that arise, and are proposed by various forms of cognitive-behavioral therapy popular in Western psychotherapeutic intervention.^[37,38] TCM posits that “any changes in social relations and information gathered by the sense of sight, hearing and smell have a direct influence on the consciousness of the human body, hence influencing changes of the ‘functional states’ of the body, such as joy, anger, sadness, worry and euphoria.”^[1]

Rather than viewing emotion and cognition as discrete entities, CCT treats emotion and cognition as interactive and mutually influencing, similar to how TCM views body organs as interactive in their functions. Cognition encompasses perceptions, beliefs and expectations. Hence, one’s internal operations are conceptualized and viewed systemically. These interrelated functionings are enacted, named, and made visible in the couple therapy sessions.

CCT not only looks upon emotion and cognition as interactive but considers communication and relationships as completing the loop to health when internal states can be communicated respectfully and received appropriately to alter the stress in one’s environment. The dynamic facilitation of wellness is incomplete with just the intrapsychic adjustment without the interpersonal dimension. Communication is an under-valued focus in Western psychotherapy and as a coping strategy. In reality, communication can be viewed as the single most important factor in solving problems and overcoming stuckness in relationship, reducing contextual stress, and bolstering a sense of personal effectiveness. These inner and outer shifts reduce helplessness, hopelessness and low self-worth. Communicating one’s desires and needs and the ability to effectively function in the world without jeopardizing relationships will temper the likelihood of depression and anxiety, two common mood disorders on the rise globally today, particularly in low- and middle-income countries.^[39]

To take the exploration of inter-relatedness of different dimensions further in CCT, clients are asked questions about their childhood experience. This is because the family is the crucible in which many habits, including styles of communication, ways of perception, and meaning-making were formed. Increasing awareness of these family of origin influences and working through unresolved blockages will help the client live more freshly in the present, without the contamination and intrusion of dysfunctional past experiences. This increased awareness of one’s past and oneself brings about a greater sense of aliveness in a person and his/her responsiveness to each other in a couple relationship.

CASE EXAMPLE

Anlie and Wingpo are a couple who have been married 3 years. They run a hostel in a small town. Anlie is looking after the business full-time while Wingpo has another job that requires

days out of town. Customers who come through can be rough and demanding and Anlie often wished that Wingpo is there to help her. The couple said their unresolved arguments have led to their distancing from each other. They have become merely roommates and business partners rather than husband and wife. Anlie has put on 8 pounds in 6 months, is suffering from anxiety and depression, and has poor concentration. Wingpo has been leaving home early and shortening his hours of sleep because of demands from his outside job. Anlie complains about Wingpo’s being away for extended periods of time and she resents his critical tone when talking about the struggling hostel business. Wingpo wants Anlie to understand that his outside job will help them financially and they can look forward to starting a family. They are at an impasse in their communication and the arguments are not leading to any solution.

In helping the couple improve their communication, the therapist first identifies where they get stuck in their communication. It is when Anlie is feeling anxious about handling the customers and running the hostel on her own and Wingpo is dismissive and annoyed with her concerns. Anlie said her parents were always critical of her when she was a child. As she said this she started crying. There were only demands placed on her without any support. She was expected to be successful in everything she did and was constantly compared to her older sister. Wingpo’s attitude and remarks triggered her anxious reactions. Wingpo on the other hand, had a more relaxed upbringing but was brought up with a strong work ethic, hence working on his fulltime job and bringing in an income as a man was important for him. A matter-of-fact kind of man, he thought Anlie should be able to handle things on her own and could not understand why she should have anxiety and depression issues.

Having identified Anlie’s communication as inferior and avoidant and Wingpo’s as fixing, Wingpo was asked if he could use a softer tone and some physical touch to soothe Anlie when she brought up problems with customers. He also needed to acknowledge Anlie’s emotions so Anlie would feel reassured, understood and supported. Anlie learned to monitor her own anxiety level and not to exaggerate her anxiety with imagined negative scenarios. She became aware of her tendency to hear Wingpo’s advise as criticism rather than well-meaning. Both agreed to make these changes to rebalance the communication and reduce the escalation of conflict. Each partner became more aware of their own behavior and how their reactions are shaped by childhood experiences. Each took responsibility to make changes. They were calmer when dealing with stressful situations and offering each other support. They started feeling closer to each other. Anlie was able to not use food as a way to assuage her anxiety and meet her emotional needs. They started eating their meals together and set up a time to share the joys and problems of their day. Six months later, they were both in better health due to more harmonious couple relationship, more balanced nutrition, and improved mood.

The above set of interventions reflects a systemic way of working on emotions and anxiety through improving communication, raising awareness of family of origin influences on present operating and communication styles, and making changes in the couple communication. All of these dimensions were worked on synergistically. The result was a reduction of stress in the management of the hostel, a lowering of anxiety and depression in Anlie, and improvement in the couple relationship.

Viewed from the standpoint of TCM, the systemic therapy of CCT did not work on the symptom of Anlie's depression, anxiety and weight gain. Rather CCT adjusted the balance in the couple communication, reduced the intrusion of negative past influences on their perception and expectation, thus improving emotion regulation of both partners, all of which led to reduction of environment stress and more effective running of the business fostered by better couple cooperation.

CHANNELING THE LIFE FORCE

Qi is a central concept in TCM. Permeating the natural world, Qi is found in Heaven and Earth. The union of Heaven and Earth gives rise to the Qi in humans.^[30] Hence humans participate in the vital energy of the Qi of the universe. However, Qi is also in constant flux and there are many types of Qi in the human body that arouse and move the functionality and activity of the organs. The organs function in balance and relation to each other. Balanced Qi is the foundation of a person's vitality and stamina. Qi has both intelligence and functionality, and manifests simultaneously on the physical and spiritual levels.^[30,33] Physical problems emanate from Qi that is out of harmony.

TCM strives to restore health by remedies that balance the internal environment of the body to help all the organs work together in harmony. In the TCM system, Qi is used to describe each organ's energetic function. The function of one organ is assessed in relation to other organs around it.^[33] TCM also adjusts the harmony between the internal environment of the body with the external environment of the seasons.^[30] In contrast, Western medicine tries to remove the infected parts to eliminate the disease. From the standpoint of TCM, Western medicine cannot permanently cure the disease because of the unchanged living environment that produced the disease in the first place. Blood and channels are central carriers of Qi throughout the body.^[30,33] The philosophy of TCM focuses not on the symptoms but looks at the body as an interconnected network of functions.

CCT as a humanistic form of therapy rests on a belief in the human potential for growth and a tendency towards wholeness. Implicit in this belief is that there is an intrinsic dynamism or spirit in human beings that under optimal conditions will have a propensity for growth, purpose and actualization.

In observing the growing plants, animals and living things on the farm where she grew up, Satir saw "growth was life

force revealing itself, a manifestation of spirit."^[40] The miracle of growth and rejuvenation inspires in us a reverence for all living things. With people, when the conditions for connection, safety and worth are satisfied, there is a release of life energy for growth.^[7]

Growth and healing are two poles of the same continuum. By balancing the communication between self and other, the inner functions of emotion with cognitions (perception, beliefs, expectations), inner awareness and outward expression, awareness of the impact of past in the present, the human system is in a greater state of alignment that frees up the life force that is embedded within.

CONCLUSION

Healing is a liberation of Qi or the life force in both TCM and CCT. Both systems seek to enhance the flow and channeling of the vital Qi into vibrant human activity and stamina. They both facilitate the flow of Qi in harmonious, cooperative relationships among all the parts. Therefore CCT and TCM principles and concepts are analogous to each other. While TCM focuses on realigning the human body and with nature through diet, acupuncture, and herbal remedies, CCT focuses on realigning thoughts and emotions, inner experience and outer expression, self and other through communication in family relationships.

CCT derives from systems principles corresponding to TCM's understanding of health as a holistic organicity and unity. CCT and TCM both acknowledge the invisible energy of Qi that vitalizes well-being. Each subscribes to an understanding of Yin-Yang rebalancing to enhance health. CCT provides an intuitive but specified set of psycho-social-spiritual interventions based on a manual of interlinkages to open up the connections of its four dimensions: interpersonal, intrapsychic, intergeneration, and universal-spiritual. TCM works on the physiological rebalancing of the human body and its energetic systems through practices such as herbal remedies, acupuncture, and adaptation to the environment. The two approaches are shown to be analogous and complementary in their key principles and concepts as explicated in this article.

Many contemporary TCM practitioners and researchers believe that TCM is a system of medicine that is still in a state of continuous development, especially in exploring the potential interfaces of East-West approaches to medicine.^[41] Although TCM locates emotions with the body's organs, it remains relatively underdeveloped in its methods to change the human relational and psychological system to reduce the stress it poses to physical health. Systemic relational therapies such as CCT with its concepts of inter-relatedness, balance, and reciprocity, supported by its empirical evidence base,^[9-11] could add a new dimension to TCM's pursuit of harmony and balance in addressing contemporary mind-body-relational ailments. Mental and addictive disorders is an area of health care urgently in need of prioritizing according to the latest global burden of diseases, in particular among lower and middle income

countries.^[42] This article hopes to have opened up a dialogue to explore the compatibilities of TCM and Western systemic therapies such as CCT. These approaches can then join forces in service of the holistic revitalization of human physical, psychological and relational health in an interconnected matrix.

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Extract and Simple Explanation on the Principles of Taiji Studies

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Abstract

Taiji studies are a field of study that has its roots in the philosophical thought of the Yi Jing or Book of changes. It integrates the self-cultivation traditions of Confucianism, Buddhism, and Daoism, and centers its academic system mostly on the perspective of the “states view” (*jing jie guan*). From the standpoint of its philosophical theory, Taiji studies divide the understanding of Dao into three theoretical states: the state of existence (*you jie*), the state of existence-nonexistence (*you wu jie*), and the state of nonexistence (*wu jie*). It also establishes a theoretical structure that mainly includes “three states and nine axioms,” “One Dao and Nine theory sections,” and “Three practice levels and Nine secrets.” Based on traditional Chinese culture and philosophy, Taiji studies are continuously integrating the essence of them for better understanding and raising, and finally set up a rational school of Taiji Da Dao.

Keywords: State of existence, state of nonexistence, Taiji studies, *Yi Jing* (《易经》Book of Changes)

Taiji is the highest notion in traditional Chinese philosophy and also the core idea and wisdom of a great number of schools of thought from all three Doctrines (Daoism, Confucianism, and Buddhism). The word “Taiji” first appears in *Yizhuan Xici*: “In Yi (changes), there is Taiji, Taiji generates the dual elementary forms (yin-yang), the dual elementary forms produce the four symbols, and the four symbols produce the eight trigrams (Bagua).” In the Dao De Jing, there is a description that points to a state as Taiji itself but with a different name: “There was something undefined and complete, existing before Heaven and Earth. Silent and deserted, standing alone without ever-changing, it circulates boundlessly. It may be regarded as the mother of the world. I do not know its name. In an effort to word it, I say it is great (da), in an effort to name it, I call it Dao.” Great Dao (Da Dao) and Taiji became meta-concepts in the early stage of the formation of Confucianism and Taoism in the spring and autumn period. Zhou Dunyi’s *Tai Ji Tu Shuo* (《太极图说》Explanation of the Diagram of the SupremeUltimate) in the Song Dynasty takes “Taiji” as the universe’s creation itself and the law of all changes. Zhu

Xi explained in his *Taijitu shuojie* that “Taiji is the Dao beyond form; Yin-Yang is the instrument of form.” Since the Ming and Qing Dynasties gradually emerged a Daoist philosophical school called Taijimen that integrated Laozi’s *ziran* (naturalness) and *wuwei* (nonexertion) thought as well as the mathematical philosophy of the Yijing. In the late 1980s, Daoist Taijimen scholars, represented by Mr. Lu Jinchuan, turned the “Daoist Taijimen” school into “Chinese Taiji Studies,” thus presenting Taiji Dadao to modern society as Taiji wisdom culture. Chinese Taiji studies have since then gradually become a popular field of study. In 1995, the Taiji culture experts committee of the Chinese Yanhuang Cultural Research Association was established in Beijing. Mr. Lu Jinchuan, a famous Taiji scholar, and General Xu Huaizhong, an old military writer, were successively its chairmen. Mr. Zhang Dainian, a famous professor in the Department of Philosophy of Beijing University, served as an advisor. Since then, the

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research and dissemination of Taiji Culture and Taiji studies have opened a new chapter.

This paper is an extract, and a simple explanation of the long-standing wisdom and knowledge found in Taiji studies – the principles of Taiji. The quoted academic framework and the theoretical trend in this article derive all from the publications of the Taiji culture experts committee. The purpose of citing and explaining Taiji studies is to clarify the line of thought and broaden the perspective of scholars at home and abroad on Taiji Health from various points of view such as the mode of thought, the academic theory, and the technical application. We even hope more that in the advent of the era of health, we would be able to provide the general public a new way to examine their own physical, mental, and spiritual health.

The terminological citations in this article include five parts namely Taiji studies overview academic outline philosophy of the three states Theory of the “state of existence” and integration of knowledge and practice.

INTRODUCTION TO THE THEORETICAL PRINCIPLES

The purpose of the establishment of Chinese Taiji studies is to help future scholars better understand and put into practice the “da Dao” thought from Chinese culture. Because “Dao” is beyond understanding and beyond words, it can hardly be probed or grasped by the conventional thinking bound by a certain level of cognition. Therefore, Taiji studies tries to establish an academic framework from the perspective of the “states view,” analyzing section by section, from Dao to theories, from theoretical exercise to Qi-Dao theory, Qi and practice,...with one principle connecting all, to help future scholars setup a dialectical thinking to better understand Taiji thought and put Taiji da Dao into practice.

The idea of the “states view” is embodied in two aspects of Taiji studies: “knowing” and “doing” of Taiji studies, that is, the two levels of “theory practice” and “Dao practice” of traditional cultivation theories. Taiji studies attach a special importance to practice of theory, clarify all the theory sections of Dao to break obstinations and dead-end in the cognitive field, and gradually to vivifying people’s thinking, according to the fluently round Taiji. Several key academic terms of Taiji studies have been chosen to be explained in the following sections.

THREE STATES (三界 SAN JIE)–THREE COGNITIVE LEVELS

The theoretical system of Taiji studies contains three levels of the world of human cognition: state of existence, state of existence-nonexistence, and state of nonexistence. In the cognitive state of existence, the six senses (*liu gen*) of the human being cognize all existing things in the world with form and quality: things and happenings, feelings and theories. The state of existence-nonexistence means those things without clear form or quality for human cognition, such as qi (气 vital force), qi (炁 primordial vital force), and chang (field in which

these these forces manifest themselves). The cognitive state of nonexistence refers to that in which the six senses (*liu gen*) of the human being cognize the nonexisting things, without form nor quality in the world: such as “original nature” or “spirit.” Since these three states are differentiated according to the “six senses” of human cognition, their connotations must modulate and change according to the evolution of times and the raising of human understanding. Therefore, the “three states” refer to something living and sagacious in the present time, place, and person, and not to something fixed and unvaried. The establishment of the concept of “three states” provides a rational framework for clarifying philosophical concepts such as Wuji, Taiji, Dao, Qi, Wu (无 nonexistence), and You (有 existence), which are otherwise hard to explain in terms of theory. The “three states” are the core expression of the “states view” in contemporary Taiji studies.

For example, regarding the cognition of “life,” if we unfold it using the “three states”, it can evolve into “three states of life”, that is, existing with form and quality, indicating that all kinds of biological lives in the “state of existence” can also be in the “state of existence-nonexistence”; existing without clear form or quality, such as qi-body life, indicating that this state might be quite bizarre and even deduce the presence of life with neither form nor quality, referring to indescribable life in the state of nonexistence, even if his kind of life cannot be put into words. Because the “three states” are only a kind of rational differentiation with the purpose of facilitating communication; therefore, the “three states” exist in a relationship of “I am within you, you are within me,” that is, the “three states” are just one. Therefore, the phenomenon of “life” can be expressed as the trinity (three bodies in one) of the physical body, the bioenergetic body or the *qi* field of life, and nothingness itself, or they can exist in various possibilities of separation and combination between them. All at once, the “three states” thinking opens up some fixed patterns and obstacles found in the understanding of the phenomenon of “life” in our daily thinking awareness.

ONE DAO NINE THEORY SECTIONS (理 LI)–THE RATIONAL COGNITION OF DA DAO

The theoretical part of Taiji studies also fully reflects the “states view” thinking. For example, to clarify the word “Dao,” in Taiji Studies one starts to expound from nine theoretical perspectives and then can continue the rational elaboration further deducing toward infinity. The reason for dividing them into nine theoretical perspectives is to emphasize their differences in “state,” and to emphasize that in any debate, both sides must be in the same “state” when reasoning, so as to avoid the farce of having a situation of dispute in which both sides talk on different channels.

The nine theory sections are: philosophy, studies, earthly life, metaphysics, mystic, religion, cultivating methodology, practice and evidence. Nine theory sections combine into one Dao and one Dao reflects in nine theory sections. Their academic categories and contents are the following:

- Philosophy – The philosophy of the Yijing (Book of changes), Yin-yang, and the three kinds of changes
- Studies – The theory of *ziran* (naturalness), *wuwei* (nonexertion), and returning to the origin
- Earthly life – The common world logic of previous, latter, end, beginning
- Metaphysics – The theory of the uncommon world- one Dap with nine theory sections
- Mystic – The truth of seclusion, manifestation, and transformation
- Religion – The traditional Buddhist and Daoist teachings about karmic retribution
- Method – The method theory on existence-nonexistence, moving-quiet, rigid-soft, and slow-rapid
- Practice – The practice theory of perfecting the form, perfecting the qi, and perfecting the spirit
- Evidence – The verification of the truth of the unity of the trinity and the return to nothingness (san ji he yi gui wu).

THE THREE AXIOMS (哲 xi)–PHILOSOPHY OF THE STATE OF EXISTENCE

In the rational exposition of the “state of existence,” “state of existence-nonexistence,” and “state of nonexistence,” Taiji studies considers the “three apparent axioms” as the essence of the philosophical theory of the “state of existence,” and the classical representative of what the ancients called “Entering Dao via Theory.” The Axiom (Xi) is the philosophical part of the theory, the essence of rational reasoning. The three axioms (San Xi) are three highly abstract and generalized philosophical formulations of the reasoning in the “state of existence,” namely the “law of transformation and emergence,” the “view of relativity,” and the “principle of development and change.” When reasoning in the system of Taiji studies, it must be “three in one, one in three” moving simultaneously in and out, just like beads running on a plate, producing infinite variations. The separate explanation of each of the three axioms of the “state of existence” rationale is as follows:

“Law of transformation and emergence” – includes odd-numbered birth, even-numbered birth and arising from change; “transformation and emergence” contains “relativity” and “development and change”.

“View of relativity” – includes the relative, absolute, and nonrelated modes of relationship; “relativity” contains “development and change” and “transformation and emergence”.

“Principle of development and change” – includes stability, variability and constant change; “development and change” contains “transformation and emergence” and “relativity”.

The “three axioms” are like open thinking rings, which are interlinked. When using the “three axioms” to study and understand the phenomena of nature, the three rings come out together, breaking the mud and sweeping away all kinds of stereotypes and rigid perceptions hidden in the thinking and understanding, just like a sharp sword breaking through fixed

patterns of thinking. In Taiji studies the importance of learning the “three axioms” is emphasized, not only because it represents the epitome of cognitive patterns in the “state of existence,” but even more because it is a gate to wisdom to break through the crust of cognition in the “state of existence” and enter a higher states of cognition such as “the state of existence-nonexistence” or “the state of nonexistence.” Having the thinking of the “three axioms” is the first step to possess the ability of Taiji thinking.

THE NINE AXIOMS (哲 xi)–REASONING OF THE “THREE STATES”

The system of the “three axioms” is ingenious; it responds cleverly to all things in the “state of existence.” However, the cognition of the “state of existence” is only one part of the human cognitive world, a part that emerges through the “six senses” of human beings. Aside from the “state of existence,” the theory includes other states of cognition that do not emerge through the human “six senses,” or in other words, realms that cannot be cognized through the human “six senses,” such as the “state of nonexistence” or the “state of existence-nonexistence.” The understanding and philosophical conclusion of all states of cognition belong ultimately to Dao. Taiji studies summarize this into the “three states” and “nine axioms,” distributed as follows:

- “State of nonexistence” – 1 axiom: In the state of nonexistence, nothingness is reason, and no reason can be shown, that is how it is
- “State of existence-nonexistence” – three axioms: The state of existence-nonexistence in itself is one, its functions are two
- “State of existence” – five axioms: In the state of existence of all things, we find three apparent axioms and two hidden axioms.

The reason why there is the principle of “nine axioms, one Dao” is because with the cognitive patterns and language explanations of the “state of existence” there are many states or realms that we cannot deal with and cannot explain, because they transcend the “state of existence,” such as Taiji and Wuji. These are not only the natural phenomena of different existential states or realms but also the inevitable manifestation of the “states view” philosophy in Taiji studies. The principle of the “nine axioms” is the complete theory of Taiji studies. It is not supposed to be a crammed at once into the mind, but rather, it starts with the principle of the “three axioms,” letting wisdom continuously reject and discard, thus returning to the origin. Thus, it is the gate to Knowledge of da Dao.

TAIJI THEORY AND DAO: A DIALECTICAL RELATIONSHIP BETWEEN KNOWING AND DOING

The reflection of both knowledge and practice in Taiji studies lies in the “Theory of Taiji” and the “Dao of Taiji”. The unity of knowing and doing is the dialectical unity of the theory of Taiji and the Dao of Taiji. Their relationship can be described as “one

and so two, two and so one.” As theory, thousands of words are spoken, in sequence of one two three four five six seven eight nine; as practice, cultivation exercise returns to Dao, from nine eight seven six five four three two to one. They engender mutually and turn one into the other just like yin-yang. This is also inevitably the case of the “three axioms” of the “state of existence: “law of transformation and emergence,” “view of relativity,” and “principle of development and change.” However, reasoning lies in intelligence, practice lies in *qi*. They may have different names, but they are carried out in the same way, and this is also the dictate of the “three states” existence.

The “Theory of Taiji” – in theoretical debates, the “states” are divided into three; according to different states, there are “nine theory sections”.

The “Dao of Taiji” – the practice of *ziran* (naturalness) and *wuwei* (nonexertion) is the way of return, in agreement with one and Wu (nothingness).

In short, the “Theory of Taiji” gives service to the “Dao of Taiji.” The “Theory of Taiji” breaks in a rational way all kinds of fixed frameworks and chains, leading the mind into the unfettered state of Taiji, which is called “wisdom penetration.” From the opposite perspective, the “Dao of Taiji” is the corroboration of the “Theory of Taiji.” The “Dao of Taiji”

grasps through practice the authenticity of the “Theory of Taiji” state, and leads body, mind and spirit to return naturally and inactively (*wuwei*) to the original Truth. This is called “practice penetration.”

CONCLUSION

The establishment of the theory and method of Taiji studies is based on the Daoist notions of *wuwei* and *ziran* in both of its dimensions (theory and practice). The purpose of learning the Taiji theory and method is to help future scholars to establish Taiji thought, get rid of attachments and obfuscation in thought patterns, and fully comprehend and put into practice the da Dao way of *ziran* and *wuwei*. The principles in Taiji studies are crossed transversally by the “three states” and vertically joined in a single Dao. Its terminology is concise and comprehensive, among its key terms we find: “three states view,” “three axioms,” etc., In the present discussion of the great proposition of our times “Taiji thought for the advance of human Health,” this may certainly serve as a stimulus.

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Acupuncture Mechanism, Applications, and Future Development

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Abstract

Researches about ancient needling, technique, have been made for many decades, whereas the results are discrepant. People tried to use modern science to explore thoroughly about the real structure of acupuncture functions. Much more progress has been made than the last century. This review summarized some of the most prevailed theories about the mechanisms of acupuncture and their common applications. And lastly, this article discussed the future development for acupuncture.

Keywords: Acupuncture, application, development, mechanism

INTRODUCTION

Acupuncture, an essential component of traditional Chinese medicine (TCM), has developed for 1000s of years. Due to the obvious efficacy and fewer side effects, acupuncture is welcomed by many people. Even in Western countries, it is used as a common complementary treatment or an independent therapy compared to some conventional methods.^[1] With its popularity increased, scientists started to explain its underlying action mechanism and apply these new findings to a modern version of acupuncture. Researchers first look into the entity, the concrete substance acupuncture takes effect on, and then gradually shift into a certain body system to explain it. In this way, some explanations can be isolated and cannot outline the whole process perfectly. In other words, there are always some factors which can be overlooked during the research process.^[2] However, through clinical acupuncture applications, there are chances that researchers can verify some theoretical mechanisms and conversely have great improvements in clinical applications using verified mechanisms. There is a close connection between the mechanism and applications of acupuncture. Recent researches have a new trend to use using precision apparatus to monitor the dynamic body system and record real-time data.^[3] Although we are in modern times, we cannot abandon the ancient Chinese old theories about

acupuncture. It is necessary to choose the proper materials and make explorations to recreate these old chapters into a better, understandable shape. Some valuable information from the past might help us get to the acupuncture mechanism much closer. Adequate collaboration between traditional-based acupuncture and modern medicine might create more benefits for patients.^[4]

This article will summarize ancient understandings and modern researches about acupuncture. Moreover, it outlines some mechanisms with more value in clinical applications.

BACKGROUND OF ACUPUNCTURE RESEARCH

Some ancient Chinese concepts and recent history about acupuncture

Along the long history of Chinese acupuncture, the basis is on Meridian theory which is described in the *Huang Di Nei Jing* (《黄帝内经》 *Yellow Emperor's Classic of Internal Medicine*). In TCM, the meridians are considered as channels which carry *Qi* (气) [Figure 1] and blood, balance Yin and Yang, and connect organ systems. *Qi* is defined as a dynamic substance that fills in the human body and operates most of the body functions. When people get ill, *Qi* is not in balance and needs

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modulations. Needles inserting in the specific acupoints along the pathway of meridians can adjust Qi to restore balance. *De Qi* (得气) is a critical process when twisting the needle. Patients will experience soreness, numbness, heaviness, or even an electrical sensation. "The fish taking the bait" is used to describe this process.^[1] After the arrival of *Qi*, pain from many diseases can be relieved in a short time.

Until the early 1950s, this technique in China started to have deep researches under the policy "Chinese medicine is a great treasure and should be more developed and explored." In 1958, Doctor H. Z. Yin from the Ear, Nose, and Throat Department of Shanghai First People's Hospital performed a tonsillectomy using acupuncture analgesia^[5] [Figure 2]. During the 1970s, propagated sensation along the pathway of channels was discovered by doctors from 301 Hospital of PLA and loads of researches around this subject blossomed. The mechanism of the transmission phenomenon is based on the theory of neuroanatomy and neurophysiology. This unique phenomenon promoted the process of mechanism research about acupuncture.

Acupuncture, Chinese treasure, gradually known worldwide is developing its own value among many medical fields.

Western country viewpoints about acupuncture effectiveness

A *New York Times* journalist James Reston first introduced acupuncture to the American public. President Nixon's visited China, pushed to the forefront, since then, acupuncture has been a popular discussion topic for American media.

Since acupuncture came to Western countries, researches have been done to prove whether it is effective. Current acupuncture research is most often based on the sham needle which was first designed by K. Streitberger and J. Kleinhenz in 1998. This idea compared two groups of people which were using different needling methods. One group was performed the real needle inserting treatment, whereas the other group was using a sham needle (considered as of placebo devices) which did not penetrate the skin. The outcomes of this research indicated that there is no significant difference in treatment results between these two groups, which means the real needle inserting method has no effectiveness. In fact, this conclusion cannot be convincing because the research design overlooked many influencing factors. The most important fact is that they did not realize that acupuncture started using a noninsert skin needle (Blunt needle, Di Zhen, one of the Ancient Nine Needles [Figure 3]) more than a 1000 years ago. Sham needle accidentally has the same effect as the Blunt needle, which results to the same efficacy in two groups. These two acupuncture groups are actually comparing two types of acupuncture techniques.^[6] Through this case, we need to pay full attention to the various shapes of acupuncture and their broad utilization.

Another challenging example about Western cognition in acupuncture is the dry needling (DN). DN is a new therapy which has been brought up against the present acupuncture system. DN practitioners claimed that DN is not acupuncture



Figure 1: Mysterious Qi



Figure 2: Historical news of acupuncture analgesia

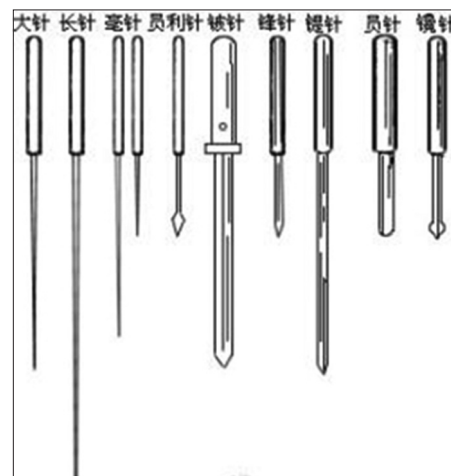


Figure 3: Ancient Nine Needles

because DN does not follow the principle of TCM meridians. DN is a type of modern acupuncture, which is also called trigger points' acupuncture^[7] [Figure 4]. A trigger point is basically defined as a tender spot in the muscle, whereas an acupoint can be found anywhere in the body.^[8] Trigger points

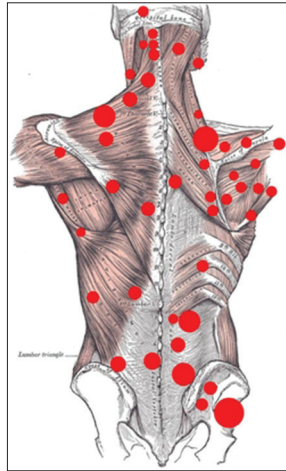


Figure 4: Trigger points in the muscle

have many overlapping parts compared to acupoints which are largely distributed in the body. Hence, DN has no reason to de-acupuncture, at most, it can be called de-meridians. Apart from the normal acupoints along meridians, there are other acupoints such as Ashi points and extra points on the body. It is unquestioned that DN is a part of TCM acupuncture as the instrument used is acupuncture instrument and the acupoint stimulated is within the TCM acupoints. Nevertheless, through this challenge from Western countries, TCM acupuncture strongly needs to explore further about the theoretical basis for Ashi point and other extra points.^[9]

Most acupuncture researches in Western countries are not firm enough to stand up against arguments, whereas some theories might have a certain influence and are worthy to be debated.

MAIN THEORIES ABOUT ACUPUNCTURE MECHANISM

Central nervous system

Numerous researches have concentrated on neurophysiology and imaging studies to verify the activation of the brain which acupuncture produces.^[1] These viewpoints are based on the anatomical structures of acupoints which may include nerve and nerve endings underneath the skin. Acupoints and internal organs are integrated by the central nervous system (CNS), hence the functional relationship between them is effectively formed. The CNS regulates the various nerves, endocrine, and humoral networks, and then affects target organs to perform the effect of acupuncture. Acupoints' effectiveness may depend on the convergent inputs of these somatic areas and the related organs in the brain as well as the integrative function of the brain neurons.^[8] The stimulation of acupoints can transmit signals along the relevant nerves to the central structure. Then it can achieve analgesic function through the pain sensation conduction pathway, which is included in the CNS conduction pathway. Some recent imaging studies have further explored that acupuncture and pain have common central pathways [Figure 5].^[1]

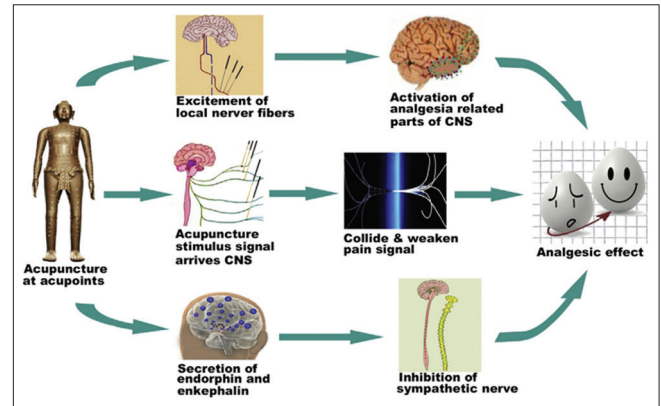


Figure 5: Three pathways of acupuncture analgesia

Functional resonance magnetic imaging (fMRI) is a newly applied technical apparatus to monitor the activated regions of the brain. Studies have shown that there may be a specific correspondence between acupoints, meridians, and functional areas of the brain, suggesting that acupuncture at different acupoints can cause functional changes in different areas of the brain. The fMRI technique detects the different ratios between hemoglobin and deoxyhemoglobin in the local blood flow of the brain-activated area and the inactive area. Moreover, the difference of hemoglobin leads to different signals, which reflects the area and characteristics of brain function changes, and then carries out real-time functional imaging of brain tissue. The application of brain functional imaging to the study of acupuncture on the CNS plays an important role in further revealing the essence of acupuncture and meridian phenomena.^[10]

However, these interactions in the CNS are complicated and yet to be fully understood. In addition, present imaging studies simply focused on some specific acupoints, thus the outcomes are not common in use. Moreover, the presence of De Qi is mostly based on the subjective sensation of people; consequently, the research outcome can be influenced due to lack of objective criteria.

Peripheral structures

In 1984, Dung listed the following anatomical structures observed near acupoints: peripheral nerves, nerves emerging from a deep to a superficial location, cutaneous nerves emerging from the deep fascia, motor points of neuromuscular attachments, blood vessels, fibers of varying sizes, ligaments, and much more other tissues. These observations indicated that there were no unique structures beneath the acupoints.^[11]

Sensory fibers

One of the first human studies to scientifically investigate the effects of acupuncture was conducted in 1973, which tested the analgesic effects of acupuncture against morphine. This research not only supported the finding that acupuncture raises the pain threshold but also revealed evidence that acupoints may be related to peripheral nerve sensory fibers.^[1]

Motor fibers

In 1978, Kline *et al.* reported that electrical stimulation of Zusanli (ST 36) decreased arterial blood pressures and heart rate significantly when the tip of the needle was close to branches of the peroneal nerve.^[8] Their results indicated that it is the activation of motor fibers that resulted in the muscle contraction and subsequent excitation of muscles and/or joint receptors, which produced an inhibitory reflex in the relevant response.

Neurotransmitters

In 1988, academician Han proved that acupuncture stimulation can activate the opioid system in body, which can increase the concentration of endorphins in the brain. And for the first time, a new way of acupuncture analgesia has been elucidated from the neurotransmitter point of view.^[12] Apart from the activation of opioid receptors, some of the well-known acupuncture mechanism researches in this area include inhibition of NADPH oxidase-mediated oxidative stress, activation of cholinergic muscarinic receptors, and anti-inflammatory signaling (reversible with atropine). Main investigations assessing the acupuncture needling effects on amino acids, monoamines (serotonin, dopamine, and norepinephrine), peptides (opioid peptides and substance P), purines, and inflammatory markers have been conducted.^[3] These researches are aiming at the substances in humor structures of related acupoints and their transmission function to CNS or organs.

Overall, structures near acupoints are the direct areas that acupuncture has effects on. They can be part of the CNS process or have functions on their own.

Fascial anatomy view

With the further study of meridians, scientists started to concentrate on a more comprehensive perspective to explain the essence of acupuncture structure. In 2008, Wang Chunlei put forward the Fascia System to explain the anatomical essence of meridians and acupoints. Through “China digital virtual human model,” they found out that some parts of the body have connective tissue in streak distribution, and its position and direction are in accordance with the classical meridian routes. It seems that the meridians and acupoints are located in the connective tissue of the human fascia.^[13] Study by Langevin and other studies have also found that there is a close relationship between the connective tissue of the fascia and the meridian acupoints. It is suggested that the connective tissue spreads throughout the body and connects the organs and tissues of the whole body. Most of the acupoints are located in the connective tissue between muscles or between muscles and bones.^[10] From the viewpoint of fascia anatomy, the essence of meridians in TCM is actually the fascia structure composed of nonspecific connective tissue, and the acupoints are located in it, which can produce strong biological information when stimulated. Because the fascia connective tissue is like a network throughout the human body, it can be concluded that the whole body is spread of acupoints. Acupuncture and

other relevant therapies make biological changes of the local fascia structure in the stimulating acupoint area and produce biological information such as neural electrical and chemical ones, resulting in a series of physiological and biochemical changes including microcirculation, membrane permeability, receptor configuration, channels opening and closing, and signal transduction. Furthermore, activating and enhancing the self-monitoring and controlling functions of the fascia system, mobilizing the stem cells reserved in the fascia to differentiate into functional cells and repair the damage.^[13] Under the participation of the nervous system and immune system, acupuncture regulates the body functions (repair, regeneration, and activation) through the fascia system.

The research of fasciaology laid the foundation for ancient acupuncture of the basis on a modern biological level. And, it provides a theoretical evidence for acupuncture research to transform from the traditional empirical medical model to the biomedical model. This field holds a broad prospect and is worthy of further exploration.

RELEVANT APPLICATIONS

Early in 1979, the WHO recommended worldwide 43 types of indications for acupuncture, which effectively promoted acupuncture to enter the public view. In 2011, the WHO’s “Clinical practice guidelines for TCM (Acupuncture)” formulated a standard acupuncture treatment program for five diseases (migraine, Bell palsy, herpes zoster, pseudobulbar paralysis after stroke, and depression), which gradually standardized acupuncture treatment.^[14] However, through the long history of acupuncture clinical experience, acupuncture applications cover a wide range of diseases due to the widespread acupoints on the body and various types of needles or therapies.

Analgesia

This is one of the greatest fields of acupuncture. Although acupuncture has been applied for treating different illnesses or symptoms, its application in treating pain is likely more accepted by patients than any other indications. A 2010 survey of hospitals in the United States showed that the top four uses of complementary and alternative medicine were pain related, and that analgesia was one of the main reasons for patients to seek acupuncturists to either complement or substitute conventional care.^[3] Yin *et al.*^[15] revealed that mounting evidence supports the use of acupuncture for chronic pain in the low back, neck, shoulder, and knee, as well as for headaches and migraines. From a perspective of physics, inserting a needle can adjust the pressure under the skin. Sometimes, pain is originated from too much pressure.

In general, acupuncture’s achievements in analgesia are obvious to all.

Relieve acute diseases

Acupuncture is effective in many diseases that suddenly occur: diarrhea or bellyache (results from unclean food or

bad eating habits), acute lumbar/ankle sprain, a suddenly stroke, and more. If these illnesses are happening within a week, choosing timely acupuncture therapy can acquire an ideal treatment outcome. In Fletcher Kovichan's research,^[2] he indicated that an organ communicates its state to its related acupoints as the tissue at those acupoints becomes tender when the organ is stressed; further, this tenderness rapidly clears once the organ's function has been corrected by acupuncture. The time is about one second or so. Thus, the speed of acupuncture effect is obvious. One of the worthy researches for acupuncture application is first-aid treatment. For instance, Renzhong (DU 26), Shixuan (Extra points), and Neiguan (PC 6) are frequently used to perform first aid for heart disease. However, these acupoints do not get the chance to give function under most of the situations.

Modulate chronic diseases

Due to the close connection between external acupoints and internal organs (traditionally by meridians and modernly by nerves or other biological substances), acupuncture also has great ability to treat various types of splanchnic diseases. In most cases, these organ illnesses have a long period of degeneration before finally break out. Thus, during the chronic changing sessions, acupuncture's effect works again. For instance, Parkinson's disease, a progressive neuro-degeneration of multiple system damaging motor and nonmotor functions, affects individual and societal dimensions negatively. In Fung Kei Cheng's research,^[16] acupuncture at specific acupoints along the body indicates positive outcomes in this illness.

Improve emotion state

As mentioned in this literature review, acupuncture has an impact on the functional regions of the brain, which can regulate patients' mood effectively. Simone M. Ormsby's research revealed that the women in their study described gaining benefits from acupuncture that they felt enabled them to better manage their lives and the changes that pregnancy brings.^[17] These findings provide a new understanding regarding the possible role acupuncture could provide as a supportive treatment for antenatal depression. Acupuncture is also effective in other types of emotions such as nervous, panic, rage, fear, and more. In this way, patients can be more dynamic in their daily life and do not have to take any side effects.

The application of acupuncture is very broad; while aiming at the same disease, there will be various ways to choose from. Acupuncture treatments are suitable for many kinds of diseases, which will be led to a satisfying outcome with lower cost and higher effects.

FUTURE DEVELOPMENT

In recent decades, the developments of acupuncture at home and abroad are relatively rapid in many ways. Acupuncture is currently widely used in over 180 countries and has gradually become an integral part of the mainstream medical field. However, problems still exist which will prevent acupuncture

from developing further. The following summarizes some aspects that are beneficial for the future of acupuncture.

First about the theoretical basis: TCM theoretical system is different from Western medicine; acupuncture combines ancient philosophy and empirical judgment, which is very different from the laboratory science and logical verification in Western countries. This makes acupuncture faced with two choices: bring acupuncture into the laboratory to establish a standard system based on experimental research or follow the original principles of TCM to develop. How to make an appropriate choice has become an important factor affecting the future development of acupuncture.^[18] Nevertheless, the great clinical efficacy of acupuncture is unquestionable. It is worthy of recognition that acupuncture therapy is a relatively independent treatment system. The theoretical innovation of acupuncture should lay foundations on the previous studies, even the classic ones. In other words, it is critical to manage the relationship between inheritance and innovation.

Second, about the aspect of acupuncture technique itself: acupuncture is variable during different clinical situations, thus the types of needle/manipulation are different. The most common type of needle is Hao Zhen (Filiform needle), whereas other types of needles are also effective. For instance, using fire needles for rheumatoid arthritis or using Yuan Li Zhen (round sharp needle) for piriformis syndrome.^[14] Appropriate combination of some special techniques is conducive to the improvement of clinical efficacy.

Then, another aspect is the acceptability of the public. Acupuncture is known by a large amount of people, but acupuncture's high awareness is often regarded as an antique cultural treasure rather than a practical medical technology. In this case, the obvious function of acupuncture needs to be propagated further. The more people choose acupuncture for treatment, the more chance there is for acupuncture to prove its efficacy.

In my point of view, the future development of acupuncture should focus on improving clinical efficacy, which is the main advantage to back up for it. Furthermore, some effective treatment plans should be integrated for certain diseases (which have poor outcome on taking medicine or do not have proper therapy in Western medicine) in order to promote more estimable acupuncture. "Preventive treatment of diseases" is an important part of acupuncture, which also can be a competitive advantage due to the recent lifestyle of people. To develop acupuncture, we just need to choose the right direction and march forward firmly.

DISCUSSION AND OUTLOOK

This article summarized the general information about acupuncture. As we all know, acupuncture has been widely applied to medical treatment and achieved outstanding effects. However, the convincing effect of the mechanism of acupuncture has not acquired a satisfying explanation.

TCM emphasizes the origin of things from the view of unity, entirety, and connection, that is “black box” theory, whereas Western medicine focuses on the “white box” theory, which is reductionism, which treats things according to atomic decomposition.^[12] Conducting researches through a microcosmic perspective can be blind in the whole picture of things, while the integral theory of TCM is understandable in whole and vague in detail. Performing microcosmic research to explore the mechanism of acupuncture is inevitable, but these researches need to ascend to an upper level, trying to lean close to a higher integral theory. Nevertheless, the traditional way has obvious efficacy in practice. We may not be able to fully understand it in short times, but we have the ability to conduct this technique to the utmost. Apart from treating common diseases more effectively, acupuncture can also treat some tough diseases and put forward their original improving ideas like how to relieve the pain of patients.

Acupuncture has distinctive features. Acupuncture practitioners from all over the world should study from different angles and different levels according to their own advantages. Blindly following the trend is inadvisable. How to actively absorb modern knowledge of life science and maintain the traditional characteristics of acupuncture is an urgent problem that we need to solve. We believe that with the development of systems biology, the unified view of medicine knowledge between the East and West, and the mutual penetration of different science technology, basic clinical research of acupuncture will move forward at a steadier and faster pace and the development of acupuncture will be much better in future.

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What Can Western Medicine Relearn from Chinese Medicine?

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Abstract

The article begins with a short review of similarities between traditional Chinese medicine (TCM) and original Hippocratic medicine. Both were holistic, and taking every aspect contributing to illness into account, both followed the dictum, “first do no harm.” A key difference between the two, even 2400 years ago, was the Hippocratic emphasis on scientific medicine. The explosion of science and technology in the latter half of the 2nd century was applied to Western medicine, which became ever more complex, specialized, and reductionist, losing much of its original holism. The strength of TCM is its holistic approach and techniques such as acupuncture, so necessary for the management for patients who have chronic illnesses such as pain for which Western medicine has few answers.

Keywords: Chinese medicine, Hippocratic medicine, Western medicine

INTRODUCTION

One important question which keeps arising is, “Why is the health consumer increasingly turning to “alternative medicine?” Complementary and alternative medicine (CAM) has become an established part of health care for many Australians.^[1] CAM is estimated to be used by up to two out of three Australians and accounts for \$3.5 billion in expenditure every year.^[1,2] It is noteworthy that the annual patient expenditure for CAM exceeds expenditure on Pharmaceutical Benefits Scheme medications by \$1.8 billion.

Prominent among such other medical avenues is traditional Chinese medicine (TCM), which is becoming increasingly popular in Western countries. TCM can hardly be classed as an “alternative medicine!” It has a 5000-year-old tradition and is a recognized medical discipline in its own right. TCM, which includes the use of meditation, exercise, nutrition, acupuncture, Chinese herbs, and massage, has been developing for 1000s of years. As we all know, many aspects of TCM, in particular acupuncture, massage, and meditation, are increasingly being applied in Western medicine, very successfully, especially by general practitioners, physiotherapists, and others who have to deal with chronic pain and other conditions for which Western medicine has few answers. Speaking on acupuncture alone,

David Mioduski, a Western-trained doctor and keen student of Chinese medicine and acupuncture, stated that Chinese medicine and acupuncture could treat almost everything except life-threatening conditions. He mentioned pain; stopping smoking; drug and alcohol addiction; obesity; cosmetic and beautification issues such as elimination of scar tissue, wrinkles, sagging skin, acne, and skin disorders; anxiety and depression; infertility and women’s issues; stress management; fitness and sports enhancement; prevention of injuries; optimizing mental functioning and clarity; immune boosting; and chronic allergies.^[3] In his view, TCM can detoxify and strengthen the body. He says that it works by treating the root cause of all diseases and conditions without causing side effects. It balances out the body and unblocks that which is blocked: poor blood flow, poor nerve conduction, and poor energy flow. He describes acupuncture points like electrical switches in the body, which can sometimes short circuit and cause chronic pain or destructive behaviors such as overeating or smoking. He attests that over a decade of experience in treating all sorts of conditions successfully, by utilizing his knowledge of Western medicine and TCM, he is able to fuse the benefits of both.

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The author's interest in Chinese medicine began in 2015 at a visit to the Colorectal Department of the Nanjing Municipal Hospital of Chinese Medicine with Dr. Ding Shuqing, a 10th generation TCM specialist and specialist colorectal surgeon in Western medicine. The hospital is an Affiliated Teaching Hospital of Nanjing University of Chinese Medicine. Ding Shuqing is the granddaughter of Ding Zemin (丁泽民), one of the founders of the hospital. In 1956, Ding Zemin generously donated eight generations of family secrets including herb prescriptions and instruments to the hospital. He set up the colorectal department with his wife and his elder brother. Ding Zemin [Figure 1] was the founder of the Chinese medicine Colorectal Disciplinary and Society in China. He had a high reputation in the colorectal field in the Asian Pacific area and has been honored as such by the Chinese government [Figure 2].

A visit to the Ding Zemin Museum dispelled any ideas that TCM was simply going to a herbal specialist and getting some Chinese herbs! Many of Zemin Ding's colorectal disease treatments are still in use today, all minimally invasive. I recommend interested readers view the fascinating story of these treatments as practiced by the 10th generation Ding family on <https://www.youtube.com/watch?v=AP2NRzeIM5c&t=61s>.

My visit to Nanjing to give lectures on my integral theory of pelvic floor function and dysfunction was a rich and busy experience for me. I found some time to work with Dr. Ding Shuqing on some original research "Interventional anorectal manometry based on the integral theory system" which ultimately led to a fine paper Dr. Ding Shuqing. We spent a half day at the Nanjing Municipal Hospital of Chinese Medicine. I was impressed by the holistic approach of the medical treatment at the Nanjing Hospital, even for something as specific as colorectal disease. This holistic approach

resonated with my own research work into the etiopathology and treatment of bladder/bowel incontinence and chronic pelvic pain. The cause of these conditions goes well outside the organs to muscles, ligaments, and fascia situated in the front, middle, and back parts of the pelvis. These structures form three natural divisions which are always in balance [Figure 3]. These interact holistically to form the peripheral neurological control mechanisms for the bladder and bowel. In turn, all are subject to central cortical control, a seamless interaction of body and mind. Important aspects of such etiopathology are the differing contributions of each of these structures to the nonlinear feedback control mechanisms and how damage to these structures can influence the end results. According to the integral theory,^[4,5] it is the biomechanical imbalance between these divisions, front, middle, and back, which causes the main bladder and bowel symptoms [Figure 3]. We have found that strengthening these ligaments and muscles, either with specialized squatting-based exercises or ligament surgery, cures or improves the symptoms indicated in Figure 3. Unfortunately, even today, many of the symptoms in Figure 3 are regarded as incurable. The problem is that a Western medicine brain fixed in reductionist mode treats the organ only, bladder or bowel, usually with poor results. A reductionist mindset will never understand the interactive role of ligaments muscles and feedback systems as set out by the integral theory system. Such an understanding will be required so medicine can progress, and cures can be provided for these afflictions which affect up to 50% of older citizens.

I see the "humours" of Hippocratic medicine and the "essential elements" of TCM as an intuitive holistic understanding of the body's natural nonlinear control mechanisms by our forebears. It remains a fact that when these are out of balance, disease processes occur, much as TCM and Hippocratic medicine state, even if the exact pathways themselves were then not known. One modern example of imbalance causing disease is in my own specialty. When the bladder's neurological feedback control system is disturbed and unbalanced, the patient cannot control her bladder and wets on the way to the toilet [Figure 3].

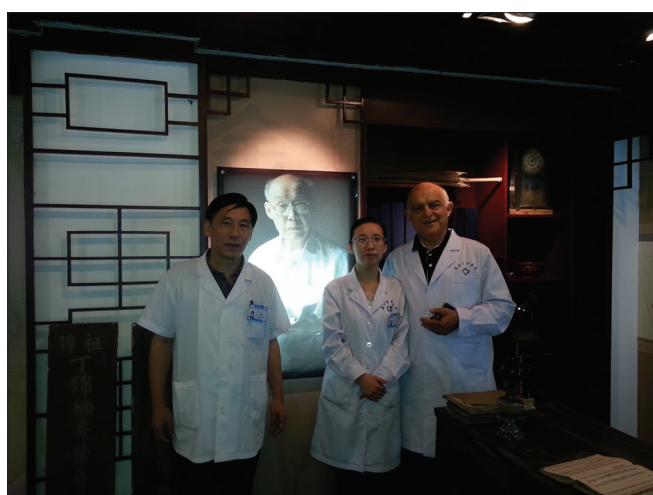


Figure 1: Photograph in Zemin Ding Colorectal Museum, Nanjing. From left, Yijiang Ding Professor of colorectal surgery Nanjing University of Chinese medicine and 9th generation Ding Chinese medicine specialist, Dr. Shuqing Ding, colorectal surgeon and 10th generation Ding Chinese medicine specialist, Professor Peter Petros

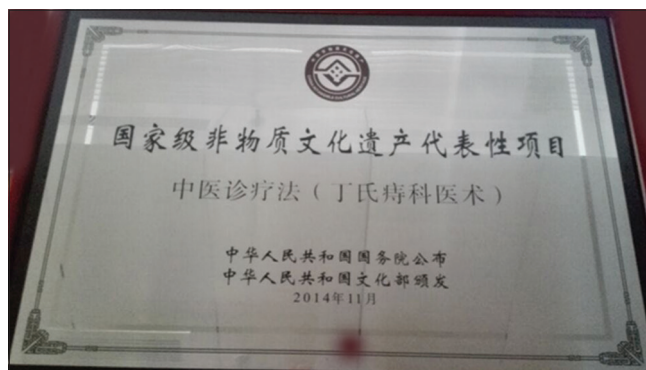


Figure 2: Plaque describing tenth generation family-owned Chinese medicine technology is the National Intangible Cultural Heritage published by the State Council of the People's Republic of China, issued by the ministry of culture of the People's Republic of China in 2014

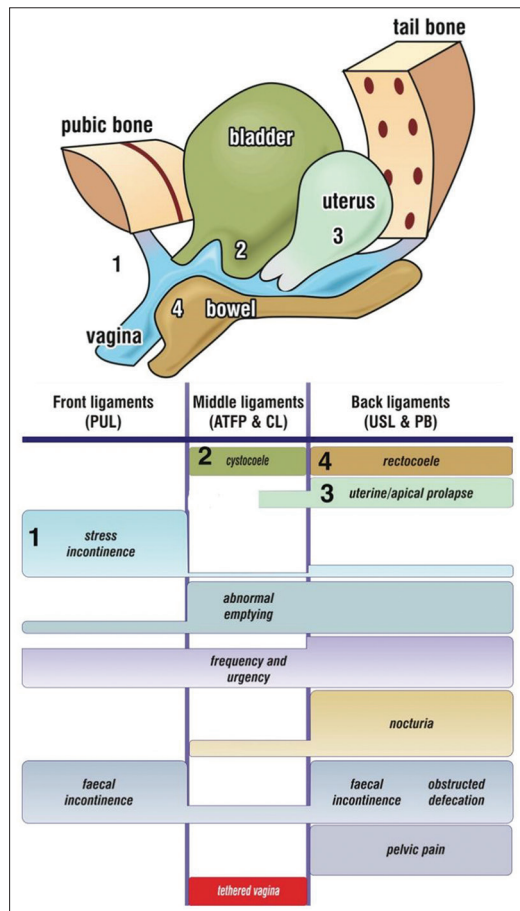


Figure 3: The muscles and ligaments structures for three natural divisions within the pelvis, front, middle and back. If specific ligaments are weak, the system is thrown out of balance and prolapse and symptoms appear as indicated

Chinese and Hippocratic medicine as originally conceived had a common holistic origin and purpose. The essence of individualized treatment of a patient in both was minimal unharmed treatment. This was summarized in the famous Hippocratic statement from the Greek “to abstain from doing harm” or the oft-quoted Latin “first do no harm.”

Hippocrates was the first physician to introduce science into medicine. He systematically classified diseases and originated the disciplines of etiology and pathology. Not only the subjective symptoms but also the objective signs of the disease must be considered to arrive at an accurate assessment of what was going on. For Hippocrates, the human body functioned as one unified organism, or physis, and must be treated, in health and disease, as one coherent and integrated whole. The concept of balance was important. Hippocratic medical treatment aimed at improving the natural resistance of the organism to overcome the disease. It placed great emphasis on strengthening and building up the body’s inherent resistance to disease. For this, he prescribed diet, gymnastics, exercise, massage, hydrotherapy, and sea bathing. Hippocratic medicine was holistic. Fundamental in Hippocratic medicine was the imperative to first treat the patient and then treat the disease.

Hippocratic medicine described disease as an imbalance of four humors. Hippocrates stated, “The body of man has in itself blood, phlegm, yellow bile, and black bile; these make up the nature of the body, and through these he feels pain or enjoys health. Now, he enjoys the most perfect health when these elements are duly proportioned to one another in respect to compounding, power and bulk, and when they are perfectly mingled. Pain is felt when one of these elements is in defect or excess, or is isolated in the body without being compounded with all the others.” But not entirely. Hippocrates’ surgical techniques for dislocations of the hip and jaw were unsurpassed until the nineteenth century.

For Chinese people, cherishing Chinese medicine also has a cultural aspect. It is the very manifestation of traditional Chinese culture in areas related to human health. Western medicine advocates a science-based approach; everything has to be tested according to science-based rules. Yet, many diseases cannot be tested with science-based rules, perhaps up to 70% of problems which lead to general practice (GP) visits. Chinese medicine follows the principle of yin and yang, balance and imbalance. Chinese medicine believes in the existence of energy channels and acupuncture points even though they cannot be seen with human eyes.

Furthermore, Chinese tradition holds that any matter in this universe has its physical side and its spiritual side. Both sides work together to form a complete entity. The TCM doctor is inextricably part of the treatment.

Practitioners of Chinese medicine understand the world and the human body in terms of five essential elements:

- Wood
- Fire
- Earth
- Metal
- Water.

In my view, we should not take such classifications literally. The classification provides a framework which allows TCM diagnosis and treatments to be categorized in a consistent, understandable holistic way. We still have our classifications today. Not all of these modern classifications make good sense, but they do provide a framework, like TCM and classic Hippocratic medicine. Whatever the criticisms, much fewer these days, TCM treatments such as acupuncture have been scientifically proven to work and increasing number of Western trained GPs are learning them.

EVOLUTION OF CHINESE MEDICINE

Like the 10th generation Ding family, much of the knowledge contained in TCM was handed down secretly from generation to generation, unlike Western medicine which was taught openly in universities. Only after the founding of the People’s Republic of China, did TCM become more open. The closed attitude around Chinese medicine no doubt has contributed to the slow adoption of much Western medicine in China. Slow

uptake of much “new Western medicine technology” has not been all bad. Sometimes such “new technology” may turn out to have problems, may not be particularly effective, or may have significant side effects or complications. It is invariably expensive. All these factors are consistent with the conservative nature of TCM philosophy. Then, there is the broader Chinese philosophy of what constitutes “time.” In Western countries, “time” is the 3–4 years till the next election. The Chinese think in 100-year segments, perhaps engendering a “wait and see” attitude to new often not well proven technology. In my specialty, pelvic floor surgery, TCM treatment has concentrated on nonsurgical aspects, with surgery reserved for very serious cases. For example, there are only 10,000 operations for urinary stress incontinence (leakage on coughing) and even fewer operations for organ prolapse in the whole China. In contrast, France alone has between 20 and 30,000 operations p.a. for each. In consequence, China has avoided the mesh controversies associated with such operations.

Yet, where new technology is important or life-saving, it is taken up quickly, indicating the wisdom and judgment required for long-term planning.

EVOLUTION OF WESTERN MEDICINE

The very nature of its scientific traditions has led to an increasingly reductionist practice of Western medicine. This reductionism gathered rapid pace in the latter half of the 20th century following major scientific and technological advances such as computer engineering which were applied in almost every aspect of medicine, from imaging, to robotic surgery, to genetic science. To accommodate all this, Western medicine has been sliced and diced into subspecialty after subspecialty. In the specialties, there are now strict areas of demarcation. The worst example of reductionist medicine is the 5 min GP consultation. No connection with the patient psyche, no holistic medicine is possible in 5 min! Yet, it is well accepted that 70% of GP visits may not have an organic origin. It is no wonder that patients are increasingly seeking alternative avenues for their health.

WHERE TO NOW FOR WESTERN MEDICINE?

In 2001, I wrote in *Lancet*^[6] that the quantitative research paradigm (Western medicine) was necessarily reductionist, because it must tightly confine all possible variables.

Yet, medicine is anything but reductionist. The body is governed by complex nonlinear systems that interact. This concept was expressed succinctly some 2000 years ago by Marcus Aurelius, the Roman Emperor and Stoic Philosopher:^[7]

“Always think of the Universe as one living organism, with a single substance, and a single soul; and observe how all things are submitted to the single perceptivity of this one whole; all are

moved by its single impulse, and all play their part in the causation of every event that happens. Remark the intricacy of the skein, and the complexity of the web.”

Whereas we can justify as essential the reductionist concepts inherent in the Cochrane collaboration, reductionism can cause confusion elsewhere, for example, definitions made by expert committees might place clinical investigation into an impossible straightjacket. The creation of long lists of rules can be counterproductive, as they can restrict not only clinical practice but also further research. Popper^[8] described such rules and artificial definitions as “linguistics” and believed that they only served to impoverish science.

Even symptoms, the very core of medical diagnosis, are judged unreliable, requiring costly imaging and other investigations. Unreliable they may be, but it is the nonlinearity of biological systems that makes them unreliable, not some inherent fault in the patient’s recall. Small alterations in initial conditions may cause major variations in the end result.^[9] An adequate grasp of nonlinearity is essential for the understanding of qualitative and quantitative approaches to medicine.

Skillful practitioners of the art of medicine intuitively tune into all the system’s elements, and might be able to harness them to treat the patient (holistic medicine). They absorb all afferent stimuli, e.g. history, examination, special tests, the patient’s body language, what the patient says (and does not say), knowledge of family, and environment. These stimuli are referenced against the accumulated knowledge of quantitative medicine to intuitively weigh up each factor. The created perspective is continuously modified until a diagnosis and its relevance to the person is reached. Such physicians first treat patients and then treat the disease.

A person skilled in the art of medicine, who intuitively understands complexity,^[10] feedback control,^[9] and the importance of small alterations in initial disorders,^[9] would not treat an individual patient with the quantitative system alone. Medicine is 50% science and is subject to proper statistics and objective criteria. It has to be. However, it is also 50% art and tuning chaotically into the disordered biological systems of a sick individual. We should not forget our art.

CONCLUSIONS

TCM in its purest form has remained a holistic art. Its strength is its holistic approach and techniques such as acupuncture, so necessary for the management for patients who have chronic illnesses such as pain for which Western medicine has few answers. Although brilliantly successful scientifically, Western medicine has become reductionist, linear, and in areas such as imaging, soulless, the patient reduced to a mere object. Yet, the scientific basis of

medicine is anything but reductionist. All biological science is nonlinear, irregularly holistic. Intuitive understanding of how all the elements contributing to the nonlinear mechanisms causing medical problems, whether organic or not, used to be known as “The Art of Medicine.” Perhaps it is time for Western medicine rediscover its “Art”, something TCM has never lost.

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Conflicts of interest

Peter Petros is the codiscoverer of the midurethral sling (“TVT”) and the Integral Theory on which it is based. He admits a major bias toward holistic medicine.

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How to Become a Good Healer in Chinese Medicine?

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Abstract

Today, traditional Chinese medicine (TCM) is a relatively new product of the People's Republic of China. About 1950 Chairman Mao aimed at the standardization and simplification of many traditional medical schools to guarantee a stable health care for the population. As academic exchange between east and west increased during the last 60 years, TCM appears today more and more as the “real” and “old” Chinese medicine. But is that really the case? There is a famous saying in China: Medicine is also idea (医者意也 Yi Zhe Yi Ye), so what are the ideas about a good healer? In my article I try to find it out. Searching through the old classical books, there are some good ideas about a good healer, especially in the *Ling Shu* (《灵枢》 *Spiritual Pivot*). The root of all is the spirit (神 Shen). There are many other requirements to be a good healer, but without a stable Shen, no treatment can really touch the cause of the disease!

Keywords: Acupuncture and moxibustion, Chinese medicine, healer

I work with Chinese Medicine (CM) for more than 40 years, especially using acupuncture and moxibustion. Treating several thousand patients up to now, I feel a little afraid today considering the development of TCM = Traditional CM in China and abroad. How traditional is CM today? Do the practitioners of TCM really use all the goods this old medicine can offer? I notice that TCM tries urgently to be accepted by Western medicine. There is a desire for clinical work, which can be measured with Western standards. However all researches, how TCM works and what kind of Western diseases can be treated with TCM, cannot deny the fact, that CM is no longer considered as a science in its own right and with its own paradigm. Do we really need that proximity to Western medicine? Of course, researches with clinical cases can show the effects of TCM, but treating cases instead of patients shows also the failures of TCM to come as closest to the patient's needs as possible.

So what is TCM? As *Paul Unschuld* (文树德), a well-known professor of medical history from Germany, tells us:

Today, the TCM, which shows a background of more than 2000 years of old remedial tradition is called TCM.

However, one cannot often emphasize that today the TCM is a relatively new product of the People's Republic of China. About 1950, Chairman Mao aimed at the standardization and simplification of many traditional medical schools to guarantee stable healthcare for the population. The top management of China met a selective choice concerning the classical texts as well as the leading experts and practitioners of the old medicine. All theories, schools, and family traditions, which deviated from this standardized model of TCM were not grasped and wiped out. Such a medicine because analytically inclined, could be better commercialized and came closer to the analytic mind of Western scholars and practitioners.^[1]

The first instance for the use of the term TCM was the September 1955 issue of the Chinese Medical Journal in an article written by *Fu Lianzhang*, President of the Chinese Medical Association and Deputy Minister of Health in that time. He titled: “Why our Western-trained doctors should learn TCM,” where he suggested the side by side working of both medical arts.^[2]

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As academic exchange between east and west increased during the past 50 years, TCM appears today more and more as the “real” and “old” CM. But is that really the case? I have been travelling to China for nearly 25 years for academic exchange and for studying CM, especially at the Chengdu University of TCM and the Beijing University of TCM, two of the first and oldest academies for studying TCM in China.

As my first teachers and me getting older, we have to face the new and younger teachers and doctors to talk and to work with.

My impression is that very often, they are better educated in Western medicine than in CM. The contents of their study have changed and lack the profoundness of understanding Chinese medical classics and theories. In their work, they give priority to a small couple of acupuncture points for treatment, and they use the same points for nearly every disease. None of them takes care of thorough pulse diagnosis and a detailed inquiry. They are not using *Zhen Jiu* alone but prescribe for every patient an herbal formula, too. Even more, they try to treat as many patients as possible to earn as much money as possible but often failed to recognize the true needs of their patients. However let me be fair – this is also the situation in many TCM-Clinics in Germany.

So how to change that? I suppose that any doctor in any medicine style wants to treat his patients as best as she can. Even more, most of them decide to become medical practitioners because of their serious wish to help and support sick people. If using CM in therapy - How can one become a good Healer in that Medicine?

What is a good healer? There is an old tradition that a good healer is called *Shen Yi* (神医 a highly skilled doctor or a miracle-working doctor). This superior doctor can heal 10 out of 10 patients, as the *Zhou Li* already told us 2500 years ago. In *Ling Shu* Chapter *Xieqi Zangfu Bing Xing* we find the statement: “An excellent practitioner cures nine cases out of ten,” and he can do so because he can diagnose the patient with three traditional methods at least: inquiry, observing, and pulse-taking.

What's more to become a good healer?

Of course, you have to go to the roots of the disease. *Su Wen* told us in Chapter *Biao Ben Bingchuan Lunpian*: “If one knows the state of *Biao* (标) and the condition of *Ben* (本), he is able to avoid making any errors in treating patients. If one is unaware of that, he will inevitably make mistakes.”

To find out what is *Ben*, you need enough time for asking, looking, and feeling. Apart from this, my experience is that we find today *Ben* is much more in emotional and spiritual disorders than in ancient times. Therefore, it is more important than ever: If one goes to the roots of disorders, one has to go to the roots of the spirit (*Shen* , 神). There is one Chapter in *Ling Shu* called *Ben Shen* (本神), which focusses on that: If one goes to the roots of be based on the *Shen*!” If we look at the *Shen* of the patient, we know the beginning and prognosis of his disease!

Shen is stored in the heart, so it is the heart who governs over all the emotional and spiritual resources. The heart is the foundation of all the five spirits in the body. The *Wu Shen* (五神) are the roots of the five emotions (五志 *Wu Zhi*). The *Shen* itself must rest sometimes and needs a pure empty heart. This is the precondition for becoming a good healer and of course, for the health of the patient and the practitioner. To cultivate this empty heart means to nourish the *Shen* (养神 *Yang Shen*). Moreover, this is important for patients and practitioners, too.

Let's go through the other *Shen*: *Hun* (魂) is the *Shen* of the liver and belongs to Yang. It dwells in the blood and needs a good quality and quantity of blood to feel at home. *Hun* comes and goes with the *Shen* and grasps the world through the eyes. During the daytime, *Hun* represents the character and identity of men, especially how to live a satisfying life and to fulfill his plans. As the liver is the organ for strategy and planning, it is the *Hun*, which can direct the human being into a good future. During the night, the blood retreats into the liver and so does the *Hun*. This is the time for dreaming and going beyond time and space. In our dreams, we can reach impossible aims or master unfilled wishes. The deficiency of liver-qi causes fear, while the excess of liver-qi causes anger. In TCM, we have the liver-qi-stagnation and the liver-fire flaming upward, which touches this idea a little.

Po (魄) is the *Shen* of the lung and belongs to Yin. It dwells in the Qi and needs a strong Qi to feel at home. *Po* goes in and out with the Essence (精 *Jing*) and contacts the world through the skin and the nose. Feeling and smelling is *Po*'s action. Because the lung is our chancellor, who regulates the rhythm of life, we can assume that regular life is good for our health. However, *Po* is difficult to control. Some Daoist texts even talk about seven *Po*. The seven *Po* are symbolic of the seven passions (七情 *Qi Qing*). In the *Dao Zang* treatise *Tai Shang Chu San Shi Jiu Chong Bao Sheng Jing* we read: “The seven *Po* are the power of accumulated Yin. Their form is like a ghost (鬼 *Gui*).

They cause many desires in men and damage his Qi through excessive strains or labors. The *Po* loves the dirty and filthy and acting against life. On the contrary, they turn toward death and flatter, deceive, and cheat. They are longing for love and voluptuousness, day and night, they indulge passions and obsessions. In that way, men will die before his proper age.”

However, the *Po* is not as bad as described here. In the human being, it rules over sensitiveness and pain and manages all instinctive matters. If someone smells good or bad is important to establish relationships. During the first 20 s we can smell, whether a woman or a man is suitable for us! A stable *Po* houses in a stable lung-qi! A desiring of the *Po* develops on a lung-qi-deficiency. Excessive joy and happiness will damage the *Po*. Damage of the *Po* will cause mania (狂 *Kuang*) and a confused mind. One takes no notice of people around. As the *Po* walks with the *Jing*, too much activity of the *Po* consumes the Essence.

Yi (意) is the Shen of the spleen and belongs to the center. It dwells in the Ying (营) and needs good nourishment to fulfill its tasks. It contacts the world through the mouth and any stuff, which enters it. *Zhang Jie Bin* comments in his *Lei Jing*: “To remember, reflect, or call back into memory is called the birth of thoughts. If the heart is directed on something but in definitive, one speaks of *Yi*.”

The meaning of *Yi* (意) is manifold. It could be an idea, opinion, intention, sentiment, thought, meaning, purpose, wish *et al.* In CM *Yi* is often described as the way, how the mind is concentrated on something or how we can learn and keep in mind.

The radical of the heart (心) combines with sound (音) makes *Yi* (意) – The intention of man reveals through the word he speaks. The voice of the heart should touch the listeners. Every word which touches the heart is true words! The *Yi* is important for learning, memorizing, and assimilating the mind-stuff. Whenever your learning is easy, you have a strong *Yi* and a good teacher. In *Qigong*, you need a stable *Yi* to guide the Qi to the right place. In acupuncture, you must have a clear intention (*Yi*) what points should be needled. And last but not least – to solve problems, your thoughts should be straight and calm. If you eat enough nutritious food, you also will nourish your *Yi*! Excessive anxiety and worry will damage the *Yi* and causes chest distress and mental depression. If the spleen-qi is deficient, all the five Zang organs will be unstable (不安 *Bu An*) and the four limbs become weak.

Finally, let's jump to the *Shen* of the kidney, which is *Zhi* (志 willpower). It dwells in the *Jing* and is the manifestation of the inborn facilities (先天之精 *Xian Tian Zhi Jing*).

Zhi as the spiritual power of the kidney, acts on the *Jing* and shows the skills and abilities of the human being. In doing so, it should be easy and without any effort. This is the Dao of enfolding the creation of power. Too many efforts will weaken the essence and shorten life.

To become an excellent football player, acupuncturist or violinist depends also on the congenital power of the kidney. To do everything in perfect know-how with skill, perfection and ease – that is the reflexion of a strong *Zhi* in human being! To be potent is the result of *Zhi*! That means not only to be sexually powerful but belongs to all skillful doing with his hands and feet. As long as the kidney has enough *Jing*, the willpower is strong and can enforce to reach one's aims. To be too ambitious and going beyond the limits will exhaust the essence and makes the kidney weak!

In *Ling Shu* Chapter *Ben Shen* we read: “That on which the *Yi* retains is called *Zhi*. And Master *Zhang Jie Bin* explains: ‘The dwell of thoughts is called *Yi*, but to detain on it by all

means and direct it toward action is called *Zhi*’. Excessive rage without relief will damage the *Zhi*, and therefore, the patient cannot understand the external world. This will cause forgetfulness and pain in the low back. Finally, the bodily form will be withered.”

And: “The kidney stores essence and houses the will *Zhi*. Deficiency of Kidney-Qi will cause the *Jue* (厥) disease with loss of consciousness and ice-cold hands and feet.

Coming back to my question: How to become a good healer in CM – The *Ling Shu* chapter 8 give us an understanding for treating mild and severe emotional and spiritual disorders. “Thus an acupuncturist must carefully examine the condition of the patient. Before treating the patient, he has to observe the state of the *Jing*, the *Shen*, the *Hun*, the *Po*, the *Yi* and the *Zhi*. If the spiritual resources in the five Zang are damaged, one should not treat with acupuncture.”

SUMMARY

To answer my question how to become a good healer in CM, I followed the ideas from the *Nei Jing Ling Shu*. There are other chapters about real mental diseases *Dian Kuang* (癲狂 chapter 22), but the treatment of acute insanity should not be undertaken in an outdoor clinic.

There are many other requirements to be a good healer, which I could explain in another article. I hope that my explanations will knock at those minds, who are not satisfying with the TCM standards in treating patients.

Udo Lorenzen, Guest professor of Chengdu University of Traditional Chinese Medicine, Medical Historian M.A., Diploma in Educational Science, Natural Health Professional (Clinic of Yang Sheng). He wrote several books about traditional Chinese medicine, Basic Terms of *Traditional Chinese Medicine* (1998, p. 208), *The Inner Landscape – Advanced concepts in Chinese Medicine* (2006, p. 660), *Part One*, and *The Inner Landscape – Advanced concepts in Chinese Medicine* (2007, p. 346), *Part Two*. All books are in German language published at Publishing House Müller & Steinicke, München.

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Conflicts of interest

There are no conflicts of interest.

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Understanding of He Hongfang's Prescription (何鸿舫方)

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Abstract

He Hongfang (何鸿舫), a medical scholar in the Qing Dynasty, was the 24th descendant of He's family in Jiangnan Region. He was famous in Shanghai during the reign of Tongzhi and Guangxu for his medicine and calligraphy. This article introduces two frames of prescriptions of He Hongfang in the Shanghai Museum of Traditional Chinese Medicine for appreciation.

Keyword: He Hongfang's prescription (何鸿舫方), He's calligraphy, Shanghai Museum of Traditional Chinese Medicine

The original name of He Hongfang (何鸿舫 1821–1889) [Figure 1] was Changzhi (昌治), and later, it was changed to Changzhi (长治). His style name (字) was Buzhi (补之), and pseudonym (号) was Hongfang (鸿舫). Later, he was named as Sick Hong in Hengmao (横柳病鸿) and Medical Hermit of Zhinan (枳南医隐) [Figure 2-6].^[1] He was from Qingpu (now an area in Shanghai), a medical scholar in the Qing Dynasty, and the 24th descendant of He's family in Jiangnan Region. He was the son of He Shutian, a famous medical doctor. He was good at medical skills with noble morality. He tried to continue his father's book *Yi Ren Shi Zhuan* (《医人史传》 *Historical Biography of Medical Doctors*) and *Chong Gu San He Yi An* (《重固三何医案》 *Reconstruction of He's Medical Cases*). Later generation also compiled six volumes of *Ink Marks of He Hongfang Chronological Prescriptions*. He learned ancient Chinese from Yao Chun, a famous scholar. He was the student of Imperial College, good at poems and painting, especially at calligraphy, and famous in Shanghai during the reign of Tongzhi and Guangxu years due to his medicine and calligraphy. He Hongfang learned calligraphy from Yan Pingyuan and Li Beihai. His font was straight, and writing force is strong and vigorous. Ink Marks of He's prescriptions were both beautiful and unrestrained, resulting from nature, belonging to the art treasures. He's calligraphy is especially excellent. If people get its prescription, they will cherish it as treasures. When Japanese came to Shanghai trying to buy it, one piece of prescription might cost 10 silver coins, at

least 4–5 silver coins. At that time, a painting by Qi Baishi only costs 2 Yuan.^[2]

Here are two pictures [Figure 7] of Dr. He Hongfang's prescriptions collected at Shanghai Museum of Traditional Chinese Medicine:

1. Weng, aged 24 years, was diagnosed on November 11 between 17 o'clock and 19 o'clock

Frequent hematemesis, easy to choke and pain in the costal region, hectic fever, rapid pulse.

Collateral injury of the liver and lung. If its onset was not serious on the winter solstice, that might be even worth congratulations.

- Raw Huang Qi (生黄芪 *Membranous Milkvetch root*) 18 g
- Qin Jiao (秦艽 *Radix Gentianae Macrophyllae*) 21 g
- Yu Zhu (玉竹 *Radix Polygonati Officinalis*) 6 g
- Yuan Zhi (远志 *Radix Polygalae*) 0.3 g
- Sheng Di (生地 *Radix Rehmanniae*) 12 g
- Raw Bie Jia (生鳖甲 *Carapax trionycis*) 12 g
- Fresh Shi Hu (鲜石斛 *Dendrobium*) 12 g
- Raw Gan Cao (生甘草 *Liquoric root*) 1.2 g
- Hu Gu Pi (湖骨皮 *Cortex lycii*) 4.5 g
- Kuan Dong Hua (款冬花 *Tussilago farfara*) 4.5 g

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Figure 1: He Hongfang (何鸿舫)



Figure 3: Collection of Seal Stamps of He Hongfang (何鸿舫印谱)



Figure 5: Collection of Seal Stamps of He Hongfang (何鸿舫印谱)

- Ju Bai (橘白 *White Tangerine peel*) 3 g.
 - Add two pieces of loquat leaves (dehaired) and four pieces of lotus root.
2. Yan, aged 35 years, May 17 between 17 o'clock to 19 o'clock Patients could only sleep when deficiency heat was relieved, but the tongue coating was still brown. brown. A weak pulse on the left hand. Body fluid was not moist and was not in good condition.
- Lu Dang Shen (潞党参 *Lucid Dangshen*) 12 g
 - Gou Qi Zi (枸杞子 *Lycium chinense*) 18 g
 - Mai Men Dong (麦门冬 *Ophiopogon*) 18 g
 - Fu Shen (茯神 *Poria with Hostwood*) concocted with cinnabar 18 g



Figure 2: Collection of Seal Stamps of He Hongfang (何鸿舫印谱)



Figure 4: Collection of Seal Stamps of He Hongfang (何鸿舫印谱)



Figure 6: Collection of Seal Stamps of He Hongfang (何鸿舫印谱)

- Zhi Cang Zhu (制苍术 prepared *Rhizoma Atractylodis*) 4.5 g
- Huai Niu Xi (怀牛膝 *Radix Achyranthes bidentata*) 18 g
- Yuan Zhi Rou (远志肉 *Radix Polygalae*) 3 g
- Fo Shou Gan (佛手柑 *Bergamot*) 1.2 g
- Dang Gui Shen (当归身 *Angelica SINENSIS*) 6 g
- Suan Zao Ren (酸枣仁 *Semen Ziziphi Spinosa*) 18 g
- Zhi Gan Cao (炙甘草 Prepared *Liquorice root*) 1.2 g
- Guang Chen Pi (广陈皮 *Citrus Chachiensis Hortorum*) 6 g
- Duan Long Chi (锻龙齿 *Forged Fossil teeth*) 9 g
- Add thin Sang Zhi (桑枝 *Ramulus mori*) 12 g and four pieces of lotus root.

In Case 1, the patient frequently suffered from hematemesis and had liver and lung collateral injury. He would have blood deficiency after bleeding; therefore, He used raw Huang Qi as the monarch medicine manifesting that He's prescription for medicine would follow the academic thought of Li Dongyuan (李东垣) and that the root for treating blood

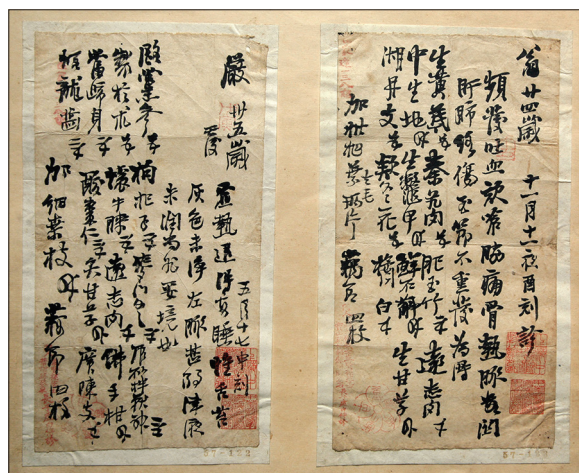


Figure 7: He Hongfang prescription

syndrome relies on the qi of spleen and stomach. We need to nourish Yin and stop hemostasis on the basis of regulating the spleen and stomach. He used raw Di Huang (生地黄), raw Bie Jia (生鳖甲), and fresh Shi Hu (鲜石斛) to nourish yin and cool the blood and to enrich qi and control blood. He used Gan Cao (甘草) to nourish yin and cool the blood and to supplement qi and control blood. He used Gan Cao and other herbs to harmonize the middle jiao, to help the body to transform its source and to control and stop bleeding. He also used Kuan Dong Hua (款冬花), Pi Pa Ye (枇杷叶), and Yu Zhu (玉竹) to resolve phlegm and stop coughing, with lotus root to stop bleeding. At the same time, he combined Huang Qi (黄芪) with Qin Jiao (秦艽) which is pungent in nature to clear wind and dampness. These compatibilities can disperse clear Yang to ascend spleen qi, descend stomach qi and regulate qi of the liver and gallbladder.

In Case 2, the patient suffered from yin blood deficiency and also not restored body fluid after deficiency heat had been cleared. He used Dang Shen as monarch medicine,

associated with Dang Gui (当归), Huai Niu Xi (怀牛膝), Gou Qi Zi (枸杞子), and Mai Men Dong (麦门冬) to nourish blood and yin. He used Fu Shen (茯神), Yuan Zhi (远志), Suan Zao Ren (酸枣仁), and Duan Long Chi (煅龙齿) to nourish the heart and tranquilize spirit. He used Fo Shou Gan (佛手柑) to regulate qi and clear stagnation, with lotus root to stop bleeding, and Sang Zhi (桑枝) to unblock collateral to prevent blood stagnation.

Application of Chinese Materia Media in He's prescription is clear and specific enough, indicating the principles of syndrome differentiation, which shows the medical ability of Mr. He.

Figures of Collections of Seal Stamps of He Hongfang (何鸿舫印谱) are provided by Prof. He Xinhui (何新惠教授) from Shanghai University of Traditional Chinese Medicine.

Translator: Shinwei Lee (李欣薇)

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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Misdiagnosis Features of Ancient Clinical Records Based on Apriori Algorithm

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Abstract

Objective: To analyze misdiagnosis features in clinical cases of “Classified Medical Cases of Famous Physicians” and “Supplement to Classified Case Records of Celebrated Physicians.” **Materials and Methods:** Two hundred and five ancient misdiagnosed cases were analyzed in aspects of locations (exterior-interior type, qi-blood type and Zang-Fu organs type) and patterns (heat-cold type and deficiency-excess type) by Apriori Algorithm Method. **Results:** The main types of misdiagnosis in those medical cases are as follows: Zang-Fu location misjudgment, misjudging the interior as the exterior, misjudging deficiency pattern as excess pattern, and misjudging cold pattern as heat pattern. Among them, the most outstanding type is the misjudgment of deficiency–cold pattern as excess–heat pattern. **Conclusions:** (1) Accurate judgment of location and differentiation of deficiency and excess patterns are the key points in diagnosing the diseases correctly. The confusion of true deficiency–cold and pseudo-excess–heat pattern should be taken seriously. (2) Data mining on ancient clinical cases offers a new methodology for assisting clinical diagnosis of traditional Chinese medicine.

Keywords: Ancient clinical cases, apriori algorithm, classified medical cases of famous physicians, data mining, misdiagnosis features, supplement to classified case records of celebrated physicians

INTRODUCTION

Ancient medical cases are an important part of academic research in traditional Chinese medicine (TCM). They are not only a vivid portrayal of the clinical wisdom and skills of ancient famous doctors but also the comprehensive application of traditional Chinese medical theory and clinical practice. In addition to a large amount of skilled and careful thinking of successful cases, there are also various introspections on misdiagnosis and malpractice.^[1] We can learn more from failure lessons than from successful experience. Hence, the analysis on misdiagnosed cases is an important link between theoretical and clinical studies and should not be ignored. There are two high-ranked medical cases that work in academy and practicability, being named “Classified Medical Cases of Famous Physicians” and “Supplement to Classified Case Records of Celebrated Physicians.”^[2] In this article, misdiagnosis cases were taken as the research objective, and the misdiagnosis features were data-mined and analyzed in

order to draw lessons from clinical cases and to provide more extensive materials, ideas, and methods for clinical application and subject research of TCM.

MATERIALS AND METHODS

Data sources

Misdiagnosis medical cases were selected from the “Classified Medical Cases of Famous Physicians”^[3] edited by People’s Medical Publishing House in 2005 and “Supplement to Classified Case Records of Celebrated Physicians”^[4] edited by People’s Medical Publishing House in 1997.

Inclusion criteria

The selected medical cases must (1) have complete symptoms and detailed process of pattern identification and treatment; (2) have misdiagnosing process and the

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amendatory results were clear, definite, and fitted to each other; and (3) be misdiagnosed and revised only once and the finally revised effect was assured.

Exclusion criteria

The medical records must be excluded if they were (1) unclear or have information missing in the pattern identification process; (2) diagnosed and treated repeatedly; (3) accurate diagnosis but improper medication or treatment; (4) predicted but actually did not occur; and (5) inexact or obscure and had no analyzing value.

Database construction

Two hundred and five misdiagnosed cases were selected and indexed according to the disorder type, true pattern name, and misjudged pattern name. In-depth index had been done in the aspects of viscera, qi and blood, exterior and interior, heat and cold, and deficiency and excess. The descriptive languages of the original medical cases were decomposed into a data unit which can be handled and analyzed by a computer, taking “China TCM Thesaurus” (the third edition)^[5] compiled by the China Academy of TCM Information Research Institute as the indexing standard reference.

Data mining methods

The Apriori algorithm in IBM SPSS MODELER 14.1 software, (Chinese Version, USA) was used to mine and analyze the above data. The maximum number of the model parameters was 5, setting the minimum support threshold as 30% and the minimum confidence threshold as 60%. The network structure map was drawn by the same software.

RESULTS

Classification of misdiagnosed medical cases

As for the analyzed misdiagnosis cases, all the cases were indexed from the aspects of both location and pattern, while location mistakes and pattern mistakes were approximately equal to each other, that is to say, there was no significance or clinical value merely according to frequency analysis [Table 1]. The first two misdiagnosis types were deficiency–excess misjudgment and visceral misjudgment, following by cold–heat misjudgment. Exterior–interior and qi–blood misjudgments were relatively scarce. The results illustrated that deficiency–excess nature is the most important distractor in diagnosing process due to its complicated changes and various false appearances. Furthermore, multiple-dimensioned relations and transmissions among the viscera increase the chance of misjudging results. We looked back on the original literature according to the indication from the above data and gained the following clues: qi–blood misjudgment always occurred in the gynecological cases and exterior–interior misjudgment always occurred in the exogenous febrile diseases.

As for the misdiagnosing subtypes, four pairs of contrast are as follows [Figure 1]: (1) there are a small number of qi and blood misdiagnosing subtypes and no obvious difference between the two subtypes. In TCM clinic, Qi and blood often become

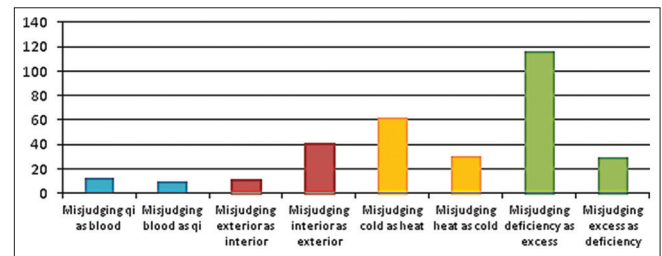


Figure 1: Frequency of misdiagnosis subtype

Table 1: Classification of misdiagnosis cases

Group	Type	Frequency (%)
Location	Viscera	104 (50.73)
	Qi and blood	23 (11.22)
	Exterior and interior	53 (25.85)
Patterns	Cold and heat	92 (44.88)
	Deficiency and excess	145 (70.73)

Owing to more than one misdiagnosis type often exists in the same case, the all-type sum was more than cases' sum

disordered and be regulated together. As a result, misjudgment of qi and blood location appears relatively less likely. Even if it does exist, to some extent, it will not influence the therapeutic effect very seriously. (2) The cases of misjudging interior as exterior were much more than the cases of misjudging exterior as interior. If some doctors could not evaluate patients' constitutions or disorder complexity properly, many endogenous febrile diseases were always misdiagnosed as exogenous pathogens invasion. (3) The cases of misjudging cold as heat were much more than the cases of misjudging heat as cold. Based on the original literature writing and combined with the data analyzing results, a mixture of cold-heat type and true–false type was the main reason leading the cold–heat misjudgment, among which false-heat(true-cold) patterns were much more than false- cold(true-heat) patterns. (4) The cases of misjudging deficiency as excess were much more than the cases of misjudging excess as deficiency. One reason is that chronic or prolonged or complex disorders were very easy to be selected when the literature was compiled. Another reason may be that the situations of excess converted from deficiency and true deficiency with false excess were very common, with greater complexity, leading to a great amount of misjudging deficiency as excess.

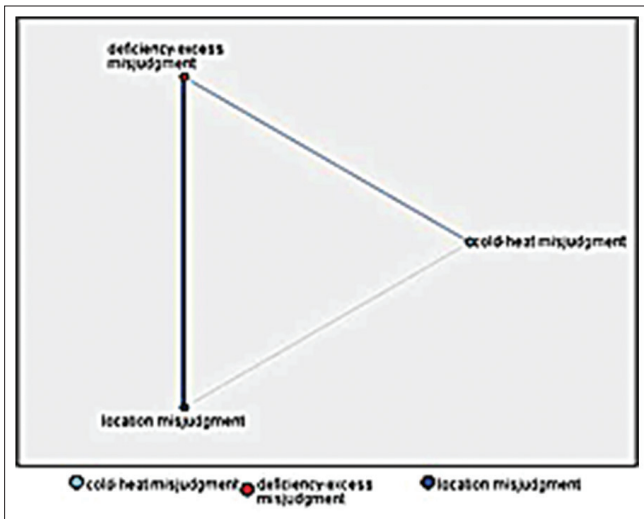
Association rules analysis among the misdiagnosis types

According to Table 2 and Figure 2, location misjudgment and deficiency–excess misjudgment always occurred at the same time, due to the fact that the two mistake types are connected, influenced, and infiltrated to each other. Tracing indications from the original literature, we found that a high correlation between location misjudgment and deficiency–excess misjudgment existed in respiratory disorders (lung disorder often attributed to excess pattern, whereas kidney disorder often attributed to deficiency pattern). Furthermore, according to Figure 2, it is clear that cold–heat misjudgment was relatively independent,

Table 2: Association rules data among the misdiagnosis types

Back item	Front item	Support	Confidence
Deficiency-excess misjudgment	Location misjudgment	74.146	67.105
Location misjudgment	Deficiency-excess misjudgment	70.732	70.345
Deficiency-excess misjudgment	Cold-heat misjudgment	42.927	81.818
Location misjudgment	Cold-heat misjudgment	42.927	69.318
Location misjudgment	Cold-heat misjudgment and deficiency-excess misjudgment	35.122	68.056
Deficiency-excess misjudgment	Cold-heat misjudgment and location misjudgment	29.756	80.328

A synthesized conclusion of support index and confidence index. The light or dark color of line manifests the affinity between two types

**Figure 2: Network map among the misdiagnosis types**

without direct relationship with location misjudgment or deficiency–excess misjudgment [Table 2 and Figure 2].

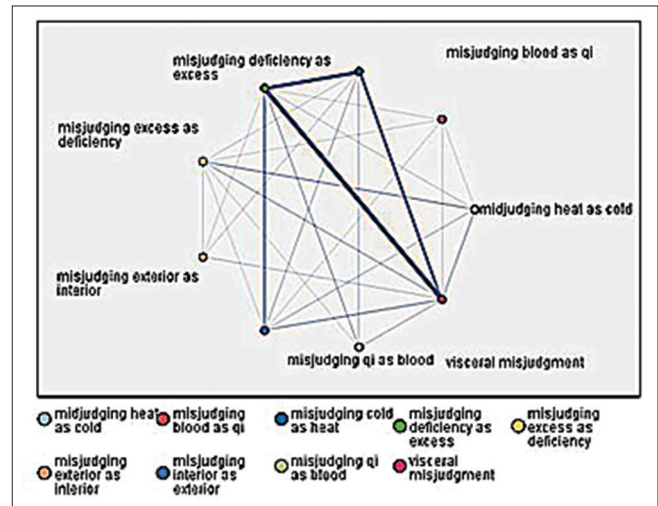
Association rules analysis among the misdiagnosis subtypes

According to Table 3 and Figure 3, the top four closely connected pairs were visceral misjudgment versus misjudging deficiency as excess, misjudging deficiency as excess versus misjudging cold as heat, visceral misjudgment versus misjudging cold as heat, and misjudging deficiency as excess versus misjudging interior as exterior. Moreover, Figure 3 explicitly points out that the tight linkage among the visceral location, deficiency–excess pattern, and cold–heat nature was the core trouble-causing misdiagnosis in ancient clinical cases. Hence, it is a significant guarantee that identifies the location and patterns clearly in diagnosing process. Combined with the original literature, we can conclude that paying attention to “excess converted from deficiency” and “true cold with false heat” is the key issue to enhance the diagnosing accuracy [Table 3 and Figure 3].

Discussion

Introspection on visceral location misdiagnosis

Visceral identification is the most important and commonly used diagnosing method. How to locate a certain Zang system precisely? It is always the diagnosing problem and the common misdiagnosing type along with the reason that TCM’s

**Figure 3: Network map among the misdiagnosis subtypes**

five-Zang system is complicated integrally and correlated systematically. Five-Zang pathological changes vary widely and are obscure for the reasons of local disorder leading to overall disorder, one Zang disorder leading to another disorder, transmission/mixtures among visceral disorders, and indistinct or obscure boundary on symptoms. In TCM, visceral names are not the anatomical structure but the collection of some groups of function, having the feature of dynamic change. In TCM diagnosing process, visceral location points not to the morphological structure but to the general dysfunctional or imbalanced judgment. It is the primary factor which leads to the difference between TCM and Western medicine. Besides the complexity of TCM itself, inexperienced physicians themselves were in addition another reason. In comparison, identification of exterior–interior and qi–blood is simpler and their misdiagnosis occurrence is comparatively infrequent. Thus, it can be seen that we should pay more attention to visceral location in TCM diagnosing process. If more than one Zang system get diseased simultaneously, we should draw a clear distinction between the primary and the secondary. At the same time, deficiency–excess identification should be combined with it because the two types are always interfered mutually.

Introspection on deficiency–excess or cold–heat pattern misjudgment

If we refer to the clinical cases’ text based on the data mining results, we can find that the type of deficiency–cold patterns

Table 3: Association rules among the misdiagnosis subtypes

Back item	Front item	Support	Confidence
Visceral misjudgment	Misjudging deficiency as excess	56.585	56.897
Misjudging deficiency as excess	Visceral misjudgment	50.732	63.462
Misjudgment cold as heat	Visceral misjudgment and misjudging deficiency as excess	32.195	51.515
Visceral misjudgment	Misjudgment cold as heat	30.244	62.903
Misjudging deficiency as excess	Misjudgment cold as heat	30.244	85.484
Visceral misjudgment	Misjudgment cold as heat and misjudging deficiency as excess	25.854	64.151
Misjudging deficiency as excess	Misjudging interior as exterior	20.000	63.415
Misjudging deficiency as excess	Misjudgment cold as heat and visceral misjudgment	19.024	87.179
Misjudging excess as deficiency	Misjudging heat as cold	14.634	50.000
Misjudging heat as cold	Misjudging excess as deficiency	14.146	51.724

being misjudged as excess–heat patterns was definitely the most common and being emphasized. The reasons might be as follows: first, “true deficiency–cold with false excess–heat” pattern or mixture of various patterns has a high frequency compared with other misdiagnosing patterns exactly. Second, those patterns always occur in prolonged disease or critical phase. Hence, they are prone to be emphasized by the writers of clinical cases. Third, those patterns cause confusion and lead the physician easily to draw some wrong conclusions. In any case, it teaches us a lesson that we should make diagnosis very carefully when we face with the excess–heat pattern which cannot be alleviated by cold therapies.

Introspection on data mining-related issue in ancient clinical case research

TCM clinical cases have a large amount of scholarly thinking and accompanied by the clinical experience of famous doctors. Based on the research of clinical cases, it is important to promote the TCM discipline advancement and elevate the clinical effect.^[6,7] With the development of information technology and data processing, massive data in TCM clinical cases need to be mined to attain new knowledge and regularities in practice.^[8,9] The ancient clinical literature has many characters such as massive information, various sentence changes, and indistinctive contents. Hence, the data mining on ancient clinical cases is on its early stage. We start the research from the pattern identification which is relatively easy to outline and try to explain the buried knowledge using statistics and a mathematical language. Despite many complexities and some controversy, we believe that this approach is a basis and direction for future-related research.

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Conflicts of interest

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3. Volume with supplement: Otranto D, Capelli G, Genchi C: Changing distribution patterns of canine vector borne diseases in Italy: leishmaniosis vs. dirofilariosis. *Parasites & Vectors* 2009; Suppl 1:S2.

Books and Other Monographs

1. Personal author(s):

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Shanghai University of Traditional Chinese Medicine Partners with Cai Tong De

A signing ceremony was held at the Cai Tong De Pharmacy in Shanghai on Nov 22nd, 2019.

Shanghai University of Traditional Chinese Medicine (SHUTCM) and Shanghai Cai Tong De Pharmaceutical Co. signed an agreement on Nov 22nd to allow international students from the university to do an internship at the Cai Tong De Pharmacy in Shanghai. The Cai Tong De Pharmacy is famous for its many types of traditional Chinese Medicine (TCM) and popular treatments.

The two sides said they hoped the agreement would bolster their cooperation and help them promote TCM internationally.

During the signing ceremony, Elijah, an international student from Russia, talked about her experiences studying TCM and said she hoped to help spread Chinese culture around the world.

Also in the same year, Yueyang, a hospital affiliated to SHUTCM cooperated with Cai Tong De to build the first overseas TCM center in Mauritius.

Shanghai University of Traditional Chinese Medicine



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