## Review article

# The Role of Tibb in Integrative Medicine for Diseases of Lifestyle

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#### **Abstract:**

Integrative Medicine combines the concepts, values and practices of complementary and alternative medicine with conventional medicine in the comprehensive diagnosis and treatment of disease. Integrative Medicine is concerned with preventing disease, health maintenance and healing, rather than merely eliminating symptoms. The person's innate healing abilities are actively supported, and the importance of mind and spiritual nature are recognised. Integrative Medicine values the relationship between the healer and the patient to promote self-help and provides the appropriate education and motivation required for patient empowerment. The complementary arm of Integrative Medicine adopts specific therapeutic techniques such as massage, herbal medicine and aromatherapy, or medical paradigms such as Tibb, Ayurveda, Naturopathy, or Homeopathy. Tibb, also known as Unani-Tibb (Graeco-Arabic) medicine, is the historical forerunner of conventional medicine, so it is an attractive partner. Integrative Medicine has a major role in both treatment of acute ailments, mainly through the conventional arm of treatment, and long-term management of chronic disorders, mainly via the complementary arm. Integrative Medicine addresses the increasingly common disorders of lifestyle such as hypertension, heart disease, diabetes 2, and depression.

**Keywords:** Tibb; Unani-Tibb; integrative; alternative; complementary; conventional; medicine; lifestyle

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#### Introduction

Most countries are faced with problems in providing their citizens with effective and affordable healthcare. The costs of diagnosis, drug and other therapies, surgery and administration are escalating steadily. In developing countries, strong demands are made upon their finances for the management of the HIV & AIDS epidemic and its unwelcome attendants tuberculosis, pneumonia, and a number of other devastating infections<sup>1</sup>. In contrast, many developed countries are experiencing a substantial rise in chronic lifestyle-related conditions such as obesity, diabetes<sup>2</sup>, hypertension, and depression<sup>2</sup>. The burden of poor health is expected to increase even further in most regions if the predicted climate changes

occur. This will inevitably manifest medically as an increase in the occurrence of numerous ailments, particularly vector-borne killer diseases such as malaria and parasitic diseases.

One possible, and realistic, approach to provide appropriate and cost-effective healthcare may be the more widespread and dedicated application of Integrative Medicine<sup>3</sup>.

Integrative Medicine is the combination of the best of conventional medicine with the best of complementary and alternative medicine (CAM) for the ultimate benefit of the patient<sup>4</sup>. Even though conventional medicine is the prevailing healthcare mode in the Western world and in many developing nations, it often coexists locally with one or more

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traditional healing systems, most of which have their roots in non-Western cultures<sup>5</sup>. Other healing systems such as Naturopathy and Homeopathy were developed quite recently in the West, but outside conventional medical practice. They are not part of the teaching curriculum in most medical schools at the present time.

CAM is often combined with conventional medicine on an informal, self-help basis. In effect, many patients instinctively seek better healing by combining conventional and CAM therapies. Visits to CAM practitioners presently exceed those to conventional doctors in many countries, even in the developed world<sup>6</sup>.

The peoples of developed countries are less afflicted by their 'traditional' diseases, especially those linked to infection (tuberculosis, malaria, pneumonia, for example) but increasingly so to the 'diseases of lifestyle' - that is, disorders, arguably selfinflicted in many cases, arising from imprudent or irresponsible behaviour, a poor diet, and poor habits - diabetes 2, obesity, and heart disease, for instance<sup>1</sup>. In the developing economies, where the healthcare challenges are largely linked to poverty, over-crowding, substance abuse, poor sanitation, and chronic malnutrition, there is fertile ground for the spread of diseases such as tuberculosis, malaria and HIV & AIDS. Even in these countries the diseases of lifestyle are increasingly more prevalent as more and more of the population, including the privileged elite, choose to adopt the deleterious lifestyle practices prevalent in Western societies. Adopting Integrative Medicine for the ameliorisation of many diseases of lifestyle is therefore realistic, practical and appropriate.

Conventional medicine stands unchallenged when dealing with acute disorders like severe pain and trauma. However, CAM is particularly suited to the treatment of chronic, persistent or recurring ailments, many of which arise from an imprudent or distorted lifestyle. CAM is pre-eminent in the maintenance of optimum health and in averting many common chronic diseases. It is better tolerated, more patient focused, 'user-friendly', and usually cheaper.

However, before Integrative Medicine can be more broadly accepted and practiced, it is essential to persuade conventional practitioners of its value. Integrative Medicine is more acceptable once it is appreciated that including CAM does not advocate alternative therapies alone, or result in falling standards of patient care and treatment. There

is unequivocal clinical evidence supporting the efficacy and safety of many forms of CAM. For their part, the CAM practitioners should accept the limitations of their therapeutic model, and concede the advantages and proven worth of its combination with conventional therapy.

#### 1. What is CAM?

CAM, often termed 'fringe', 'natural' or'nonallopathic' refers to medicine other than allopathic, modern or 'bio-medical' medicine, and which is not generally not taught in conventional medical schools or generally available in most hospitals.

An acceptable working definition comes from the National Center for CAM in the USA, which states that CAM is:

"... healthcare practices that are not an integral part of conventional medicine. As diverse and abundant as the peoples of the world, these practices may be grouped within five major domains: alternative medical systems; mind-body interventions; biologically-based treatment; manipulative and body-based methods; and energy therapies" 7.

Many forms of CAM are tradition-based and result from centuries of observation, empirical practice and intuitive experience. Common to traditional health systems such as Tibb and Ayurveda is the belief that the body has a natural but potent tendency towards self-healing, maintained by inner harmony. Regulating this internal balance and boosting the body's power of self-healing is essential to good long-term health and well-being.

#### 2. How CAM differs from conventional medicine

The most significant difference is that the former is based on traditional, non-physical or non-quantifiable belief systems not yet acceptable to modern science. CAM theory and practice often incorporates spiritual, metaphysical, or religious influences alongside the physical dimension, and clinical practices not proven rigidly by scientific method and investigation.

There are numerous additional differences between the two systems<sup>5</sup>.

• *Holistic principle.* Conventional medicine generally views the human body mechanistically as a complex, smoothly organised and functioning machine, where the whole is the sum of its parts. CAM, on the other hand, sees the body as an

- extremely complex system of physical, mental, and spiritual interactions. Therapy is therefore holistic when diagnosing and treating the ailment, or in order to maintain optimum health.
- *Diagnostic principle*. CAM regards intuition in a positive light. This is based on the patient's personal lifestyle, temperament and cultural environment. Contrariwise, conventional medicine increasingly favours multiple diagnostic and investigative tests at the expense of diagnostic skills.
- Therapeutic principle. CAM actively seek sunder lying causes of the patient's illness. By contrast, conventional medicine usually targets the patient's troublesome symptoms for short-term benefit, with little concern for the underlying cause, and little practical advice

- offered on avoiding recurrence.
- Patient principle. Conventional medical practice allows little professional interaction with the patient, for either diagnosis or treatment. The patient is merely a passive recipient of therapy. CAM, however, attaches value to the patient/practitioner interaction and personal empowerment.
- Tolerance principle. Conventional medicine claims superiority for acute disorders, although there are concerns regarding its long-term benefit for chronic diseases. Adverse drug reactions and other therapy-related disorders are a concern. However, CAM is perceived (not always accurately) as being better tolerated over the long term.

Box 1: Differences between complementary medicine and conventional medicine<sup>9</sup>

<u>Feature</u>	Complementary medicine	Conventional medicine
Definition: health	Balance between opposing forces, internally	Absence of disease.
-	and externally.	
Definition:	Symptoms indicate disruptive forces and/or	Specific, locally defined deviations from
disease	healing processes.	'normal', or impaired functions.
Diagnosis	Intuitive. Focuses on subjective information,	Morphological. Uses high-tech methods.
	such as how the patient is feeling.	Focuses on objective information - charts,
		tests, statistics, etc).
Therapy of	Reinforcing self-healing.	Combating destructive or infective agents.
disease	Deals with underlying cause(s).	Treats symptoms, not cause(s).
	Emphasises achieving good health.	Emphasises elimination of causative
	Focuses on lifestyle and prevention.	agent, especially microbes or biochemical
	The patient has say re healthcare choices.	abnormalities.
		The physician totally controls health problems.
Philosophy	Based on empirical, inductive observation.	Based on deductive reasoning. Objective and
	More intuitive or subjective.	scientific stance.
Relationship to	Active participation needed to regain health.	Passive recipient of external solutions. More
patient	More empowering and flexible.	authoritarian and controlling.
Generalattitude to	Seeks to understand the patient. Empathy an	More concerned with the disorder. Doctor is
consultation	important factor in healing. The practitioner	emotionally neutral or detached. The physician
	is a partner in the healing process.	is the all-knowing authority who is rarely
		challenged.
Perspective on	Accepts physical, psychological, spiritual	Considers physical dimension exclusively.
body	and social dimensions. Affirms that mind	Body regarded mechanistically. Does not accept
	and body are inter-connected.	mind: body dualism.
Generalist/	Takes an integrated approach. There are	Specialises in a particular disease focusing on a
Specialist	usually no specialists.	particular organ.

# 3. The migration from conventional medicine to CAM

There is a substantial swing away from conventional medicine to CAM systems worldwide<sup>10,11</sup>. This reflects both dissatisfaction with conventional medical treatment<sup>7</sup>, and an increase in interest in alternative healing modalities<sup>12</sup>. Furthermore, people are now more aware of the undoubted therapeutic efficacy and safety of alternatives to conventional medicine.

Major societal factors contribute to this swing:

- Conventional medicine relies heavily on drugs, which are prone to iatrogenic disorders such as adverse drug reactions and metabolic distortions. These can counteract any clinical benefit achieved, and often demand further drug treatment. This may not be a major problem for acute disorders, but can seriously undermine any long-term treatment of chronic, persistent, or recurring ailments.
- Conventional medicine focuses on eradicating symptoms of the disorder with drugs.
   Unfortunately, the source or causes of the disorder is rarely pursued. Furthermore, little attention is paid to advice on lifestyle changes and other measures to remedy the presenting disorder.
- CAM is patient-centred and wellness-orientated, and often focused on lifestyle factors controllable by the patient. This satisfies many patients' greater awareness of, and demand for, greater control and empowerment over their life events.
- The cost of conventional medical care, for diagnosis, treatment, monitoring, and prevention puts many diagnostic techniques and therapeutic procedures beyond the reach of many people.
- Present-day conventional medicine is dependent on front-line technology, so is often impersonal and emotionally difficult. The healer-patient relationship in CAM is warmer and far more personal. This applies especially to those who seek a more holistic involvement in their own healthcare.
- The population of most countries is ageing, so chronic ailments are becoming more prevalent. Resorting to CAM becomes more attractive, because conventional medicine is perceived as poorly tolerated, or less effective, where longterm therapy is necessary.

Additional factors driving the switch to CAM include

mistrust of 'big Pharma' coupled with a rise in antiscientific attitudes<sup>13</sup>; better appreciation of CAM by increasing numbers of conventional practitioners; better response by health insurance companies to claims for CAM expenses<sup>10,13</sup>, and more effective marketing of CAM remedies.

Finally, conventional medicine lacks an holistic ideology, which is increasingly important for many people. The philosophical orientation towards the whole person, rather than a specific defect of a particular tissue or organ, is a powerful attractant to CAM<sup>5</sup>.

### 4. The nature of Integrative Medicine

"Integrated or Integrative Medicine is the practice medicine in a way that selectively incorporates elements of Complementary and Alternative medicine into comprehensive treatment plans alongside solidly orthodox methods of diagnosis and treatment" 15

Many people combine CAM with conventional medicine for common chronic disorders, ranging from digestive ailments, rheumatic disorders, and diabetes 2, to anxiety, insomnia, and symptoms of the menopause. Lowering of high cholesterol levels and relief of the common cold and flu are particularly popular.

Integrative Medicine is not just a random mixture of conventional medicine and CAM, but a medical paradigm that emphasises the maintenance of health and holistic healing as the primary outcome .It does not focus solely on treating the disease by applying various therapeutic options to reduce troubling symptoms. As a matter of principle, it requires analysis of the reasons why a patient has a particular disorder, and seeks the kind of treatment from what conventional medicine and CAM have to offer. This has to be appropriate for the disorder, given the patient's temperament, state of health, personal beliefs, and socio-economic situation. Another factor is the severity of the ailment, and whether it is an acute disorder, or chronic and recurring16. It also takes into account the patient in his or her entirety, from the mental and spiritual aspect as well as the physical one<sup>23,24</sup>. All three are recognised and practically involved in diagnosing and treating the patient's ailment whenever appropriate.

Integrative Medicine asserts that the origin of any disease is multi-factorial in nature, with genetic, physical, emotional, psychological, and spiritual

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elements involved. It therefore approaches a patient's ailment by attempting to identify any contributory factors and deal with them as necessary. Consequently, the range of options in the practice of Integrative Medicine can go well beyond standard conventional therapy. It can embrace the patient's spiritual life and social relationships, apply mind—body practices, and introduce herbal therapy and hands-on techniques.

An example of Integrative Medicine in practice is the treatment of recurring headaches. Initially, one or more conventional drugs would be used to relieve the patient's distress. The conventional component would embrace an analgesic drug as rescue therapy to abort the headache, and a prophylactic drug to help prevent further attacks. However, an Integrative Medicine practitioner would seek underlying possible causes and contributory factors: how does the patient cope with stress? Are there any particular foods or behaviours which may be triggering or prolonging the headaches? How is the patient's lifestyle involved? When any are identified, changes to the patient's behaviour and lifestyle would be agreed to and implemented. Furthermore, other therapeutic modalities would be

considered, such as acupressure to reduce the frequency of attacks, and relaxation techniques, therapeutic cupping, advice on nutrition, and herbal remedies to prevent further attacks.

A positive feature of Integrative Medicine is that it actively encourages responsibility by, and involvement of, the patient .It attempts to avoid the any prescriptive, authoritarian or top-down approach that often characterises conventional medical treatment, and supports the patient into taking charge of his or her health. For instance, the patient will be persuaded to accept changing to a reasonable lifestyle in order to promote well-being, deal with specific ailments, and aid recuperation. The Integrative Medical Practitioner will emphasise appropriate health education and advice on self-help.

## 5. Integrative Medicine and diseases of lifestyle

We are living in a period of history where the 'traditional diseases' arising from malnutrition, infection, poor hygiene, and crowded, cramped living conditions are in significant decline, whereas the diseases of lifestyle, which result from an imprudent or dysfunctional lifestyle, are inexorably on the rise (*Box2*).

**Box 2: Diseases of lifestyle** 

Major diseases of lifestyle	Other diseases of lifestyle
Diabetes 2	Arthritic diseases, esp. Osteo-arthritis
Obesity	Dental diseases, esp. periodontal diseases
Cardio-vascular disease, including hypertension and coronary heart disease	Digestive disorders, esp. irritable bowel syndrome
Certain cancers	HIV &AIDS
Osteoporosis	Certain kidney and liver diseases
Stroke	Skin disorders, esp. acne and allergies
Mental/emotional disorders including anxiety, bulimia and anorexia	Alzheimer's disease, insomnia and depression

This shift in emphasis from traditional ailments to diseases of lifestyle is, unfortunately, affecting many people in developing countries, particularly those in the increasingly affluent sector. They too now have ready access to Westernised lifestyles, especially where calorie-dense food, reduced physical activity, and access to drugs are concerned. The stress load of many of these is climbing, boosted by sociodynamic factors such as unemployment and job

insecurity. Diabetes 2 and coronary heart disease are on the increase, and appearing much earlier than previously<sup>17</sup>.

There are several reasons for this demographic shift in the burden of disease. The average person's diet has changed markedly. Calorie-dense, low-fibre, high sugar, high saturated fat food has become more widely available and affordable; people are reducing their physical activity: for example, car travel replaces walking, and social and work stress is having a major impact on daily, social and domestic life. The use of recreational drugs, especially alcohol and cocaine, is becoming pervasive, and the source of much physical and mental ill-health.

The achievements of conventional medicine in dealing with chronic diseases of lifestyle have been less than spectacular. In spite of huge expenditure on medical research and development, there has been little if any amelioration in the average person's quality of personal health. In actual fact, a number of developed countries shave recently shown a marked decrease in life expectancy, and an alarming increase in the mortality rate of the young. This is in spite of the availability of a plethora of drugs effective in dealing with the symptoms of the diseases of lifestyle: anti-hypertensive drugs, lipid lowering drugs, hypoglycaemic agents, appetite suppressants, anti-depressants, and so on.

Integrative Medicine offers the possibility of dealing with the chronic diseases of lifestyle by supplementing the conventional drugs mentioned above with CAM practice. Particularly effective in many chronic diseases, it harnesses the inner healing potential of the person, which comprises an exquisite range of subtle, sophisticated defence, self-regulation, and self-repair mechanisms. These act in concert to promote self-healing. As a result, many diseases of lifestyle will respond favourably to the introduction of this option from CAM.

## 6. Tibb as a partner in Integrative Medicine

Tibb is a traditional system of healthcare, widely practiced on the Indian sub-continent, based upon the teachings of three historic pioneers of medicine – Hippocrates, Galen and Ibn Sina (aka Avicenna)<sup>18</sup>. It formed the basis for Western medicine until well into the 18<sup>th</sup> Century, and is presently experiencing a resurgence of interest in many countries. Tibb can be applied alone as a distinct system of health maintenance or disease alleviation. It can also lay claim as an ideal partner for conventional medicine in the practice of Integrative Medicine.

The basic principle of Tibb is that of dynamic equilibrium or homeostasis. This refers both to inner state, where metabolic balance is a pre-requisite for health and vitality, and the relationship with the outside, surrounding environment. According to Hippocrates, the human being draws from the environment what the body needs for life, and returns to it the waste products and other unnecessary materials. Tibb defines ideal health as the state where

perfect harmony exists between the person, his or her lifestyle, and the environment. Conversely, disease reflects disharmony and disruption of the triad<sup>5</sup>.

Another pillar of Tibb philosophy is that every person is unique, and this uniqueness is called temperament. In effect, this is the amalgam of the person's genetic profile, constitution or physique, his or her personality, and behavioural tendencies<sup>19</sup>. Although the concept of four dominant temperaments goes back to historical times, it is still considered pertinent in the fields of mental therapy, psychological research, and education<sup>20</sup>. In Tibb, identifying a person's temperament is an indispensible requirement before actual diagnosis of the disorder and subsequent therapy. Moreover, a number of studies have indicated that specific disorders are more prevalent in people with a certain temperamental disposition.

Another important concept in Tibb is that of Physis, or the inherent wisdom of the body. This concept is shared by most CAM paradigms, especially Ayurveda, Homeopathy, and Naturopathy<sup>21</sup>. Physis is responsible for the drive to inner healing and harmony. It is the body's inborn potential to self-regulate and self-repair, so maintaining harmony when confronted by metabolic internal changes, physical trauma and hostile environmental factors<sup>22</sup>. Essentially it means that although we may apply treatment for a disease or injury from the outside, true healing actually comes from within<sup>3,23</sup>. Much of Physis' activity is contained within the immune system, although other functions such as toxin neutralisation, drug detoxification, and cellular damage control are integral parts of it. Natural healing systems respect Physis by avoiding therapies that damage or oppose it and focus on supporting it by their specific remedies and healing practices.

Critical examination of the lifestyle factors in maintaining health and opposing disease is another important aspect of Tibb. These broadly define a person's way of living, and are made up of his or her regular behaviour, including food and drink, breathing practice, physical activity and relaxation, sleep hygiene, mental state (especially stress levels), and efficiency of body waste removal. Therapy is directed at harmonising these where feasible, so improving the person's clinical risk profile. This form of personal empowerment generally results in substantial benefit to the person's quality of life.

Tibb is essentially empirical in nature, drawing extensively on clinical experience extending far back into history. However, recent scientific studies have been initiated into the impact of Tibb in a number of common, chronic or recurring diseases such as HIV&AIDS, bronchial asthma, and diabetes 2. Results to date have been encouraging.

In practice, conventional medicine would be the major partner in the treatment of acute diseases, emergencies, and the alleviation of troubling symptoms. Tibb would be the major partner in the management of chronic or recurrent disorders, and directed at nullifying the underlying causes or contributory factors of the disease. The two medical paradigms would therefore effectively complement and support each other.

# 7. Obstacles to Integrative Medicine

Integrative Medicine is practiced by many conventional practitioners, especially in the fields of geriatrics and family medicine where acute exacerbations and chronic disorders co-exist. However, before Integrative Medicine can become broadly established there are certain obstacles to overcome<sup>3</sup>.

- The need for training. Conventional doctors do not have the basic concepts or practical knowledge of CAM. A number of medical schools are now aware of the need for conventional medical practitioners to familiarise with its features, benefits, and limitations. However, increasing numbers of doctors now undergo training in CAM, aware that the skills gained could be used to their professional advantage as adjuncts in therapy. Practitioners could be actively encouraged to undergo further, extracurricular, training in disciplines such as Tibb, Ayurveda, Traditional Chinese Medicine, and Homeopathy, or in specific techniques such as acupuncture and aromatherapy. The use of distance learning programmes and the Internet offer other practical media for instruction<sup>10,15</sup>.
- Attitude change. Until recently, CAM was regarded by many as suspect or second-rate at best, and ineffective or even dangerous at worst. In recent times this attitude has undergone a

change as evidence accrues of its value and relevance in modern-day healthcare. Patients now often request advice on specific CAM therapies and guidelines for their use<sup>10</sup>.

#### 8. Conclusion

Integrative Medicine combines elements of conventional medicine and CAM into a comprehensive and holistic approach for the treatment and prevention of clinical disorders. It promotes theuse of natural procedures for the prevention of chronic disease, supported by conventional medicine for troublesome symptoms and pain alleviation. It emphasises the wellness of the patient, focusing on healing rather than symptom suppression. The patient's innate power of inner healing is encouraged and supported by various therapeutic modalities. Integrative medicine accepts the role that the mind, spirit, and even community can play in the healing process. Treatment is based on scientifically validated techniques, and is modified in the light of emerging new evidence and investigations. It is predominantly natural and less invasive than conventional medicine. The relationship between healer and patient is critically important when treating disease and helping in recuperation. Integrative medicine is preeminent in the management of chronic and recurring disorders such as heart disease, bronchial asthma, and migraine, and is at the forefront of treating the modern diseases of lifestyle such as hypertension, diabetes 2, obesity, depression, and numerous cancers. The complementary component of integrative medicine can be assumed by specific therapeutic techniques such asacupuncture, herbal therapy or aromatherapy. It can also adopt broader medical paradigms such as Tibb, Ayurveda, Naturopathy and Homeopathy. Tibb is particularly well suited as a partner for conventional medicine, as it is broadly consistent with it, and its proven clinical benefits are based on empirical evidence and clinical studies. Integrative Medicine offers the best of both therapeutic worlds, as an equal partnership of conventional and complementary medicine.

#### **References:**

- Murray CJL, Lopez AD, eds. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. Cambridge, Harvard School of Public Health on behalf of the World Health Organization and the World Bank, (Global Burden of Disease and Injury Series, Vol. 1). (1996).
- Al-Maskari, F. (2010). Lifestyle Diseases: An Economic Burden on the Health Services. Online at: www.un.org/ wcm/content/site/chronicle/home/archive/issues2010/ achieving global health/...
- 3. Weil, A. (1997). Spontaneous Healing.Warner Books. London.
- Jacobs, J and Fisher, P. (2013). Polypharmacy, multimorbidity and the value of integrative medicine in public health. Europ. *J. Integr. Med.* 2013: 5; 4-7 https://doi.org/10.1016/j.eujim.2012.09.001
- Bhikha, R. and Haq, MA. Tibb Traditional Roots of Medicine in Modern Routes to Health. Mountain of Light. South Africa. (2000).
- Van Rensberg, HCJ, Fourie, A and Pretorius, E (1992).
  Health Care in South Africa Structure and Dynamics.
  Academica, Pretoria
- Gilbert, L, Selikow, TA, & Walker, L. (1998). Society, Health and Disease.Ravan Press, Randburg, South Africa.
- 8. Lee, N. (1995). SA family guide to Natural Medicine. Reader's Digest.
- 9. Bhikha R.A.H, JP. Haq M.A.H, Glynn al Integrative chronicdisease and medicine, Tibb. World Review ofScience, *Technology* 2008;5:2 Sustainable Development. and https://doi.org/10.1504/wrstsd.2008.018560
- 10 Coulter, ID and Willis, EM. (2004). The rise and rise of complementary and alternative medicine: a sociological perspective. Med J Australia. 180:587-9
- 11. Cuellar, N., Aycock, T., Cahill, B. and Ford, J.

- (2003). 'CAM use by African and Caucasian Americans. A descriptive, comparative study'. *BMC Complementary and Alternative Medicine*, Vol. **3**, p.8. https://doi.org/10.1186/1472-6882-3-8
- 12. Le Fanu, J. (2011). The Rise and Fall of Modern Medicine. Abacus, London, UK
- 13. Beyerstein, D. (1999). Social and judgmental Biases that make inert Treatments seem to work. Online at: www. crhp.net/article1/html
- 14. Hurd, L. (2000). American WholeHealth, Total Health, Vol. **22**, Jan–Feb, pp.23–25.
- 15. Rees, L and Weil, A. (2001). *Integrated Medicine.British Medical Journal*. **322**;119-120 https://doi.org/10.1136/bmj.322.7279.119
- Peters, D and Woodham, A. (2000). The Complete Guide: Integrated Medicine, Dorling-Kindersley, London, UK.
- 17. Changing face of disease in Africa. Online at: www. iafrica.com/pls/cms.
- Bakhtiar, L. (1999) The Canon of Medicine. Avicenna, Adapted by Laleh. Great Books of the Islamic World, Inc.
- Rolfe, R. (2002). The Four Temperaments. Marlow & Co. New York. USA.
- 20. Kagan, J. (1995) Galen's Prophecy: Temperament in Human Nature, Westview Press, USA.
- Leviton, R. (2000). Physician. Medicine and the unsuspected Battle for Human Freedom. Hampton Roads Publishing Inc. USA
- 22. Chishti G M. (1991). The Traditional Healer's Handbook.A Classic Guide to the Medicine of Avicenna. Healing Arts Press.
- 23. Blom, B. (2003). Opening Doors to Integrative Medicine, SA J. Nat. Med., Vol. 10, pp.9-10.
- Bell I R, Caspi O, Schwartz GER, et al. (2002). Integrative medicine and systems outcomes research. Arch Intern Med. Vol162: 133-140. https://doi.org/10.1001/archinte.162.2.133

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