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RESEARCH ARTICLE

INSTITUTES CONTRIBUTION TO THE MEDICINE OF HIPPOCRATES, GALEN, AND IBN SINA

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Abstract

The training of doctors in this system of medicine in South Africa, was introduced by the Ibn Sina Institute of Tibb under the name of Tibb (Arabic word for Medicine), after obtaining academic support from universities in India and Pakistan, where this system is trained and practiced under the name of Unani Medicine. The Institute identified concerns with respect to the terminology of humours, the limited information on identifying temperament with respect to predisposition to illness conditions as well as the lack of relationship between the principles of physis, temperament, humours, and lifestyle factors. This paper highlights the contribution of the Institute, based on various research projects conducted between 2003 and 2020. The results of the research projects contributed positively to the humoral and temperamental theories as well as the relationship between an individual and the environment within the context of Lifestyle Factors. More significantly the relationship between the principles of physis, humours, temperament, and lifestyle factors within the context of aetiology, pathology, diagnosis, and treatment have also been clarified. The Institute's contribution to this system of medicine has facilitated the development of the training material at both a 5-year Undergraduate Degree and a 1-year Postgraduate Diploma (for diagnostic healthcare professionals) to be trained as doctors of the Medicine of Hippocrates, Galen, and Ibn Sina – also known as Tibb.

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Introduction

Under the banner of Tibb (the Arabic word for medicine), the Ibn Sina Institute of Tibb's endeavors to contribute to the Medicine of Hippocrates, Galen, and Ibn Sina, began in 1992, when my eight-year-old daughter was diagnosed with fibrosing alveolitis confirmed by a lung biopsy and prescribed 50mg prednisone (cortisone) daily. Her illness and subsequent failure to receive adequate treatment from leading specialists initiated my journey to research this holistic system of medicine. Whilst my daughter underwent test after test to no avail, and eventually had to be on oxygen full time, I became increasingly despondent as one doctor after another informed me that the cause/s could not be identified. Being a pharmacist since 1969 and having established the largest privately owned pharmaceutical company in South Africa (SA) I was greatly concerned with the symptomatic approach to treatment without an understanding of the cause/s of illness conditions. Her illness and subsequent failure to receive adequate treatment from leading specialists initiated my journey to research this holistic system of medicine.

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Unfortunately, because of the dominance of Western medicine, the training and practice of this system of medicine, was only available in the Indian subcontinent under the name of Unani medicine. This led to my request for academic support for the training of Unani-Tibb doctors in SA, initially from Hamdard University in Pakistan in 1994 and subsequent visits to Jamia Hamdard University, Aligarh Muslim University, and the Central Council for Research in Unani Medicine, in India.

After obtaining and reviewing academic support, I realized that the source of the training and practice of Unani Medicine was Ibn Sina's Canon of Medicine, which remained the reference textbook of this system of medicine all over the world until the 17th century. In addition, the training and practice of Unani Medicine needed to be changed in the typical South African Western dominated environment.

The training and practice of Unani Medicine in the Indian subcontinent was based on the following philosophical principles included in the Canon of Medicine a) Physis, the body's self-healing mechanism¹, b) The four Elements of Creation, with respective qualities - Earth (Cold & Dry), Water (Cold & Moist), Air (Hot & Moist), Fire (Hot & Dry)². c) Humours, as hypothesized by Hippocrates, phlegm, yellow bile, black bile, and blood, also with respective qualities^{3,4}; d) Temperament as hypothesized by Galen, categorized individuals into four dominant temperamental types, in relation to the four humours, either as an individual having a Sanguinous, Phlegmatic, Choleric, or Melancholic temperament, also with respective qualities^{3,5,6,7}; e) Six Lifestyle Factors which influences the relationship between an individual and the environment within the context of health promotion and treatment – include Air/climate, Physical Activity/Body Movement, Sleep and Wakefulness, Physic Movement and Response, Food & Drink and Evacuation and Retention – each having a qualitative effect^{8,9}.

Also, the review of the principles, made me realize that qualities associated with Humours, Temperament, and Six Lifestyle Factors, formed the basis of interpreting signs and symptoms, with respect to diagnosis and subsequent treatment. The quality/ies associated with illness condition/s, have been treated with medication having opposite quality/ies, in keeping with the understanding of “allopathic medicine” where the word “allo” is opposite to the signs and symptoms associated with an illness condition².

Whilst the practice of this system of medicine has been successful in the treatment based on the opposite qualities and the pharmacological action of natural medication, as recorded in many pharmacopoeias over the past ten centuries, the training and practice of this system of medicine needed to be relooked at within a typical Western dominated South African environment. In addition, concerns were identified in the current training of Unani Medicine, including the terminology of one of the humours as “blood” – in today's understanding of “blood”, which consists of plasma, different blood cells, platelets etc. Also, there was no correlation between the terminology of humours and temperament. More significantly, there was no information with respect to identifying an individual's temperament for insights into the individual's predisposition to illness conditions, as well as no identified relationship between the principles of Temperament, Humours, Six Lifestyle Factors, and Physis.

To address the above concerns, as well as obtaining official recognition of this system of medicine with the Department of Health and facilitating the training of Unani-Tibb doctors in SA, the Ibn Sina Institute of Tibb (Waqf/Public Benefit Organization: PBO No. 930 008 393) was established in 1997.

In 2001, the Institute facilitated the recognition of Unani-Tibb with the Allied Health Professions Council of South Africa (AHPCSA). The AHPCSA regulates the training and practice of Complementary and Alternate Medicine modalities including amongst others Homeopathy, Chiropractic, Ayurveda, Chinese medicine, Phytotherapy and Naturopathy <https://ahpcs.co.za/>.

In 2003, the Institute established the training of Unani-Tibb doctors at the University of the Western Cape's (UWC), School of Natural Medicine (SoNM), at both a 5-year Undergraduate programme and a 1-year Postgraduate Diploma (PGD-UT) – for medical doctors and clinical primary healthcare nurses. **The curriculum included a research module which made it possible for the Institute to contribute to the Medicine of Hippocrates, Galen, and Ibn Sina.** Based on the curriculum and training of the PGD, in 2004, I completed my PhD in education entitled “African Renaissance in Health Education: Developing an Integrative Programme of Unani-Tibb training for Healthcare Professionals in Southern Africa” at UWC.

Institute's Contribution to the Terminology of the Medicine of Hippocrates, Galen, and Ibn Sina

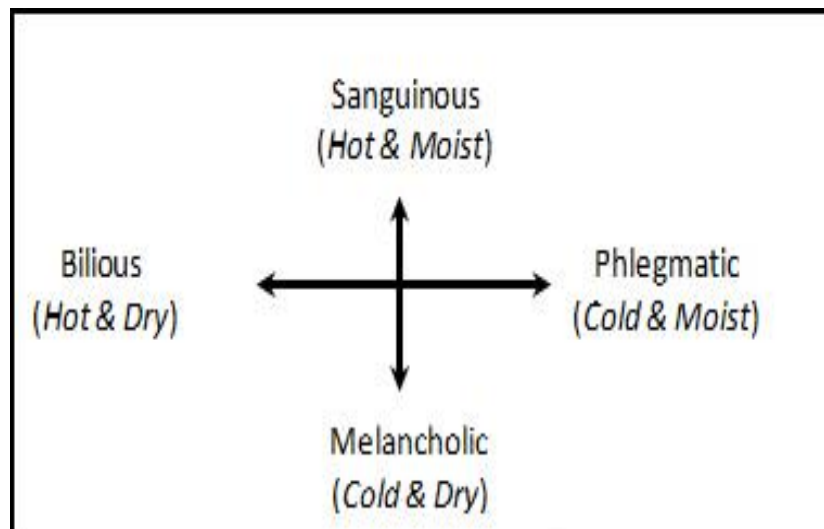
To address the terminology concerning the word “blood” as one of the humours, as well as the lack of correlation between the terminology of humours and temperament – taking into account Galen’s contribution to the humoral theory with respect to categorizing four dominant temperamental types in relation to the four humours, with respective qualities, the Institute deemed it acceptable to align the humours and temperaments with the same names, viz: Sanguinous, Phlegmatic, Melancholic, and Choleric. However, as the link between the different temperaments and qualities is the foundation of this system of medicine, the Institute thought it would be appropriate to rather use the word “Bilious” instead of Choleric which is in keeping with the qualities of bile which has Hot & Dry qualities¹⁰.

Institute's Contribution to the Concept of Temperament

Inspired by the famous saying of Hippocrates, “*It is more important to know what sort of a person has a disease than to know what sort of disease a person has*”, which highlights the uniqueness of an individual (temperament), with respect to predisposition of illness conditions; as well as an individual’s relationship to the environment (lifestyle factors). Taking into account Galen’s categorizing of only four dominant temperamental types, the Institute researched different models that satisfied the criteria of identifying an individual’s temperament^{3,11,12}.

This criterion was influenced by Florence Littauer’s poem, in her book “The Four Temperaments” in which she describes the personality traits of the four temperamental types and concludes with the words, “*We need each temperament for the total functioning of the body*”. This highlights that whilst each person has personality traits/attributes from all four temperaments, each individual has a dominant temperament, less of a second, even less of a third and the least amount of the fourth temperament¹³.

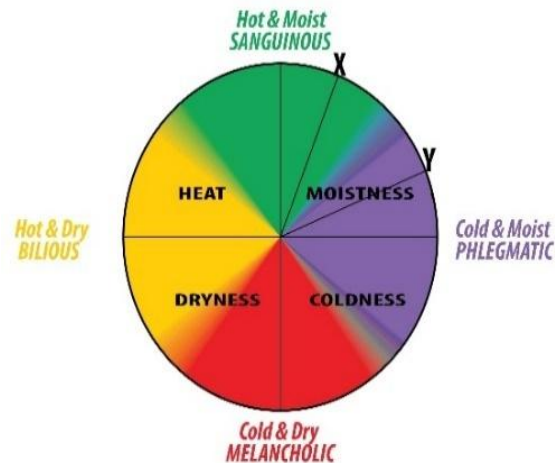
Within the context of opposite qualities not existing simultaneously – nothing can be Hot and Cold; nor Moist and Dry at the same time, the Institute hypothesized that an individual’s temperamental combination will have a dominant temperament, a second less (sub-dominant temperament) that will be adjacent to the dominant temperament, and the least temperament being opposite.



For example, a person with a dominant Sanguinous temperament with Hot & Moist qualities, will have a sub-dominant temperament of either Bilious (Hot & Dry qualities) or Phlegmatic (Cold & Moist qualities) and not a Melancholic temperament with Cold & Dry qualities, as this is opposite to the Hot & Moist qualities associated with the Sanguinous temperament¹⁴.

After conducting thousands of temperamental evaluations, between 1998 and 2000, the Institute confirmed that each individual has a dominant/sub-dominant temperament, which is adjacent to each other, with respective qualities including an overall dominant quality as indicated below.

Qualities associated with an individual's temperament



The chart above is reflective of an individual's dominant Sanguinous, sub-dominant Phlegmatic temperament as indicated in the line marked X. This person will have an overall dominant quality of moistness, less heat, followed by coldness and the least amount of dryness. Similarly, an individual with a dominant Phlegmatic, sub-dominant Sanguinous temperament (marked with a Y) will also have an overall quality of moistness but followed with coldness than heat and the least amount of dryness. However, both temperamental combinations have a dominant quality of moistness and the least amount of the dryness quality¹⁵.

Being aware of the different temperamental combinations and associated qualities, to validate the hypothesis of Hippocrates with respect to the temperament of an individual in relation to the predisposition to illness conditions, the Institute initiated its first research to confirm this link.

1ST Research Project: Relationship Between an Individual's Temperament and the Predisposition to Illness Conditions

This research, included in my PhD (<https://www.tibb.co.za/wp-content/uploads/FINAL-THESIS-2004.pdf>) was conducted by 21 students who completed the Postgraduate Diploma in Unani-Tibb (PGD-UT) at the University of the Western Cape (UWC), in 2003, on 108 patients. This research highlighted a definite correlation between the patient's dominant/sub-dominant temperament and predisposition to the illness condition.

2ND Research Project: Relationship Between Temperament and Qualities in the Predisposition to Illness Conditions

Having established the relationship between an individual's temperament and the predisposition to illness conditions, a second research was conducted in 2006, to confirm that there is a relationship between an individual's temperamental combination and illness conditions with respective qualities.

Ibn Sina's Canon of Medicine confirms that most illness conditions are associated with qualities. All illness conditions begin with an excess of one of the four qualities of heat, coldness, moistness, and dryness, that leads to a second associated quality. An example of this is the common cold, which typically develops in the cold season of the year. If this cold imbalance is not corrected, symptoms develop and are often associated with an increase in mucous production such as a runny or congested nose, productive cough etc. Therefore, colds and flu are associated with qualities of coldness with moistness. Similarly, constipation is linked to qualities of dryness with coldness, as intestinal motility slows and the level of fluid is low, resulting in the formation of dry, hard, dehydrated stools¹⁶.

This research project entitled: Correspondence of Qualities and Temperament in groups of patients suffering from Hypertension, Type 2 Diabetes, Bronchial Asthma, and HIV & AIDS was conducted by 27 students in the PGD-UT at UWC, in 2006, on 2151 patients suffering from Essential Hypertension (521); Type 2 Diabetes (416); Bronchial Asthma (432); and HIV & AIDS with TB (381); HIV & AIDS without TB (401); in the research project.

Summary of the above research results is listed below under two separate headings a) Relationship between Temperament and Illness Conditions, and b) Relationship between Illness Conditions and Qualitative Frames

associated with the Illness Conditions. The complete report is available on the Institute's website (<https://www.tibb.co.za/wp-content/uploads/Eval-Rep-2006-qual-temp-20.04.22.pdf>).

a) Relationship between an individual's temperament and illness conditions

Hypertension

Of the 521 Hypertension patients 457 (88%) patients with a **dominant/sub-dominant Sanguinous temperament** are predisposed to developing **Hypertension**¹⁷.

Type 2 Diabetes:

Of the 416 Type 2 Diabetes patients, 370 (89%) of the patients with a **dominant/sub-dominant Sanguinous temperament** are predisposed to developing **Type 2 Diabetes**¹⁸.

Bronchial Asthma:

Of the 432 patients, 361 (84%) patients, with a **dominant/sub-dominant Phlegmatic temperament** are predisposed to developing phlegmatic **Bronchial Asthma**¹⁸.

HIV & AIDS without TB:

Of the 401 patients, 321 (80%) patients, with **dominant/sub-dominant Phlegmatic temperament** are predisposed to developing **HIV & AIDS without TB**¹⁸.

HIV & AIDS with TB:

Of the 381 patients, 241 (63%) of the patients, with **dominant/sub-dominant Bilious temperament** are predisposed to **HIV & AIDS with TB**¹⁸.

The above results confirmed a definite relationship between an individual's temperamental combination and predisposition to the above illness conditions – the results of this research project were similar to the first research: Hypertension 88% - previous research 83%; Type 2 Diabetes 89% - previous research 100%; Bronchial Asthma 84% - previous research 83%.

b) Relationship between illness conditions and the dominant quality

Hypertension:

Of the 521 patients, 438 (84%), highlighted that the **quality of moistness is a dominant quality** associated with **Essential Hypertension**.

Type 2 Diabetes:

Of the 416 diabetic patients, 374 (90%), highlighted that the **quality of moistness is a dominant quality** associated with **Type 2 Diabetes**.

Bronchial Asthma:

Of the 432 patients, 344 (80%), highlighted that the **quality of moistness is a dominant quality** associated with **phlegm related Bronchial Asthma**.

HIV & AIDS without TB:

Of the 401 patients, 316 (79%), highlighted that **moistness is the dominant quality** associated with **HIV & AIDS without TB**.

HIV & AIDS with TB:

Of the 381 patients, 262 (69%), are associated with heat – the overall **results do indicate that heat is a dominant quality**.

3RD Research Project: Treatment of Humoral Imbalance at a Cellular/Sub-Cellular Level

The research entitled "Treatment of Humoral Imbalance at a Cellular/Sub-cellular level" was conducted during May 2015 – September 2016 by 9 researchers on 100 patients at the Institute's Treatment Centres in Cape Town. Whilst the complete research is available on the Institute's website (<https://www.tibb.co.za/wp-content/uploads/2022/04/Treatment-of-humoral-Imbalances-at-a-cellular-sub-cellular-level.pdf>) a summary of the research in relation to the research questions is listed below.

In the research 55 (55%) patients were successfully treated with only the herbal infusions, aimed at restoring humoral imbalances at a cellular/sub-cellular level¹⁹.

Also, noted in the results is that 56 out of 78, (72%) of the patients over the age of 40 presented with a Melancholic (Cold & Dry) imbalance.

4TH Research Project: To Validate Whether the Excess/Abnormal Melancholic Humour is the Cause of Chronic Conditions

Based on one of the results from the previous research that (72%) of the patients over the age of 40 presented with a Melancholic (Cold & Dry) imbalance, the Institute conducted further research to validate whether excess/abnormal Melancholic humour could well be the primary cause of chronic illness conditions. The research entitled: "Is the Excess/Abnormal Melancholic Humour the cause of Chronic Conditions?" was conducted at the Tibb Treatment Centres in Cape Town by 7 researchers on 1000 patients during July and November 2018 (<https://www.tibb.co.za/wp-content/uploads/2020/08/IS-EXCESS-ABNORMAL-MELANCHOLIC-HUMOUR-THE-CAUSE-OF.pdf>).

The results of the research highlighted a steady increase of chronic + chronic/acute conditions with patients in the different age groups with a Melancholic imbalance from 0% to 100% in the groups over the age of 70, whereas there was a decline of acute conditions associated with the Melancholic humour from 100% to 0%. This confirmed that the Melancholic imbalance, with respect to chronic conditions, increases with age. More significantly, it was interesting to note that whilst there is a gradual increase in chronic patients with a Melancholic imbalance from 0-100%, there is a noticeable percentage increase of 38% (56% - 18%) in patients between the age of 40-49 compared to the other age groups of only 3% between the age groups of 20-29 (15%) and 30-39 (18%). This highlights that whilst there is a gradual weakening of physis over an individual's life span, the effectiveness of physis in the restoration of homeostasis is gradually compromised from the age of 40 onwards. This is understandable as death is inevitable¹⁹.

The research indicated that most chronic illness conditions are associated with an excess/abnormal Melancholic humour, confirming that this may well be the cause/s of chronic conditions.

5TH Research Project: Role of Lifestyle Factors in the Management of Patients with Hiv & Aids, Type 2 Diabetes, Hypertension

The above research was conducted in 2005, over a period of 4-months, by 17 PGD-UT students on 185 patients at UWC is available on the Institute website (<https://www.tibb.co.za/wp-content/uploads/Comb-Eval-Rep-HIV-HTN-DIAB.-2005.pdf>). The research included 72 HIV and Aids patients; 55 type 2 diabetic patients; and 58 hypertensive patients. All patients were considered stable and receiving either allopathic or herbal medication throughout the study period. The main clinical endpoint, the Quality-of-Life index based on 15 subjective parameters obtained by face-to-face interview was adopted.

Aims and Objectives

The primary objective was to ascertain whether the Six Lifestyle Factors can have a positive influence on patients with one of the above disorders, as reflected by changes in their Quality-of-Life indicators. The secondary objectives include, assessing the clinical effect of lifestyle factors in terms of changes in clinical parameters relevant to the disorder, and also whether there was a reduction of the medication in the management of the conditions in some patients.

The positive result from the above research of lifestyle changes in illness management, prompted the Institute to further research and validate not only the **role of lifestyle factors in illness management** but also in **health promotion**, based on an individual's dominant/sub-dominant temperamental combinations and associated dominant quality.

6TH Research Project: Impact of Tibb Lifestyle Factors in Health Promotion and Illness Management

The research on the role of lifestyle factors in health promotion and illness management was conducted in 2018 by Clinic Health Promoters and Community Healthcare Workers, in 23 clinics in one of the seven regions in the City of Johannesburg, who were trained as Tibb Lifestyle Advisors (<https://www.tibb.co.za/wp-content/uploads/Impact-of-Tibb-LF-in-HP-and-M.pdf>).

Aims and Objectives

The primary objective of the research was to validate the impact of the lifestyle factors on 120 ‘well’ individuals (mostly below the age of 40) in a health promotion group, and 480 patients (mostly above the age of 40) with pre-diagnosed, chronic conditions, in an illness management group, over a 1-year period as reflected by changes in Quality of Life (QoL) parameters for the two different groups, after designing Individualised Health Care Plans based on the Six Lifestyle Factors.

The Individualised Care Plan for the health promotion group was tailored according to the dominant quality associated with the participant’s temperament. The plan advised lifestyle factors with opposite qualities to that of the patient’s temperament and discouraged lifestyle factors with the same qualities. Similarly, the illness management group, lifestyle advice with qualities opposite to the qualities associated with sign and symptoms/illness conditions was advised.

The results clearly demonstrated the value of the Six Lifestyle Factors in Health Promotion and Illness Management. The Tibb philosophical principles of temperament and qualities, both in relation to the dominant quality associated with an individual’s temperament as well as the qualities associated with the signs and symptoms of various illness conditions, allowed for an individualised approach in the application of lifestyle factors²⁰.

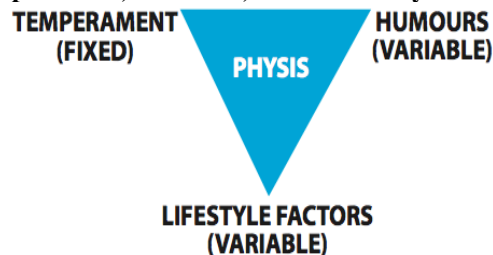
Institute’s Contribution to the Concept of Physis

Whilst the concept of physis may have been known for many centuries, it was Hippocrates who emphasised its importance, under the name of “Vis Medicatrix Naturae”, the body’s ability to maintain and restore homeostasis^{21,22,23}.

The Institute’s contribution to the concept of physis was highlighted in the research on the Melancholic humour wherein it is stated, “that the weakening of physis begins from the age of 40 onwards” during an individual’s lifespan²⁴.

In addition to the Institute’s above-mentioned findings with respect to the role of physis during an individual’s lifespan, the relationship between Temperament, Humours, Six Lifestyle Factors, and Physis, was also identified as described below.

Relationship between Physis, Temperament, Humours, and the Lifestyle Factors



The scheme (above) illustrates the constant interplay between temperament, humours, lifestyle factors and physis. Although an individual’s temperament is fixed, humours fluctuate constantly as a result of the qualitative effect from the lifestyle factors, especially diet. This dynamic relationship influences the humoral balance quantitatively and qualitatively, especially in relation to an individual’s temperament – with Physis constantly striving to restore homeostasis. The inability of Physis to restore homeostasis inevitably leads to pathological processes and clinical disorders¹⁶.

7TH Research Project: Review of the Relationship Between Temperament and Qualities in the Predisposition to Illness Conditions

The above research project was to not only validate the importance of the relationship between temperament and qualities in the predisposition to illness conditions, within the context of aetiology, pathology, diagnosis, and treatment, but also investigate how the signs and symptoms of illness condition vary in relation to an individual’s temperamental dominant quality²⁵.

The research was conducted over a period of six months by six (6) registered Unani-Tibb Doctors at the Institute’s clinic in Cape Town, in 2019. A total of five hundred (500) patients, aged between 8 and 84 were included in the

research (<https://www.tibb.co.za/wp-content/uploads/Review-of-the-relationship-between-Temperament-and-Qualities.pdf>).

The aim of this study was to validate the relationship between an individual's dominant temperamental quality in relation to qualities associated with illness conditions, as an indicator to the predisposition to illness/es. The results confirmed the hypothesis that an increase in the dominant quality associated with an individual's temperament will lead to illness condition/s having similar quality/ies. There was also a definite gradient between the dominant quality of the patient's temperamental combination, with respect to acute and chronic conditions, where acute conditions were higher in children and young adults, whereas chronic conditions increased with age. The results also highlighted a substantial increase in illness conditions, especially chronic after the age of 40 because of the weakening of physis, the body's self-healing mechanism. Significantly, the research also highlighted the role of the Six Lifestyle Factors as being the cause/s, of both health and disease, and the Tibb philosophical principles within the context of aetiology, pathology, diagnosis, and treatment.

Significance of the positive research results

Whilst the above research validated the importance of the relationship between temperament and qualities in the predisposition to illness conditions, the significance of this research, together with the Institute's other research projects, highlights the Institute's Contribution to the Medicine of Hippocrates, Galen, and Ibn Sina within the context of aetiology, pathology, diagnosis, and treatment as mentioned below.

Aetiology within the context of Health Promotion and Illness Prevention

Institute's research projects confirm that whilst an individual's predisposition of illness conditions is linked to an individual's dominant quality, management of lifestyle factors that will not increase the dominant quality will most certainly prevent illness conditions, especially in individuals below the age of 40. The research also highlights that whilst poor management of the Six Lifestyle Factors are directly linked to the cause/s of illness conditions, however, well managed lifestyle factors can also be the 'cause/s' of health promotion/illness prevention especially in young individuals.

Pathology and Diagnosis

The significance of the above research in pathology and diagnosis confirms an accurate diagnosis of illness condition/s. In addition, the Institute's contribution to the humoral theory highlights the importance of identifying excess/abnormal humours for a better understanding of pathological processes and diagnosis of illness conditions.

Treatment

The quality/ies associated with medication and lifestyle factors should be opposite to the dominant quality associated with the illness condition. Also, the inclusion of medication aimed at restoring humoral imbalances will most certainly address the cause/s of the illness conditions at a cellular/sub-cellular level and be cost effective.

Whilst the summary of the above provides information into the significance of the Institute's contribution to the philosophical principles of temperament, humours, and lifestyle factors within the context of aetiology, pathology, diagnosis, and treatment, the effectivity of physis to maintain and restore health, has always been an important consideration in this system of medicine.

Summary and Concluding Comments on the Institute's Contribution to the Medicine of Hippocrates, Galen, and Ibn Sina

The summary of the Institute's contribution to this system of medicine, is based on the concerns that were identified in the Introduction of this paper. These concerns included the terminology of the humours, in relation to the terminology of temperament, as well as the limited information of identifying an individual's temperament with respect to the predisposition of illness conditions. More significantly there was no link between temperament, humours, and lifestyle factors. The research projects conducted over the past twenty-years have addressed the above concerns by a) being aware of the link between humours and temperament, the same terminology was used for both temperament and humours; b) the Institute's identification of an individual's temperament being a combination of a dominant and a sub-dominant temperament with a dominant quality, not only provided insights into the predisposition of illness conditions, but also identified the relationship between temperament, humours, and lifestyle factors associated with an individual's dominant quality. In addition, the Institute also contributed to the principle of physis with respect to the weakening of physis from the age of 40 onwards.

The Institute's contribution to the Medicine of Hippocrates, Galen, and Ibn Sina in a typical Western-medicine dominant environment, ultimately resulted in expanding on the philosophical principles of physis, temperament, humours, lifestyle factors and more significantly, identifying the link between these principles within the context of aetiology, pathology, diagnosis, and treatment.

For information purposes, the Institute's current research is to validate this link. The research project includes fifty case studies on diagnosis and treatment with the following research objectives:

1. To assess whether the presenting signs and symptoms/illness condition/s provide insights into the cause/s in relation to poor management of Lifestyle Factors (Aetiology/Causes).
2. To assess whether the link between the dominant quality of an individual's temperament in relation to the presenting signs and symptoms/illness condition/s is indicative of an individual's predisposition to illness/es (Aetiology).
3. To assess whether the presenting signs and symptoms/illness condition/s are indicative of qualitative and/or excess/abnormal humoral imbalances (Pathology/Diagnosis).
4. To assess the outcomes of the holistic approach of assisting physis in treatment – categorized as: Successful, Partly Successful/Unsuccessful (Treatment).

Finally, it needs to be emphasized that the outcomes of the research have been included in the Institute's reference textbook for the training of Tibb doctors entitled: "Theoretical Principles of Tibb" and in the Institute's training Modules at both, a 1-year Postgraduate Diploma (PGD) – for medical doctors, and a 5-year Undergraduate Degree.

References

1. Dr Fateh Ali Tipo, D. B. (2019). Understanding concept of Tabiat (Physis) in the view of Unani physicians: A literature review. *International Journal of Research and Analytical Reviews*, 265-268.
2. Jabin, F. (2011). A Guiding Tool in Unani Tibb for Maintenance and Preservation of Health: A Review Study. *Afr J Tradit Complement Altern Med.*, 140-143.
3. Konstantinos Kalachanis, I. E. (2015). The Hippocratic View on Humors and Human Temperament. *European Journal of Social Behaviour*, 1-5.
4. Tatjana Lazarevic, Z. K. (2021, May). Medicine in the Hippocratic and Post-Hippocratic Age. *Vojnosanitetski preglod*, pp. 1-19. doi:<https://doi.org/10.2298/VSP210325057L>
5. Jesper Dammeyer, I. Z. (2018). A Bried Historical overview on links between personality and health. *Personality and Disease*.
6. Sheehan, H. E. (2002). Unani Tibb: History, Theory, and Contemporary Practice in South Asia. *The Annals of the American Academy of Political and Social Science*, 122-135.
7. Jouanna, J. (n.d.). The Legacy of the Hippocratci Treatise the Nature of man: The theory of the Four humours. In J. Joanna, *Greek Medicine from Hippocrates to Galen*. Brill.
8. Emtiazy, R. C. (2015). The Concept of Lifestyle Factors, Based on the Teaching of Avicenna (Ibn Sina). *International Journal of Preventative Medicine* .
9. Renger F. Witkamp, K. v. (2018). Let thy food be thy medicine... when possible. *European Journal of Phamacology* , 102-114.
10. Hussain, D. M. (2019). Concept of temperament in Unani system of medicine: A review. *The Pharma Innovation*, 7-11.
11. Eleni Tsiompanou, S. G. (2013). Hippocrates: timeless still. *Journal of the Royal Society of Medicine*, 288-292.
12. Sebers, R. (2016). What's Your Temperament: the Humoral Theory's Influence on Medicine in Ancient Greece. *Young historianS conference* , (pp. 1-13). Portland state.
13. Litauer, F. (1986). *Your Personality Tree*. USA: W Publishing Group.
14. Bhikha, R. Saville, J. (2014). *Healing with Tibb*. Ibn Sina Institute of Tibb, South Africa.
15. Miraj S., et al. (2016). Scientific correlation between dystemperament in Unani medicine and diseases: a systematic review. *Electronic Physician*, 3240-3247.
16. Bhikha R (2018). *Theoretical Principles of Tibb*. Ibn Sina Institute of Tibb, Roodepoort, South Africa.
17. Bhikha, R., Manxiwa, F., et.al. (2006). Correspondence of Qualities and Temperament in groups of patients suffering from Hypertension, Type 2 Diabetes, Bronchial Asthma, HIV & AIDS. 1-38.
18. Bhikha, R., & Glynn, J. (2017). Treatment of Humoral Imbalances at a Cellular/Sub-Cellular Level. *International Journal of Recent Scientific Research*, 19321-19323.
19. Bhikha, R., & Dube, A. (2018). Impact of Tibb lifestyle factors In health Promotion and Illness Management. *International Journal of Recent Scientific Research*, 27914-27918.

20. Christos F. Kleisiaris, C. S. (2014). Health care practices in ancient Greece: The Hippocratic ideal. *Journal of Medical Ethics and History of Medicine*, 1-5.
21. Last, J. M. (2007). *A dictionary of Public Health*. Oxford University Press.
22. Alan C Logan, E. M. (2012). *Vis Medicatrix naturae: does nature “minister to the mind”?* *BioPsychoSocial Medicine*, 1-10.
23. Cousins, N. (2005). *Anatomy of an Illness as Perceived by the Patient*, WW Norton, New York, USA. (Albert Schweitzer).
24. Bhikha, R., & Abrahams, Y. (2019). Is Excess/Abnormal Melancholic Humour the Cause of Chronic Conditions. *International Journal of Recent Scientific Research*, 34170-34174.
25. Bhikha, R., & et.al., (2020). Review of the Relationship between Temperament and Qualities in the Predisposition to Illness Conditions. *International Journal of Innovative Studies in Medical Sciences (IJISMS)*, 9-16.