RESEARCH PROJECT CONDUCTED AT
THE UNIVERSITY OF WESTERN CAPE

CORRESPONDENCE OF QUALITIES & TEMPERAMENT IN GROUPS OF PATIENTS SUFFERING FROM

HYPERTENSION, TYPE 2 DIABETES, BRONCHIAL ASTHMA, HIV & AIDS

UNIVERSITY *of the*
WESTERN CAPE

TIBB
A SCIENCE OF MEDICINE
THE ART OF CARE

Evaluation Report:

Pilot Research Project undertaken by Unani-Tibb Diploma Students on the correspondence of qualities and temperament in groups of patients suffering from common diseases such as hypertension, type 2 diabetes, bronchial asthma, and HIV and Aids in South African rural and urban clinical settings.

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Keywords: Unani-Tibb; patients; qualities; temperament; hypertension; type 2 diabetes; bronchial asthma; HIV & Aids

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Executive summary

Introduction. A mandatory requirement for the award of the University of the Western Cape Diploma in Unani-Tibb is the satisfactory completion of a research project on the treatment of patients with a specific disorder according to Unani-Tibb principles.

In this report, the relationship between the qualities characterising a particular chronic clinical disorder and the patient's temperament was assessed in a substantial number of patients who are suffering from hypertension, or type 2 diabetes, or bronchial asthma, or HIV and Aids, both with or without co-existing tuberculosis (TB). This report extends an earlier study, which assessed the effect of governing (lifestyle) factors (a central tenet of Unani-Tibb therapy), on the clinical course of patients with HIV and Aids in a real-life clinical context, as reflected by changes in their CD_4 counts and quality of life parameters, and whether this treatment allowed a reduction in orthodox medication.

Methodology. Twenty-seven student investigators were involved in this study. A total of 2151 patients were involved, suffering from clinically proven essential hypertension (521 pats), type 2 diabetes (416), bronchial asthma (432), and HIV and Aids with (381) or without (401) co-existing tuberculosis.

Qualitative analysis. The qualitative frames for the disorders under study were obtained from the standard Unani-Tibb texts. Each specific disorder was allocated to one of the six qualitative frames. Likewise, the qualities characteristic for each disorder were recorded from the literature.

Results. For patients with hypertension, type 2 diabetes and bronchial asthma, there was a very good correspondence between patient temperament, qualities and the specific clinical disorder affecting them. In hypertensive patients, those with a dominant or sub-dominant sanguinous temperament are markedly predisposed to developing volume-related essential hypertension. Support for the Unani-Tibb principle that hypertension can be allocated to the hot and moist frame was forthcoming, as the qualities of heat and moistness are responsible for increasing the blood volume, a process which is associated with the signs and symptoms of hypertension. Similarly, in diabetic patients, those with a dominant or sub-dominant sanguinous temperament are evidently predisposed to developing type 2 diabetes. The results also support the Unani-Tibb hypothesis that type 2 diabetes can be allocated to the hot and moist frame. Asthmatic patients with a dominant or sub-dominant phlegmatic temperament are predisposed to developing phlegm-related symptoms. In addition, persons with a dominant phlegmatic and sub-dominant sanguinous are more at risk than patients with other temperamental profiles. The results indicate that phlegm-related asthma is associated with the moist frames.

In patients with HIV and Aids, the results were less defined. Overall, the results of the temperamental evaluation indicate that patients with a dominant or sub-dominant phlegmatic temperament are predisposed to developing HIV and Aids without concomitant TB, whilst patients with a dominant or sub-dominant bilious temperament are predisposed to HIV and Aids with TB. There were, however, a number of anomalous results indicating that the temperamental evaluations of the HIV and Aids

patients generally and more specifically those with TB, is perhaps a difficult exercise and cannot be accurately ascertained.

The results on the qualitative frames indicated that a reasonable number of patients of HIV and Aids patients diagnosed without TB are associated with the cold and moist qualitative frame and those with TB with the hot and dry qualitative frame. However, these results were not conclusive as in the other conditions, as the percentage of patients in the other qualitative frames were also higher then expected. This could be explained by the 'wasting effect' associated with HIV and Aids patients, which results in patients whose initial symptoms beginning in one frame deteriorating towards other frames.

Conclusion. Overall, concordance between Unani-Tibb diagnostic theory and practice in the chronic diseases of lifestyle – hypertension, type 2 diabetes and bronchial asthma – was good to excellent. In patients with the chronic clinical disorder's hypertension, type 2 diabetes and phlegm related bronchial asthma, there was a good correspondence between the patients' temperament, the qualities associated with the specific disorder affecting them, and their predisposition to the disorder. A similar, although less firm, relationship was detected between a patient's temperament, his or her qualities, and predisposition to HIV and Aids (with or without co-existing TB). The reason for these deviances from Unani-Tibb basic principles of diagnosis is discussed.

1. Introduction

Hippocrates, the ancient medical philosopher, reputedly said that “it is better to know what type of person has a disease, than to know what type of disease a person has”. In Unani-Tibb, the concept of ‘knowing the type of person’ is embodied within the scope of the person’s temperament. This is described as a combination of the individual’s physical, psychological and emotional attributes. According to Unani-Tibb, people can be classified into four basic temperamental types; namely, sanguinous, phlegmatic, melancholic and bilious. In turn, each of these basic temperaments is characterised by the possession of a certain combination of qualities; namely, heat, coldness, moistness and dryness (Bhikha and Haq, 2000).

Identifying a person’s temperament is important, because it provides valuable insights into the individual’s predisposition to certain illnesses. This has been indicated in pilot research projects that were undertaken by students in 2003.

In a pilot study undertaken by DUTM postgraduate students in 2005, positive results emerged that lifestyle factors, such as improved diet, physical exercise and stress control can play an important part in improving the quality of life of patients with chronic illnesses such as HIV and Aids, type 2 diabetes and hypertension.

Although the initial results appear promising, they need to be confirmed on a somewhat larger scale. This application refers to a proposed study which will evaluate this relationship in greater depth. By assessing the strength of the relationship between a person’s temperament and the nature of his or her chronic illness, it should allow better lifestyle advice to be proffered, which will either delay the onset of the disorder, or diminish its impact when it does in fact arise.

Part of the study will also explore an aspect of Unani-Tibb philosophy which considers that specific diseases can be allocated to different ‘qualitative frames’ which differ in their quality profiles. All illnesses are considered to fall into one of six specific qualitative frames. For example, respiratory disorders such as colds and influenza are associated with excess qualities of coldness and moistness (Bhikha and Haq, 2000). This research project is a mandatory part of the UWC Postgraduate Diploma in Unani-Tibb and is introduced in order to assess the student’s understanding of the Unani-Tibb principles. It also serves as an important vehicle for conducting research in the Unani-Tibb sphere.

The Diploma in Unani-Tibb (Dip. UTM) is a 12-month elective programme which was introduced at the University of the Western Cape in 2003. Participants in the programme are qualified healthcare practitioners, and include conventional doctors, homeopaths, and clinical primary healthcare nurses.

Structure. The course is modular in format. It consists of six modules on the theory and philosophy of Unani-Tibb, followed by five modules on its practical application to a wide range of commonly encountered clinical situations. Of more relevance to this report, however, is that the twelfth, and final, module relates to a specific ‘mini-research’ project carried out by each participant.

2. Aims and objectives of the research project

The aim of the research project is to test the Unani-Tibb hypothesis that there is a predisposition of people with certain temperaments to specific chronic disorders, and that these disorders can be allocated to specific qualitative frames. This prospective study will assess the temperament of a number of patients recruited by the researchers who present with one of five chronic disorders and relate these to specific qualitative frames.

These patients will remain on their existing orthodox or complementary (such as Unani-Tibb) treatment whilst taking part in this study.

The specific objectives of this research project are to:

- To assess accurately the patient's dominant and sub-dominant temperaments by application of the established Unani-Tibb methodology
- To diagnose accurately a patient's clinical disorder according to orthodox and Unani-Tibb with respect to signs, symptoms and specific clinical parameters.
- To allocate the patients' clinical disorders to the specific Unani-Tibb qualitative frames
- The patients involved in this research project will be confirmed as suffering from the following clinical disorders:

  Essential hypertension (mild to moderate in severity)

  In Unani-Tibb practice, sanguinous hypertension belongs to the *Hot and Moist* qualitative frame

  Diabetes mellitus (type 2)

  In Unani-Tibb this disorder is of sanguinous - phlegmatic origin, associated with the *Hot and Moist*, to *Moist and Hot* qualitative frames.

  Breathing disorders (phlegmatic)

  In Unani-Tibb lower respiratory disorders exhibiting signs and symptoms associated with excessive phlegm (in Unani-Tibb, *Al rubwo*) are associated with *Cold and Moist* qualitative frames.

  HIV and Aids (without co-existing TB)

  In Unani-Tibb, this condition, featuring *phlegmatic* symptoms (vomiting, thrush and diarrhoea), belongs to the *Cold and Moist* qualitative frame.

  HIV and Aids, (with co-existing TB)

  In Unani-Tibb, this condition, featuring *bilious* symptoms (inflammation, tuberculosis and meningitis), belongs to the *Hot and Dry* qualitative frame.

3. Literature review

3.1. Outline of Unani-Tibb

3.1.1. Introduction

Unani-Tibb is a comprehensive healing system which has its roots in early Greek, Arabic and Western medicine (Azmi, 1995). It is a humanistic and holistic approach to health and illness, which recognises the physical, mental, emotional and spiritual contributions to health (Bhikha and Mohammed, 2004). The philosophy of Unani-Tibb is based upon concepts related to healthcare; the main ones from the perspective of this Report are physis, humours, temperament and the governing (lifestyle) factors. These concepts allow for the comprehensive understanding of aetiology, pathology, diagnosis and therapeutics in Tibb medicine (Bhikha and Haq, 2000).

Physis is the body's innate drive and capacity to preserve health and where necessary self-heal any ailment. (Chishti, 1991). This concept is not unique to Unani-Tibb but exists in a number of traditional and complementary health systems (Weil, 1997). In effect, treatment with Unani-Tibb in disorders such as HIV and Aids is aimed at bolstering the patient's innate capacity for self-healing, by supporting the myriad of mechanisms, such as the immune system, which assist the patient's body in counteracting the hostile outer environment and rectifying unwanted disturbances to inner harmony.

Humours. In Unani-Tibb, the humours are the primary fluids which are manufactured by the liver from the food and drink we consume (Bakhtiar, 1999). Every level of organisation in the body – sub-cellular organelles, cells, tissues and organs – is infused with, and interconnected by, the humours. A proper balance of humours within a person's body ensures efficient metabolism, prevents the build-up of toxins, and maintains optimum health. They give rise to all components within the body. Humoral imbalance is often the root cause in the origin and development of a particular illness. They have three main functions in the body: (a) to maintain the temperamental balance; (b) to provide nutrition for the maintenance of the body's structure; and (c) provide the energy requirements for the body's various activities (Bhikha and Haq, 2000). The humoral theory is consistent with the concept of the four elements – *air, earth, water* and *fire* – and with the concept of four qualities – *moistness, dryness, cold* and *heat*. There are four humours: Blood, which corresponds to the *sanguinous humour);* phlegm (*phlegmatic humour);* yellow bile (*bilious humour*); and black bile (*melancholic humour*).

Temperament. This concept defines the uniqueness of a person (Rolfe, 2002). It is a collective measure of a person's physical constitution and psychological profile, or personality. This concept has endured from its origin centuries ago, and is still applied, with suitable modifications in many medical and scientific spheres (Azmi, 1995). The Tibb concept of temperament and its predisposition to specific illnesses is based on the qualities associated with the temperament of the individual. Unani-Tibb applies this concept not only to the patient being treated, but to the disorder affecting him or her, and even to the type of medication or activity recommended as therapy. Unani-Tibb affirms that each patient should be treated individually (Bhikha and Haq, 2000).

Governing (lifestyle) factors. These are lifestyle and environmental factors which collectively influence a person's state of health and his or her progress towards disease (Bakhtiar, 1999). There are six main ones which have direct relevance to Unani-Tibb therapy – (1) atmospheric air and breathing; (2) the person's diet and eating practice; (3) bodily movement and rest; (4) sleep and wakefulness; (5) the emotional state; and (60 the toxin elimination processes. Each of these factors is involved to varying degrees in the Unani-Tibb health maintenance and therapeutic regimens.

Unani-Tibb therapy. Treatment of chronic ailments is carried out by way of four approaches (Bhikha and Haq, 2000):

(1) Dietotherapy according to the patient's temperament and the nature of the ailment (Vallee and Bhikha, 2003).

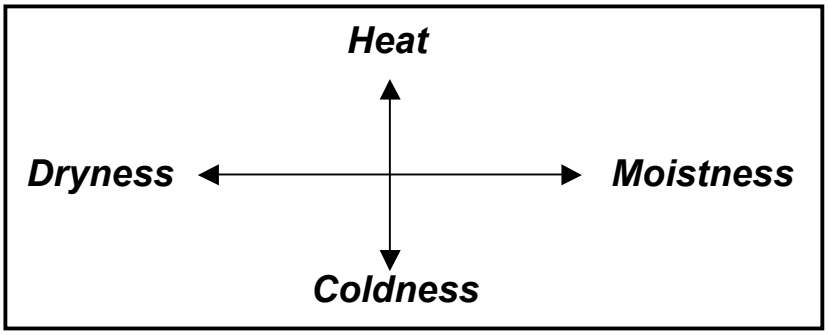
(2) Pharmacotherapy – that is, treatment with one or more of a range of herbal products.

(3) Regimental therapy, which includes a number of therapeutic interventions, such as purging, cupping, diuresis and fasting; and

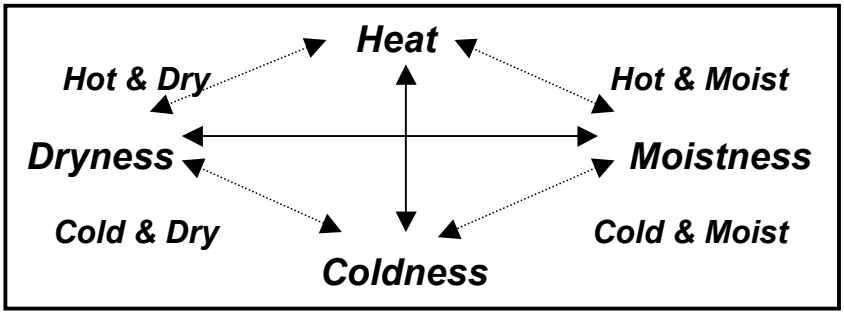
(4) Advice and application of changes to the patients governing (lifestyle) factors.

3.1.2. Qualities and qualitative frames.

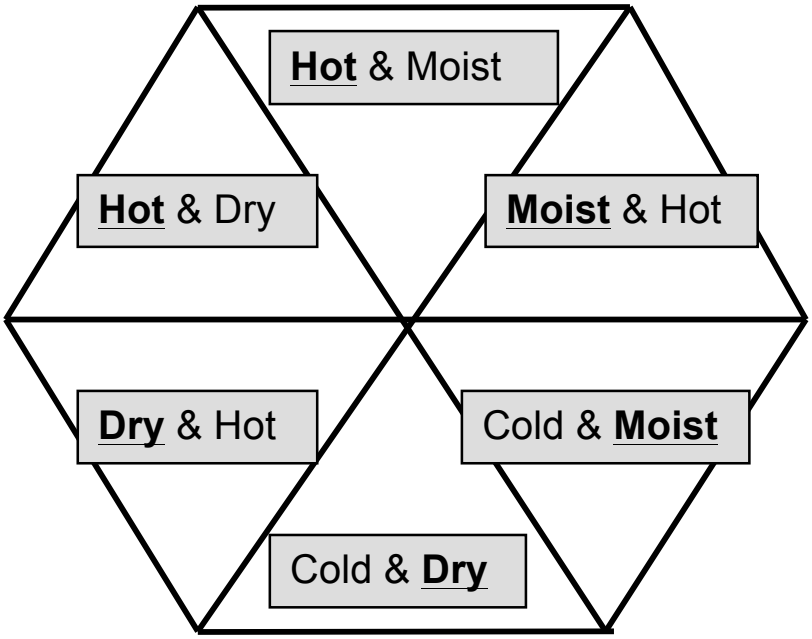
Qualities. A quality is a distinctive attribute or property which confers individuality (Bhikha and Haq, 2000). In Tibb the qualities selected as being relevant to the health and illness scenario are: Heat, Coldness, Moistness, and Dryness. The interaction or relationship between the qualities is shown below:



The qualities can be combined into pairs if they are positioned next to each other, as in *Diagram 1* below. For example, the quality of Heat can be combined with that of Dryness, and Heat with Moistness, but not the qualities of Heat and Coldness. As a general rule, opposing qualities cannot be combined.



Qualitative frames. The various qualitative combinations are related to one another in a scheme of six basic combinations. This is based on extensive experience, and observation of the various cycles in nature, such as the day-night cycle and the seasonal cycle. The relationship is shown below:



Of the above six frames, the Moist and Hot, plus the Cold and Moist frames have a dominance of *moistness;* the Cold and Dry, plus the Dry and Hot frames have a dominance of *dryness;* and the Hot and Dry, plus the Hot and Moist frames have a dominance of *heat*.

According to Tibb all clinical disorders can be allocated to one or two of the six qualitative frames. This will be elaborated on below.

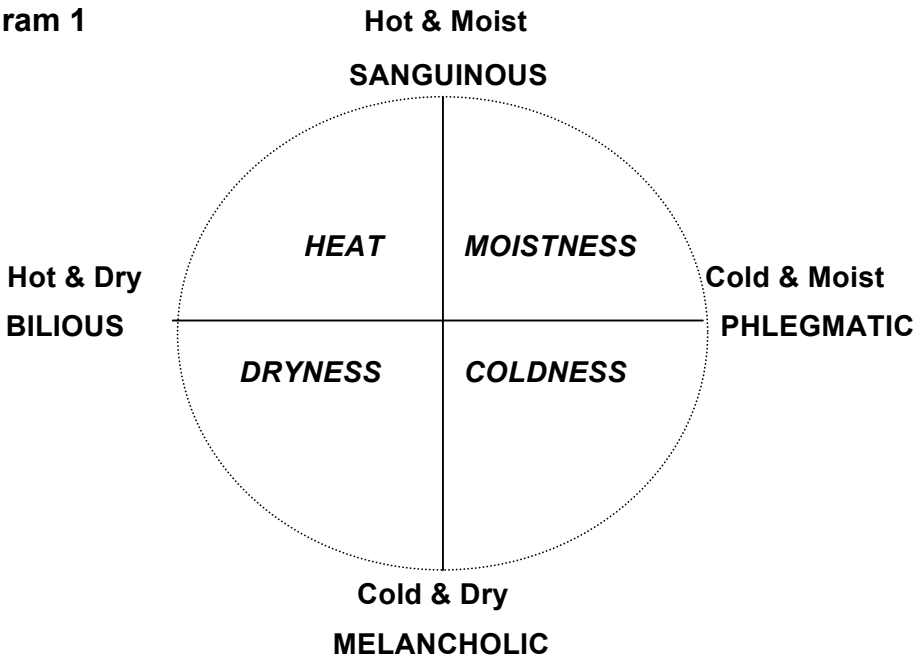
3.1.3. Clinical disorders and qualities

Just as different temperamental types are associated with different qualities, so the different clinical disorders are characterised by the possession of different qualities. These qualities are interpreted from the signs and symptoms associated with the particular disorder. For example, the signs and symptoms of a cold in winter are associated with a runny nose and phlegm-related, productive cough, and are allocated to the cold and moist frame. Similarly, osteoporosis is allocated to the Cold and Dry frames and heat related inflammation to the Hot and Dry frame.

3.1.4. Relationship between temperament, qualities and predisposition to clinical disorders

Unani-Tibb classifies individuals into four basic temperamental types with corresponding qualities. These are: sanguinous with qualities of hot and moist, phlegmatic with qualities of cold and moist, melancholic with qualities of cold and dry and bilious with qualities of hot and dry (*as in Diagram 1)*

Diagram 1



Each individual will have a dominance of one particular temperament, and a sub-dominance of a second temperament. This latter has to be adjacent to his dominant temperament. In the above diagram a person with a dominant sanguinous temperament can either have subdominance of either phlegmatic or bilious, but not of its opposite, melancholic, temperament.

3.1.5. The relationship between temperament and the quality associated with it

The dominant *quality* associated with an individual is determined from the combination of the dominant and sub-dominant temperament. In the diagram above, a person with a dominant sanguinous and sub-dominant phlegmatic temperament will have a dominant quality of *moistness*, as this is the common quality between the two temperaments (hot and *moist*, cold and *moist*). Similarly, a person with a dominant sanguinous and sub-dominant bilious will have a dominant quality of *heat* associated with his/her temperament.

This dominant quality associated with an individual's temperament is indicative of his or her predisposition towards disorders that are associated with the same quality of the temperament. For example, a person with a dominant sanguinous temperament combined with a sub-dominant phlegmatic temperament, will be predisposed to clinical disorders where moistness is the dominant quality of the disorder.

3.2. Review of the clinical disorders investigated

This review of the clinical disorders investigated in the research project will provide a brief summary of the disorders from the orthodox (or allopathic) medical perspective and elaborate on the Unani-Tibb perspective of these disorders.

Generally speaking, orthodox medicine attaches extensive importance to the role of signs and symptoms in the diagnosis of clinical disorders such as hypertension and diabetes. The signs include physical parameters, such as blood pressure, forced expiratory volume, and blood sugar levels. The

symptoms include nose bleeds, headache, breathlessness and weakness. Unani-Tibb accepts the importance of such signs and symptoms in arriving at an accurate diagnosis. However, it does include in its diagnosis of a disease a reference to underlying changes in qualities and humours, plus a reference to the patient's temperament.

3.2.1. Hypertension

- In orthodox medicine, hypertension is defined in terms of physical blood pressure readings. As far as aetiology is concerned, hypertension arises either from an increase in total peripheral resistance, or from an increase in blood volume. The reason(s) for changes in these two parameters are rarely if ever proffered. The disorder is therefore defined in terms of signs and symptoms, and no real effort made to describe the underlying changes which precede and aggravate the disorder. This paradigm differs from that of Unani-Tibb, which explains the abnormal rise in blood pressure in terms of changes to the affected person's qualities and humours, and his or her temperament.
- In Unani-Tibb, there are two main types of hypertension:

Hypertension due to an imbalance in the hot and moist qualities

- This is the most common imbalance found in hypertensive people. Those who have a dominant or sub-dominant *sanguinous* temperament are at greatest risk. The imbalance in this type of hypertension shows up as an increase in the volume of blood circulating within the body.
- This form of hypertension results from the person consuming excessive amounts of hot & moist foods which will increase the sanguinous humour, as well as incorrect management of other Governing Factors. This leads to an excess of hot and moist qualities.
- This form of hypertension is also known as *essential* hypertension, the focus of the study.

Hypertension due to an imbalance in the Cold and Dry qualities

- This type of hypertension is usually found in those who have a *melancholic* dominant or sub-dominant temperament. It arises from a person having a melancholic (cold and dry) imbalance in the vascular system.
- The elevated blood pressure is due mainly to the person consuming too food, which is predominantly cold and dry, resulting in an increase of the melancholic humour, as well as increasing the cold and dry qualities from persistent abuse of the Governing Factors.

3.2.2. Type 2 diabetes

- In orthodox medicine, type 2 diabetes is diagnosed by reference to blood glucose levels, which may be abnormally high for a person at a particular time related to food ingestion. The reasons for such abnormally high levels are rarely stated, apart from reference to obesity or the nature of food taken. This is in contrast to the situation with Unani-Tibb, where the disorder is diagnosed not only in terms of blood glucose levels, but also with reference to temperament and changes in the affected person's qualities and humours.

- According to Unani-Tibb, Type 2 diabetes is a hot and moist disorder arising from the accumulation of excess moisture in the body. This results in the metabolic processes in the body being 'turned down', so that less heat is formed. This becomes worse as the person gets older.
- Another aggravating factor is the consumption of predominantly moist foods, excessive weight gain and the lack of exercise. All of these factors contribute to a reduction in heat levels within the body.
- On the basis of this, Unani-Tibb predicts that persons who have a dominant or sub-dominant sanguinous temperament will be predisposed to develop Type 2 diabetes. In addition, those with a sanguinous/phlegmatic combination will be at even greater risk, as their temperament will have a qualitative imbalance, due to a build-up of moistness.
- Those people who have a bilious temperament (that is, hot and dry qualities) in either dominant or sub-dominant position will be at *less* risk of developing Type 2 diabetes, because excess moistness will be neutralised by the heat and dryness associated with the bilious temperament.

3.2.3. Bronchial asthma

- In orthodox medicine, bronchial asthma is an all-embracing term usually applied to all types of transient breathing disorders. It is characterised in terms of symptoms – dyspnoea, cough, fluid accumulation in the lung. The disorder is considered an inflammatory process of the bronchial tissue. The underlying reasons for the development of the condition are usually noted as allergy (extrinsic asthma) or in reaction to internal infection or hormonal changes (intrinsic asthma).
- In contrast, Unani-Tibb classifies breathing disorders into three different categories (a) associated with excessive phlegmatic humour (accumulation of phlegm in the alveoli); (b) associated with the melancholic humour (dried tight chest as in emphysema); and (c) associated with heat (allergic reaction). This study is related predominantly to phlegmatic breathing disorders.
- Phlegmatic bronchial asthma results from an accumulation of the phlegmatic humour due to an excessive intake of hot and moist and cold and moist foods, and from incorrect management of the other governing factors.
- In this type of asthma, breathing difficulties arise because of the accumulation of phlegmatic humour. Insipid, thin or thick, sweet phlegm is produced, and this accumulation causes the problem. This is mostly associated with the Moist and Hot or Cold and Moist frames.

3.2.4. HIV and Aids (with and without TB)

- As we are all aware, the cause of HIV and Aids remains controversial. There are two main camps in this debate. There is the mainstream view of scientists who support the 'virus-origin' theory, where HIV and Aids is regarded as largely a sexually transmitted viral disease, resulting in a number of signs and symptoms which relate to a progressively compromised immune system. Alternatively, there is the view of the so-called 'AIDS dissidents' who support environmental factors such as poverty and poor diet. The latter group regards the viral origin of Aids as being coincidental; claiming that the virus observed in infected people's body fluids has not been

categorically or conclusively shown to be responsible for the signs and symptoms of AIDS. Orthodox medicine does not consider to any significant extent the various negative influences on the patient's capacity for inner, self healing.

- According to Unani-Tibb, the person's temperament will to some extent determine the course of the disease, especially whether or not the person will go on to succumb to one or other opportunistic infection such as tuberculosis.
- The typical signs and symptoms associated with HIV and Aids (vomiting, diarrhoea, weight loss and thrush) are associated with *Cold* and *Moist qualities*, and with the phlegmatic temperament.
- People who are HIV-positive, and who have a dominant or sub-dominant *phlegmatic* temperament, are at greater risk of suffering from these symptoms.
- Conversely, people with a dominant or sub-dominant *bilious* temperament will be less likely to complain of these symptoms. These people are more likely to elicit the signs and symptoms typical of inflammatory illnesses, such as tuberculosis, swollen glands and lymphatic complaints. These are associated with the qualities *of Heat* and *Dryness*.

4. Research methods and instruments

4.1. Study design

This research project is a prospective observational study, with pooled data from multiple co-investigators.

4.2. Study sample

Patient numbers. The research project allowed each co-investigator (28 in total, listed below in section 4.5.) to evaluate one hundred (100) patients with one of the chronic clinical disorders listed above. Ideally, the researcher must include a minimum of 10 patients from each of the five disease categories referred to above. All patients must be stable on their existing conventional or complementary treatment before they are included in the study.

Patient recruitment. Recruitment was conducted either at Day Clinics or Anti-retroviral Clinics in the area, or at local HIV and Aids counselling sessions. Admission criteria were that patients selected were proven to have essential or primary hypertension, or Type 2 diabetes, or bronchial asthma, or were HIV-positive. The latter category of patients was further sub-divided into those with co-existing tuberculosis, and those without. All patients investigated were in a stable condition as a result of therapy with conventional or Unani-Tibb medication or were eliciting symptoms of HIV and Aids.

4.3. Measurements

Temperament analysis. This will be determined according to the standard Unani-Tibb method, which is based on a pre-set temperament evaluation form, direct inquiry and observation.

Clinical diagnosis. This will be determined according to standard Unani-Tibb and orthodox clinical practice. That is, the researchers will assess the patients' presenting signs and symptoms, with a clinical evaluation, possibly supported by the appropriate pathological testing, to confirm diagnosis.

The number of contacts to be made with the patient, and over what period of time, should be at the discretion of the student as long as meaningful outcomes are achieved.

Qualitative frame. The evaluation of the qualitative frame will be determined from an assessment of the qualities associated with signs and symptoms as well as by pulse and tongue diagnosis.

4.4. Timeframe for the study

The research project took place over a *four-month* period.

4.5. Investigator and project leader details

Principal researcher: Prof Rashid A Bhikha

Project leaders: Dr Flangeni Manxiwa, Dr Muhammed A Haq

Co-investigators: Damane, Sizeka Valerie; Dlamini, Cecilia Mokwamada; Dunjana Nyomeka; Jamjam, Nonyaniso Faith; Kefaladelis, Andreas; Landingwe, Junior; Machubne, Stella Tandiwe; Mapukata, Leonora Qalile; Markman, Ruth Sindiswa; Mini, Pamphilia ; Motwana, Elsa Nomhlope; Mphahlele, Pinky Gladys; Mtsi, Patience Nomakoszano; Mzembeta, Thenoria Nodumo; Mzuku, Sindiswa Wardrina; Nqoto, Dorcas Nomabadi; Ntshiba, Nomsa Cynthia; Panda Potwana, Primrose N; Qingana, Nomboniso C; Sihlahla, Lumkile Joseph; Tana, Vuyiswa Veronica; Wasa, Primrose Noxolo; Xongo, nomahlubi Cynthia; Zim, Nokwana Passover.

4.6. Ethics statement

This proposed study will involve the active and willing involvement of all participating patients. It will be conducted according to accepted ethical practice. This includes:

- A discussion with the patient on the value of the study
- Informed consent by the patient after reasonable explanation of his or her involvement in the study.
- An assurance to the patient of full confidentiality regarding his or her clinical condition, subsequent treatment and outcome information. The patient's name will not be included in the project text.
- The option to the patient to withdraw from any stage of the study without explanation. All patients will be aware that they are free to discontinue their active involvement in this study, without prejudice.
- An assurance that there will be no personal involvement of the participants that exposes them to physical or mental trauma.

Patient consent. Each patient enrolled into the study was informed of, and understood, the objectives, their involvement, and awareness of their possible discontinuation without prejudice. This agreement and consent by the patient was formalised by signature on an appropriate custom-drawn Consent Form.

5. Results and discussion

5.1. Hypertension

Temperament. The temperamental natures of the hypertensive patients, together with their respective percentages, are recorded in Table 1.

Temperamental combinations *(Dominant / Sub-dominant)*	**No. patients**	**Percentage**
Sanguinous / Phlegmatic	257	**49%**
Sanguinous / Bilious	78	**15%**
Phlegmatic / Sanguinous	94	**18%**
Bilious / Sanguinous	28	**5%**
Phlegmatic / Melancholic	10	**2%**
Bilious / Melancholic	14	**3%**
Melancholic / Bilious	26	**5%**
Melancholic / Phlegmatic	14	**3%**
TOTAL	**521**	**100%**

Table 1: The temperamental combinations of the hypertensive patients (Dominant / Sub-dominant)

From the above table, of the 521 hypertension patients, the patients with a dominant sanguinous temperament with sub-dominant temperaments of phlegmatic and bilious equals to 257 + 78 = 335. In addition, patients with sub-dominant sanguinous temperament having a dominant phlegmatic and bilious temperament are 94 + 28 = 122, totaling to 457 patients (335 + 122) equivalent to 457/521 = 88% of the patients with a dominant/sub-dominant sanguinous temperament are predisposed to developing Hypertension.

Discussion on the results of temperament

From the above results it is evident that persons with a dominant or sub-dominant sanguinous temperament (88% of patients in total) are predisposed to developing hypertension. From the 88% the dominant sanguinous temperamental types has a 64% chance of developing hypertension. It is also evident that persons with a dominant sanguinous and sub-dominant phlegmatic (49%) are more at risk then patients who are dominant sanguinous / sub-dominant bilious (15%) temperament. The greater risk associated with this temperamental combination (phlegmatic / sanguinous) is further confirmed if we add the combination of sanguinous – phlegmatic (49%) and phlegmatic / sanguinous (18%) totaling 67%. This is in keeping with the Unani-Tibb interpretation that patients with a sanguinous – phlegmatic combination will be more predisposed to hypertension because of the excessive quality of moistness associated with their temperament, (*as in diagram 1 page 10*), which causes volume-related essential hypertension.

It is noteworthy that the sanguinous / bilious temperamental combination is also reasonably high (15%). Unani-Tibb explains this phenomenon with the rationale that this temperamental combination

has an excess quality of heat, which is responsible for increasing the patient's blood volume. Therefore, patients with this temperamental type are also predisposed to hypertension.
The bilious dominance (that is, the bilious / sanguinous combination) shows a lower inclination towards hypertension with the bilious / melancholic combination becoming even less frequent. The lowest percentage of hypertension occurs in the temperamental combination phlegmatic / melancholic (2%) and melancholic / phlegmatic (3%). This is understandable, as these combinations are associated with cold and dry qualities, where there is minimal moistness and/or heat.
The above results confirm the Tibb hypothesis that persons with a sanguinous dominant and to a lesser extent sub-dominant sanguinous temperament are predisposed to developing volume related essential hypertension.
Qualities. The qualities associated with the hypertensive patients, with their respective percentages, are recorded in Table 2.

Qualitative Frame	**No. of pats.**	**Percentage**
Hot & Moist	368	**71%**
Moist & Hot	23	**4%**
Cold & Moist	47	**9%**
Hot & Dry	38	**7%**
Dry & Hot	7	**1%**
Cold & Dry	38	**7%**
TOTAL	**521**	**99%**

Table 2: The qualities associated with the hypertensive patients.

Discussion on results of qualitative frames
The basic hypothesis can be stated: *the qualities associated with the signs and symptoms of essential hypertension are allocated to the hot and moist qualitative frame.*
Of the 521 patients, 368 (71%) fall into the hot and moist frame, confirming the Unani-Tibb hypothesis that Essential Hypertension can be allocated to the hot and moist frame, in which the qualities of heat and moistness are responsible for increasing the blood volume, associated with the signs and symptoms of Hypertension. Adding the three moisture related frames (368 + 23 + 47) = 438 equivalent to 84% (438/521), highlights that the quality of moistness is a dominant quality associated with in Essential Hypertension.
Qualities associated with gender
An interesting observation of the results was the gender breakdown of the hypertensive patients. Of the 521 patients, the gender of only 488 patients was recorded. Even so, 333 of these patients (68%) were female. This observation is consistent with the Unani-Tibb perspective, as females have more moisture in their body then males.

5.2. Type 2 diabetes

Temperament. The temperamental natures of the Type 2 diabetic patients, together with their respective percentages, are recorded in Table 3.

Temperamental combinations *(Dominant / Sub-dominant)*	**No. patients**	**Percentage**
Sanguinous/ Phlegmatic	211	**51%**
Sanguinous / Bilious	49	**12%**
Phlegmatic / Sanguinous	88	**21%**
Bilious / Sanguinous	22	**5%**
Phlegmatic / Melancholic	13	**3%**
Bilious / Melancholic	10	**2.5%**
Melancholic / Bilious	10	**2.5%**
Melancholic / Phlegmatic	13	**3%**
TOTAL	**416**	**100**

Table 3: The temperamental combinations of the diabetic patients (Dominant / Sub-dominant)

From the above table, of the 416 Type 2 Diabetes patients, the patients with a dominant sanguinous temperament with sub-dominant temperaments of phlegmatic and bilious equals to 211 + 49 = 260 patients. In addition, patients with sub-dominant sanguinous temperament having a dominant phlegmatic and bilious temperament are 88 + 22 = 110, totaling to 370 patients (260 + 110) equivalent to 370/416 = 89% of the patients with a dominant/sub-dominant sanguinous temperament are predisposed to developing Type 2 Diabetes.

Discussion on the results of temperament

The basic hypothesis can be stated: *patients in whom a sanguinous temperament is dominant are predisposed to type 2 diabetes.*

From the above results it is evident that 89% of persons with a dominant or sub-dominant sanguinous temperament are predisposed to developing type 2 diabetes. In the 89% of patients with a dominant sanguinous temperament, there is a 63% chance of developing type 2 diabetes. It is also evident that persons with a dominant sanguinous and sub-dominant phlegmatic (51%) are more at risk then patients who are dominant sanguinous or sub-dominant bilious (12%). The greater risk associated with this temperamental combination (sanguinous / phlegmatic) is further confirmed if we add the combination of sanguinous / phlegmatic (51%) and phlegmatic / sanguinous (21%), which totals 72%. This is in keeping with the Unani-Tibb interpretation that patients with a sanguinous / phlegmatic combination will be more predisposed to type 2 diabetes because of the excessive quality of moistness associated with their temperament, (*as in diagram 1 page 10*).

It is particularly noteworthy that the sanguinous / bilious combination in type 2 diabetes is only (12%), whereas in hypertension it was 15%. On the other hand, the phlegmatic / sanguinous combination in diabetes is (21%) whereas in hypertension it was (18%). This highlights the fact that although both

diabetes and hypertension are conditions that are related to excess moistness, in diabetes the heat and dryness of the bilious temperament reduces the risk to a certain extent.
Of the remaining combinations, the phlegmatic / melancholic is at lesser risk of diabetes. Even lesser is the bilious / melancholic combination. It is interesting to note that in hypertension it was the phlegmatic / melancholic combination that exhibited the lowest risk, whereas in diabetes it is the bilious / melancholic combination. This is also in keeping with the Unani-Tibb understanding, as the bilious / melancholic temperament provides dryness with heat, which counters the moisture associated with diabetes.

Qualities. The qualities associated with the diabetic patients, together with their respective percentages, are recorded in Table 4.

Qualitative Frame	**No. of pats**	**Percentage**
Hot & Moist	276	**66%**
Moist & Hot	53	**13%**
Cold & Moist	45	**11%**
Hot & Dry	17	**4%**
Dry & Hot	4	**1%**
Cold & Dry	21	**5%**
TOTAL	**416**	**100%**

Table 4: The qualities associated with the diabetic patients.

Discussion on results of qualitative frames
The basic hypothesis can be stated: *the qualities associated with the signs and symptoms of type 2 diabetes can be allocated to the hot and moist, to moist and hot qualitative frames.*

Of the 416 diabetic patients, 276, or 66%, fall into the hot and moist frames. This result also confirms the Unani-Tibb hypothesis that Type 2 Diabetes can be allocated to the hot and moist frame. Adding the three moisture related frames (276 + 53 + 45) = 374 equivalent to 90% (374/416), highlights that the quality of moistness is a dominant quality associated with Type 2 Diabetes.
Qualities associated with gender An interesting observation of the results was an evaluation of the gender breakdown of the hypertensive patients. Of the 416 patients, 285 (69%) of these patients were female. This is consistent from the Unani-Tibb perspective, as females have more moisture in their body then males.

5.3. Bronchial asthma

Temperament. The temperamental natures of the patients with bronchial asthma, together with their respective percentages, are recorded in Table 5.

Temperamental combinations *(Dominant / Sub-dominant)*	**No. patients**	**Percentage**
Phlegmatic / Sanguinous	226	**52%**
Phlegmatic / Melancholic	46	**11%**
Sanguinous / Phlegmatic	64	**15%**
Melancholic / Phlegmatic	25	**6%**
Sanguinous / Bilious	25	**6%**
Melancholic / Bilious	15	**3%**
Bilious / Melancholic	17	**4%**
Bilious / Sanguinous	14	**3%**
TOTAL	**432**	**100%**

Table 5: The temperamental combinations of the patients with bronchial asthma (Dominant / Sub-dominant)

From the above table, of the 432 patients, the patients with a dominant phlegmatic temperament with sub-dominant temperaments of sanguinous and melancholic equals to 226 + 46 = 272. In addition, patients with sub-dominant phlegmatic temperament having a dominant sanguinous and Melancholic temperament are 64 + 25 = 89, totaling to 361 patients (272 + 89) equivalent to 361/432 = 84% of the patients, with a dominant/sub-dominant phlegmatic temperament are predisposed to developing phlegmatic Bronchial Asthma.

Discussion on the results of temperament

The basic hypothesis can be stated: *patients in whom phlegmatic temperament predominates are predisposed to phlegmatic breathing disorders.*

From the above results it is evident that 84% of persons with a dominant or sub-dominant phlegmatic temperament are predisposed to developing phlegm-related bronchial asthma. From the 84% of persons with a dominant phlegmatic temperament, 63% are at greater risk of developing bronchial asthma. It is also evident that persons with a dominant phlegmatic and sub-dominant sanguinous, who comprise 52% of the total, are more at risk then patients who are dominant phlegmatic / sub-dominant melancholic (11%). The greater risk associated with this temperamental combination (phlegmatic / sanguinous) is further confirmed if we combine the phlegmatic / sanguinous (52%) and sanguinous / phlegmatic (15%), achieving a total of 67%. This is consistent with the Unani-Tibb interpretation that patients with a phlegmatic / sanguinous combination will be more predisposed to phlegm-related bronchial asthma because of the excessive moistness associated with their temperament, (*as in diagram 1 page 10*).

Of the remaining temperamental combinations, the sanguinous / bilious and the melancholic / phlegmatic possess a risk profile of 6%, whereas those with a bilious / melancholic combination are at least risk of phlegm related bronchial asthma (3% & 4% in the above table) as these temperaments have the dominant quality of dryness.

Qualities. The qualities associated with the asthmatic patients, together with their respective percentages, are recorded in Table 6.

Qualitative Frame	**No. of Pat**	**Percentage**
Cold & Moist	201	**47%**
Moist & Hot	84	**19%**
Hot & Moist	59	**14%**
Hot & Dry	38	**9%**
Dry & Hot	19	**4%**
Cold & Dry	31	**7%**
TOTAL	**432**	**100%**

Table 6: The qualities associated with the patients suffering from bronchial asthma.

Discussion on results of qualitative frames

Breathing disorders in Unani-Tibb fall into three categories (a) phlegm/moisture related; (b) allergic or heat-related (hot and moist, hot and dry); and (c) dryness-related as in emphysema (cold and dry). Adding the three moisture related frames (201 + 84 + 59) = 344 equivalent to 80% (344/432), highlights that the quality of moistness is a dominant quality associated with phlegm related Bronchial Asthma.

Qualities associated with gender. A gender breakdown of the 432 phlegm-related bronchial asthma patients indicates that 254 (59%) of these patients are female. The relationship of this disorder to gender and moistness is not that conclusive and could also be attributed to the reasons given above (i.e., the problems inherent in accurately diagnosing breathing disorders). This also makes perfect sense from the Unani-Tibb perspective as females have a higher moisture content than males.

5.4. HIV and Aids, without TB

Temperament. The temperamental natures of the HIV and Aids patients without coexisting TB, together with their respective percentages, are recorded in Table 7.

Temperamental combinations *(Dominant / Sub-dominant)*	**No. patients**	**Percentage**
Phlegmatic / Sanguinous	147	**37%**
Phlegmatic / Melancholic	35	**9%**
Sanguinous / Phlegmatic	120	**30%**
Melancholic / Phlegmatic	19	**5%**
Sanguinous / Bilious	25	**6%**
Bilious / Melancholic	22	**5%**
Bilious / Sanguinous	22	**5%**
Melancholic / Bilious	11	**3%**
TOTAL	**401**	**100%**

Table 7: The temperamental combinations of the patients with HIV and Aids, without concomitant TB (Dominant / Sub-dominant)

From the above table, of the 401 patients, the patients with a dominant phlegmatic temperament with a sub-dominant temperament of sanguinous and melancholic equals to 147 + 35 = 182. In addition, patients with a sub-dominant phlegmatic temperament having a dominant sanguinous and melancholic temperament are 120 + 19 = 139, totaling to 321 patients (182 + 139) equivalent to 321/401 = 80% of the patients, with dominant/sub-dominant phlegmatic temperament are predisposed to developing HIV and Aids without TB.

Discussion on the results of temperament

The basic hypothesis can be stated: *HIV and Aids patients without TB display phlegmatic (moist) related symptoms (and have a dominance of the phlegmatic temperament).*

From the above results it is evident that 80% of HIV and Aids patients with a dominant or sub-dominant phlegmatic temperament are predisposed to developing phlegmatic symptoms. Within this, 80% persons with a dominant phlegmatic temperament, 45% are at greater risk of developing these symptoms. It is also evident that persons with a dominant phlegmatic and sub-dominant sanguinous (37%) are more at risk than patients who are dominant phlegmatic / sub-dominant melancholic (9%). The greater risk of this temperamental combination (phlegmatic / sanguinous) is further confirmed if we add together the combination of phlegmatic / sanguinous (37%) and sanguinous / phlegmatic (30%), totaling to 67%. This is in keeping with the Unani-Tibb interpretation that patients with a phlegmatic / sanguinous combination are more predisposed to phlegm-related symptoms of HIV and

Aids because of the excessive moistness associated with their temperament, (*as seen in diagram 1, page 10*).

The percentage for the remaining combinations is 6% for sanguinous / bilious; 5% each for bilious / melancholic and melancholic / phlegmatic; and the lowest of 3% for the melancholic / bilious. This is understandable in the light of the melancholic / bilious temperament having a dominance of dryness. The two bilious dominant frames at 5% are indicative of the heat neutralising the excess moistness and melancholic – phlegmatic, also at 5%, towards cold and dry are also in keeping with the Unani-Tibb philosophy. It is interesting to note that the sanguinous / bilious combination is marginally higher (at 6%), which is due to the limited moistness associated with the sanguinous temperament.

The above findings confirm the hypothesis that HIV and Aids patients without co-existing TB have a dominance of the phlegmatic temperament.

Qualities. The qualities associated with the HIV and Aids patients, without co-existing TB, together with their respective percentages, are recorded in Table 8.

Qualitative Frame	No. of pats	Percentage
Cold & Moist	213	**51**
Hot & Moist	55	**14**
Moist & Hot	48	**12**
Hot & Dry	38	**9**
Dry & Hot	9	**2**
Cold & Dry	50	**12**
TOTAL	**401**	**100**

Table 8: The qualities associated with the patients suffering from HIV and Aids, without co-existing TB.

Discussion on results of qualitative frames

The basic hypothesis can be stated: *the qualities associated with the signs and symptoms of HIV and Aids patients without TB can be allocated to the moist qualitative frames.*

The hypothesis that the qualities associated with the signs and symptoms in HIV and Aids patients without TB are associated with moist qualitative frames. Of the 401 patients, the patients associated with the moisture related frames totals to 213 + 55 + 48 = 316 equivalent to 316/401 = 79% of the patients, highlights that moistness is the dominant quality associated with HIV and Aids without TB.

Although this percentage reasonably confirms the hypothesis, the 50 patients (or 12%) in the cold and dry frames is not entirely in keeping with the hypothesis. A possible explanation from the Unani-Tibb perspective is that these patients whose initial symptoms began in the moist frames could well have deteriorated via by the “wasting effect” associated with HIV and Aids patients. A good reflection of the frames is that the number of patients residing in the hot and dry (9%) and more particularly the dry and hot (2%) are consistent with the hypothesis, as these frames are the dry frames.

Qualities associated with gender. Of the 401 patients, the gender of only 347 patients was recorded. The gender breakdown indicated that 231 (67%) of these patients were female. This is consistent with the Unani-Tibb hypothesis, as females contain more moisture in their body than do males.

5.5. HIV and Aids, with TB

Temperament. The temperamental natures of the HIV and Aids patients with coexisting TB, together with their respective percentages, are recorded in Table 9.

Temperamental combinations *(Dominant / Sub-dominant)*	**No. patients**	**Percentage**
Bilious / Melancholic	99	**26%**
Bilious / Sanguinous	60	**16%**
Sanguinous / Bilious	44	**11.5%**
Melancholic / Bilious	25	**7%**
Phlegmatic / Melancholic	39	**10%**
Phlegmatic / Sanguinous	54	**14%**
Sanguinous / Phlegmatic	44	**11.5%**
Melancholic / Phlegmatic	16	**4%**
TOTAL	**381**	**100%**

Table 9: The temperamental combinations of the patients with HIV and Aids, but with concomitant TB (Dominant / Sub-dominant)

From the above table, of the 381 patients, the patients with a dominant bilious temperament with a dominant temperament of melancholic and sanguinous are 99 + 60 = 159. In addition, patients with a sub-dominant bilious temperament having a dominant melancholic and sanguinous temperament are 44 + 38 = 82, totaling to 241 patients (99 + 60 + 44 + 38) equivalent to 241/381 = 63% of the patients with dominant/subdominant bilious temperament are predisposed to HIV and Aids with TB.

Discussion on the results of temperament

The basic hypothesis can be stated: *HIV and Aids patients with TB display bilious (heat) related symptoms and have a dominance of the bilious temperament.*

The above results show that 60% of patients with bilious (heat) related symptoms of HIV and Aids have a dominance or sub-dominance of the bilious temperament. From the 60% persons with a dominant bilious temperament (42%) are at greater risk of developing these symptoms. The results indicate that persons with a dominant bilious / sub-dominant melancholic (26% in total) are more at risk then patients with a dominant bilious and a sub-dominant sanguinous. Based on the results in hypertension, diabetes, asthma and HIV and Aids without TB, it would expected that the melancholic / bilious combination temperament would show a high risk, which in the above result is only (7%),

whereas the risk of sanguinous / bilious is much higher at 11%. However, this is an apparent anomaly. From the hypothesis that heat related symptoms are predisposed in patients with HIV and Aids with TB, the greatest number of patients should be in the heat sector which is associated with the bilious / sanguinous combination (i.e., the bilious / sanguinous at 16%; the sanguinous / bilious at 11%, totaling 27%. In the above results the highest percentage occurs in the dry sector associated with the bilious / melancholic combination (i.e., bilious / melancholic at 26% and melancholic / bilious at 7%), totaling 33%.

Although the dominance of a bilious temperament associated with heat-related symptoms of HIV and Aids is indicative from the above results, they do show that the temperament combination is more towards the bilious / melancholic combination, which possesses a dominant *dryness* quality. This contrasts with the bilious / sanguinous combination, with its dominant *heat* quality. Another anomaly is that if the dominant quality of dryness is linked to HIV and AIDS related symptoms, then the lowest percentage of patients should be in the moistness frame associated with sanguinous / phlegmatic. However, the above results are too high: the sanguinous / phlegmatic is 11.5%, and the phlegmatic / sanguinous is 14%, totaling 25.5%.

A possible explanation is that the temperamental evaluations of the HIV and Aids patients generally and with HIV and Aids patients with TB more specifically, is perhaps a difficult exercise and cannot be accurately ascertained.

Qualities. The qualities associated with the HIV and Aids patients, without co-existing TB, together with their respective percentages, are recorded in Table 10.

Qualitative Frame	**No. of Pat**	**Percentage**
Hot & Dry	129	**34%**
Dry & Hot	83	**22%**
Hot & Moist	50	**13%**
Cold & Moist	65	**17%**
Moist & Hot	18	**5%**
Cold & Dry	36	**9%**
TOTAL	**381**	**100**

Table 10: The qualities associated with the patients suffering from HIV and Aids, with co-existing TB.

Discussion on results of qualitative frames.

The basic hypothesis can be stated*: The qualities associated with the signs and symptoms of HIV and Aids patients with TB can be allocated to the hot qualitative frames.*

The hypothesis that the qualities associated with the signs and symptoms in HIV and Aids patients with TB are associated with heat qualitative frames. Of the 381 patients, the patients associated with heat related frames totals (129 + 50 + 83 = 262 equivalent to 262/381 = 69% of the patients associated with heat. Whilst the overall results do indicate that heat is a dominant quality.

Qualities associated with gender. Of the 381 patients, the gender breakdown was 64% female, or 243, and 36% male, or 138.patients. Again, these results do not tie up with the Unani-Tibb concept, as heat is more associated with males then females.

6. Perceived deficiencies of the study

General. There are several drawbacks to the projects which preclude more rigorous analysis and definite conclusions. By its very nature, the research was carried out by students who are not fully familiar with the process and requirements for carrying out clinical research. Further research projects along the lines of those here evaluated will have to rectify this deficiency by appropriate training instruction and demonstration.

7. Conclusions

In hypertension, persons with a sanguinous dominant and to a lesser extent sub-dominant sanguinous temperament are predisposed to developing blood volume related essential hypertension. The results also confirm that hypertension can be allocated to the hot and moist frame, where the qualities of heat and moistness are responsible for increasing the blood volume associated with the signs and symptoms of hypertension.

In diabetes, persons with a dominant or sub-dominant sanguinous temperament are predisposed to developing the disorder. In those patients with a dominant sanguinous temperament, there is a marked chance of developing the disorder. The results also confirm the Unani-Tibb hypothesis that type 2 diabetes can be allocated to the hot and moist frame.

In bronchial asthma, persons with a dominant or sub-dominant phlegmatic temperament are predisposed to developing phlegm-related asthmatic symptoms. Moreover, persons with a dominant phlegmatic and sub-dominant sanguinous are more at risk then patients who are dominant phlegmatic plus sub-dominant melancholic in their temperament. The results indicate that phlegm-related asthma is associated with the moist frames.

In HIV and Aids, patients with a dominant or sub-dominant phlegmatic temperament are predisposed to developing phlegmatic symptoms. Persons with a dominant phlegmatic and sub-dominant sanguinous temperament are more at risk than those with other temperament profiles. These findings confirm the hypothesis that HIV and Aids patients without concomitant TB have a dominance of the phlegmatic temperament. In HIV and Aids patients with co-existing TB, those with bilious (heat) related symptoms of HIV and Aids have a dominance or sub-dominance of the bilious temperament. Persons with a dominant bilious plus a sub-dominant melancholic are more at risk then patients with a dominant bilious and a sub-dominant sanguinous temperament. There were, however, a number of anomalous results, indicating that the temperamental evaluation of HIV and Aids patients generally and more specifically in those patients with TB, is perhaps a difficult exercise and cannot be accurately conducted.

The results on the qualitative frames indicated that a reasonable number of patients of HIV and Aids patients diagnosed without TB are associated with the cold and moist qualitative frames, whereas

those with TB with the hot and dry qualitative frames. However, these results were not conclusive as for other conditions, as the percentage of patients in the other qualitative frames were also higher

then expected. This could be explained by the 'wasting effect' associated with HIV and Aids patients, which results in patients whose initial symptoms begin in one frame and deteriorate towards other frames.

Additional research with wider parameters and clearer guidelines for evaluating temperament and qualitative frames, and with a greater degree of diagnostic rigour is recommended in order to overcome the deficiencies of this in evaluating the role of temperament and qualities, especially in patients suffering from HIV and Aids.

References and further reading

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UWC RESEARCH PROJECT REGISTRATION AND ETHICS CLEARANCE APPLICATION FORM

This application will be considered first by the UWC Faculty Board Research and Ethics Committees, then by the UWC Senate Research Committee, which may also consult outsiders on ethics questions, or consult the UWC ethics subcommittees, before registration of the project and clearance of the ethics.

No project should proceed before project registration and ethical clearance has been granted.

A. PARTICULARS OF INDIVIDUAL APPLICANT

NAME: **Rashid Ahmed Hassen Bhikha** TITLE: **Dr**

DEPARTMENT: **School of Natural Medicine** FACULTY: **Faculty of Community & Health Sciences**

FIELD OF STUDY: **Complementary Medicine**

ARE YOU:				
A member of UWC academic staff?	Yes	**X**	No	☐
A member of UWC support staff?	Yes	☐	No	☐
A registered UWC student?	Yes	☐	No	☐
From outside UWC, wishing to research at or with UWC?	Yes	☐	No	☐

B. PARTICULARS OF PROJECT

PROJECT NUMBER: TO BE ALLOCATED BY THE SENATE RESEARCH COMMITTEE:

EXPECTED COMPLETION DATE: **November/December 2006**

PROJECT TITLE:
To assess the relationship between the qualities associated with a number of chronic disorders and the temperament of the person affected.

THREE KEY WORDS DESCRIBING PROJECT**: Qualities, chronic illness, temperament.**

PURPOSE OF THE PROJECT: **Departmental research**

M-DEGREE: D-DEGREE:

POST GRADUATE RESEARCH: **Diploma in Unani-Tibb**

C. PARTICULARS REGARDING PARTICULAR RESEARCHERS

	FAMILY NAME:	INITIALS:	TITLE:
PRINCIPAL RESEARCHER:	**BHIKHA**	**R.A.H.**	**DR**
OTHER RESEARCH PROJECT LEADERS:	**MANXIWA**	**F.**	**DR**
	GLYNN	**J.P.**	**DR**

OTHER CO-RESEARCHERS:
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7. Latib, Feroz Osman
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11.Mavi, Ntombizifikile Priscilla
12. Mentor, Cheryl
13. Mini, Pamphilia N
14. Motwana, Elsa Nomhlope
15. Mphahlele, Pinky Gladys
16. Mtsi, Patience Nomakoszano
17. Mzembeta, Thenoria Nodumo
18. Mzuku, Sindiswa Wardrina
19. Nqoto, Dorcas Nomabadi
20. Ntshiba, Nomsa Cynthia
21. Panda Potwana, Primrose N
22. Qingana, Nomboniso C
23. Sihlahla, Lumkile Joseph
24. Tana, Vuyiswa Veronica
25. Wasa, Primrose Noxolo
26. Xongo, nomahlubi Cynthia
27. Zim, Nokwana Passover

THESIS: STUDENT RESEARCHER: NOT APPLICABLE

THESIS: SUPERVISOR: NOT APPLICABLE

C. GENERAL INFORMATION

STUDY LEAVE TO BE TAKEN DURING PROECT (days): **N/A**

IS IT INTENDED THAT THE OUTCOME WILL BE SUBMITTED FOR PEER REVIEWED PUBLICATION?
YES **X** NO ☐

COMMENTS: DEPARTMENTAL CHAIRPERSON:

SIGNATURE OF THESIS STUDENT RESEARCHER – WHERE APPROPRIATE:

DATE

SIGNATURE OF THESIS SUPERVISOR – WHERE APPROPRIATE:

DATE

SIGNATURE OF PRINCIPAL RESEARCHER – WHERE APROPRIATE:

DATE:

SIGNATURE OF DEPARTMENTAL CHAIRPERSON:

DATE:

NOTE: THESE SIGNATURES IMPLY AN UNDERTAKING *BY THE RESEARCHERS* TO CONDUCT THE RESEARCH ETHICALLY, AND AN UNDERTAKING BY THE THESIS SUPERVISOR (WHERE APPROPRIATE), AND THE DEPARTMENTAL CHAIRPERSON, TO MAINTAIN A RESPONSIBLE OVERSIGHT OVER THE ETHICAL CONDUCT OF THE RESEARCH.

E. DESCRIPTION OF PROJECT AND RESEARCH ETHICS STATEMENT

Please type below, or attach a typed document, usually between 500 and 5000 words, setting out the purpose and process of the research. Please include a clear research ethics statement. The onus is on the applicant to persuade UWC that the research will be conducted ethically. This will normally require evidence of an up to date research ethics literature search in the particular discipline; evidence of what the world standard ethical practice is, in the particular discipline; an explanation of how the proposed research is to be conducted ethically; a detailed justification of any proposed departure from world standard ethical practice; and a clear undertaking to conduct the research ethically. It may be useful also to agree to conduct the research in line with the published ethical rules of a national or international disciplinary association. UWC reserves the right to stop or suspend any research undertaken by its staff or students, or by outsiders on its property or in association with it, if the research appears to be unethical.

(SEE ATTACHED PROPOSAL)

Form issued by: Professor Renfrew Christie, UWC Dean of Research, February 2002.

(959 2949; 959 2948 secretary, 959 3170 fax, email: rchristie@uwc.ac.za)

UNIVERSITY OF THE WESTERN CAPE
Faculty of Community and Health Sciences

School of Natural Medicine

ABSTRACT
RESEARCH PROJECT

Keywords: Unani-Tibb, qualities, HIV and Aids, hypertension, diabetes, respiratory disease, treatment frames, temperament

1. Introduction

Hippocrates, the ancient medical philosopher, reputedly said that “it is better to know what type of person has a disease, than to know what type of disease a person has”. In Unani-Tibb, the concept of “knowing the type of person“ is embodied within the scope of the person’s “temperament”. This is described as a combination of the individual’s physical, psychological and emotional attributes. According to Unani-Tibb, people can be classified into four basic temperamental types; namely, sanguinous, phlegmatic, melancholic and bilious. In turn, each of these basic temperaments is characterised by the possession of a certain combination of qualities; namely, heat, coldness, moistness and dryness[1].
Identifying a person’s temperament is important, because it provides valuable insights into the individual’s predisposition to certain illnesses. This has been indicated in pilot research projects that were undertaken by students in 2003[2].
In a pilot study[3] undertaken by students in 2005, positive results emerged that lifestyle factors, such as improved diet, physical exercise and stress control can play an important part in improving the quality of life of patients with chronic illnesses such as HIV and Aids, type 2 diabetes and hypertension.
Although the initial results appear promising, they need to be confirmed on a somewhat larger scale. This application refers to a proposed study which will evaluate this relationship in greater depth. By assessing the strength of the relationship between a person’s temperament and the nature of his or her chronic illness, it should allow better lifestyle advice to be proffered, which will either delay the onset of the disorder, or diminish its impact when it does in fact arise[4].

Part of the study will also explore an aspect of Unani-Tibb philosophy which considers that specific diseases can be allocated to different 'qualitative frames' which differ in their quality profiles[5]. All illnesses are considered to fall into one of six specific qualitative frames. For example, respiratory disorders such as colds and influenza are associated with excess qualities of coldness and moistness. This relationship will be evaluated further, and in greater detail.

This research project is a mandatory part of the UWC Postgraduate Diploma in Unani-Tibb, and is introduced in order to assess the student's understanding of the Unani-Tibb principles. It also serves as an important vehicle for conducting research in the Unani-Tibb sphere.

2. Aims and objectives of the study

This prospective study will assess the temperament of a number of patients recruited by the researchers who present with one of a number of common, chronic disorders.

These patients will remain on their existing orthodox or complementary (such as Unani-Tibb) treatment whilst taking part in this study.

The specific objectives of this research project are to:

- To assess accurately the patient's dominant and sub-dominant temperaments by application of the established Unani-Tibb methodology
- To diagnose accurately a patient's clinical disorder according to orthodox and Unani-Tibb with respect to signs and symptoms and specific clinical parameters.
- To allocate the patients' clinical disorders to the specific Unani-Tibb qualitative frames

The patients involved in this research project will be confirmed as suffering from the following clinical disorders:

- HIV and Aids. Unani-Tibb phlegmatic symptoms in the moist frames, with signs and symptoms of vomiting, thrush and diarrhoea
- HIV and Aids. Unani-Tibb bilious symptoms in the hot frames, with signs and symptoms of inflammation, tuberculosis and meningitis
- Essential hypertension, mild-moderate. Unani-Tibb sanguinous hypertension in the hot and moist frames
- Type 2 diabetes. Unani-Tibb sanguinous - phlegmatic origin, associated with the hot and moist to moist and hot frames
- Breathing disorders. Unani-Tibb phlegmatic associated symptoms (in Unani-Tibb, *Al rubwo*) with signs and symptoms resulting from excessive phlegm in the lower respiratory structures.

3. Research methods and instruments

3.1. Study design

Prospective study, with pooled data from multiple researchers.

3.2 Study sample

The research project is designed for each researcher (28 in total) to evaluate one-hundred (100) patients with one of the chronic clinical disorders listed above. Ideally, the researcher should include at least 10 patients from each of the five disease categories referred to above. All patients must be stable on their existing orthodox or complementary treatment before they are included in the study.

3.3. Measurements

Temperament analysis. This will be determined according to the standard Unani-Tibb method, which is based on a pre-set temperament evaluation form, direct inquiry and observation. *(Annexure 1)*

Clinical diagnosis. This will be determined according to standard Unani-Tibb and orthodox clinical practice. That is, the researchers will assess the patients presenting signs and symptoms, with a clinical evaluation, possibly supported by the appropriate pathological testing, to confirm diagnosis.

The number of contacts to be made with the patient, and over what period of time, should be at the discretion of the student as long as accurate measurement/s of the condition/s frames are achieved *(Annexure 2)*

3.4. Timeframe for the study

The research project will take place over a **4 to 5 month** period.

4. Ethics statement

This proposed study will involve the active and willing involvement of all participating patients. It will be conducted according to accepted ethical practice. This includes:

4.1. A discussion with the patient on the value of the study

4.2. Informed consent by the patient after reasonable explanation of his or her involvement in the study. *(Annexure 3)*

4.3. An assurance to the patient of full confidentiality regarding his or her clinical condition, subsequent treatment and outcome information. The patient's name will not be included in the project text.

4.4. The option to the patient to withdraw from any stage of the study without explanation. All patients will be aware that they are free to discontinue their active involvement in this study, without prejudice.

4.5. There will be no personal involvement of the participants that expose them to physical or mental trauma.

Information sources on Unani-Tibb

1. R.Bhikha & M.A.Haq. 2000. Tibb – Traditional Roots of Medicine in Modern Routes to Health. South Africa.
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3. Progress Report. To assess the integration of governing (lifestyle) factors into the treatment of patients suffering from chronic illness conditions. (HIV and AIDS, Hypertension and Diabetes), UWC, 11 April 2006
4. R.Bhikha.4 Temperaments, 6 Lifestyle Factors. (2006). Ibn Sina Institute of Tibb, Johannesburg.
5. Postgraduate Diploma in Unani-Tibb Modules 1 – 11. (2003), UWC.

ANNEXURE 1

EVALUATION SHEET FOR DETERMINING TEMPERAMENT OF PATIENT

Patient name _____

Age_____ Sex_____ Date_____

Category	Sanguinous		Phlegmatic		Bilious		Melancholic	
FRAME	Large frame, more muscle		Large frame, more fat		Medium frame, lean		Thin/bony frame (short/tall)	
SKIN TEXTURE	Moderate in softness and moistness, warm		Cool, Moist, soft		Warm, dry		Dry, rough, cold	
EYES	Moderate to large in size, bright, reddish		Moderate to large in size, dreamy		Small to moderate in size, sharp with yellowish tint		Small in size, active/darting	
PERSONALITY TRAITS	Persuasive, sociable, outgoing, talkative		Calm, accommodating, patient, good listener		Resourceful outspoken, dominant, maybe short tempered		Thoughtful, logical, analytical, tend to be perfectionist	
EMOTIONAL TRAITS	Playful, disorganised, exaggerates		Fear, shyness, slow, indecisive		Aggressive, angry, irritable, impatient		Fearful, insecure, suspicious, anxious	
MEMORY	Good but selective		Slow but prolonged		Sharp, never forgets		Recent memory good, distant memory bad	
FOOD & DRINK	Healthy appetite with a moderate to excessive thirst		Slow, steady appetite, low thirst, can skip meals		Good appetite, excessive thirst, can not delay meals		Irregular and variable appetite and thirst	
MENTAL ACTIVITY	Moderate to active intelligence		Calm, slow, receptive, cool minded		Aggressive, intelligent, sharp minded		Restless, enquiring, philosophical, imaginative	
CLIMATIC PREFERENCE	Dislikes hot, moist conditions, summer and rainy weather		Dislikes cold, moist conditions, winter and rainy weather		Dislikes hot, dry conditions, summer and spring		Dislikes cold, dry conditions, winter and autumn	
ELIMINATION	Golden yellow urine, perspires easily		Transparent, light yellow urine, low perspiration		Passes dark yellow urine, perspires easily		Passes moderate to excessive urine, low perspiration	
SLEEP PATTERN	Moderate to deep, 6-8 hrs		Heavy, excessive, 8 hrs plus		Low but sound, 5-6 hrs		Interrupted, irregular, insomnia	
HEALTH PROBLEMS			Phlegm-related disorders				Colon and gas-related disorders	
SCORE	----------		----------		----------		----------	

Dominant: _____ Subdominant: _____

Student Name: _____ Student No.: _____

ANNEXURE 2

DIAGNOSIS OF THE PATIENTS'S CONDITION AND ALLOCATION OF THE QUALITATIVE FRAME

Illness Condition: _____

Patient Name:_____**Age**:_____ **Sex:** _____ **Date:**_____

Temperamental type: Dominant _____ Subdominant_____

Patient's presenting complaints:

_____

_____

_____

Clinical examination: (to confirm the chronic illness condition):

Blood pressure _____/_____mm/Hg Blood sugar_____mg/100mL Chol _____mmol/L

Pulse: _____ Weight: _____kg Urine:_____

Any other pathological tests:

_____

_____

_____

Current medication:

_____

_____

_____

Allocation of Qualities to signs & symptoms of patient's

Signs, symptoms & clinical observations	Associated Qualities
OVERALL FRAME/S OF THE CONDITION	

STUDENT NAME: _____STUDENT NO: _____

ANNEXURE 3

CONFIDENTIAL

LETTER OF CONSENT

Date: _____

I, _____ hereby give my consent that the results of the completed questionnaires and my medical data may be used for research purposes and that the group results may be used in research articles and publications. I understand that the researchers will guarantee confidentiality regarding my personal information and results and that this information will be used anonymously for research purposes only. I agree to participate voluntarily in this study and I understand that I may withdraw from the study at any time.

_____

Signature of participant

_____

Signature of researcher