



PILOT RESEARCH PROJECT CONDUCTED AT THE UNIVERSITY OF WESTERN CAPE THERAPEUTIC CUPPING AS ADJUNCTIVE THERAPY IN THE TREATMENT OF DIABETES, HYPERTENSION AND OSTEOARTHRITIS

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Evaluation Report:

Pilot Research Projects undertaken by Students for the Bachelor of Complementary Medicine (Unani-Tibb) on the evaluation of therapeutic cupping as adjunctive therapy in the treatment of type 2 diabetes, hypertension and osteoarthritis.

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Introduction. A mandatory requirement for the award of the Bachelor in Complementary Medicine (Unani-Tibb), under the auspices of the School of Natural Medicine, University of the Western Cape, is the satisfactory completion of a pilot research project. This is generally carried out on the treatment of patients with specific disorders according to Unani-Tibb principles. For the 2007 project, the students ('researchers') were requested to investigate the clinical effect of therapeutic cupping in the adjuvant treatment of a specific chronic disease. This report summarises the individual projects completed in the treatment of type 2 diabetes, hypertension and osteoarthritis. The therapeutic end-points investigated were the clinical parameters appropriate to each chronic disorder. Also evaluated was the linkage of the disorder to the patients' temperaments. Although the effect of cupping on the patients' quality of life was not part of the original research proposal, the opportunity to assess changes in this important parameter presented itself.

Objectives. The primary objective of all three studies was to assess the clinical value of therapeutic cupping as adjunctive therapy in a number of patients presenting with the chronic disorder under study. These patients were simultaneously receiving standard therapy. The secondary objective was to quantify changes in the patients' quality of life parameters before and after therapeutic cupping. The final objective was to confirm (or otherwise) the relationship between these clinical disorders and temperament that have been observed in previous projects.

Methodology. Six researchers were involved in this open, prospective pilot study; two per research project. Each research group recruited a number of patients with the relevant chronic disease who were receiving standard therapy, either conventional drugs or as Tibb medication. Appropriate advice on regulation of their governing factors was also proffered. A number of exclusion criteria were applied, which varied according to disease. The temperament of each patient, both dominant and sub-dominant, was assessed initially using the standard Tibb format. Therapeutic cupping was applied at specific body sites according to a pre-determined protocol, and the progress of the disease followed by assessment of the outcome parameters (resting blood glucose for the diabetics; blood pressure for the hypertensives; and pain and joint mobility for the arthritics) at specific interval over a fixed time period. The patients' quality of life was also assessed before and after cupping by means of the standard Tibb questionnaire.

Results. In the diabetic patients, a significant difference was detected in the blood glucose levels before and after they were subjected to cupping. In the hypertensive patients, cupping resulted in a marked decrease in both systolic and diastolic blood pressure compared to the control group. In the osteoarthritic patients, cupping led to a significant and constant improvement in the various clinical endpoints when compared to the control group. The correlation between the temperament of the patient, the disease affecting them, and the therapeutic outcome, was complex, and varied somewhat between groups.

Conclusion. The researchers in each component of the research project concluded that cupping showed potential as adjuvant therapy in the active treatment of patients with type 2 diabetes, hypertension or osteoarthritis. Cupping was also associated with an improvement in the patient's quality of life. Further

studies in a larger number of patients are suggested by the results of this pilot study, the researchers commented.

1. Introduction

In South Africa, the incidence of chronic diseases of lifestyle is on the increase. This trend is similar to that noted in other parts of the world, not only in the developed, industrialised world, but also in the developing countries. There are several reasons for this. Not only is calorie-rich, high-fat, low fibre becoming increasingly affordable and available, but active exercise by many section of the community is in serious decline. From the Unani-Tibb perspective, adherence to the governing factors as a means of maintaining basic, sound health is falling away. Diseases like type 2 diabetes, hypertension and osteoarthritis are becoming more prevalent partly or largely through failure to adopt a proper diet, carry out appropriate physical exercise, deal with stress and other emotional disturbances, remove toxins from the body, breathe properly in a clean environment and get good quality sleep. Effective treatment of these chronic diseases of lifestyle is possible, but at a cost. Although undoubtedly effective, the drugs used long term impose a major burden on the individual and the community, and are prone to marked side effects and serious metabolic changes. Unani-Tibb advocates treatment of these disorders by a combination of lifestyle changes (that is, adjustment of the person's governing factors), administration of herbal medication where appropriate, and application of regimental therapies. Such a combination has several advantages. It is better tolerated, it involves the patient in his or her healing, is less likely to be financially challenging, and is more suitable for the long term.

One particular form of regimental therapy is therapeutic cupping. This traditional procedure has been practiced over many centuries, and is well established in the treatment of chronic, repeating diseases. This report summarises the results obtained by three groups of researchers who investigated the benefits accruing from the short-term application of cupping in small groups of patients with type 2 diabetes, hypertension and osteoarthritis. Patients who were treated with medication (either conventional or Tibb), and had received advice on improving their lifestyle by adjusting their governing factors, underwent a short course of therapeutic cupping. The changes in clinical parameters, namely blood glucose level (in diabetics), blood pressure (in hypertensives), and joint mobility (in patients with arthritic joints) were measured before and after cupping. The results were compared to those of patients who had not undergone cupping. At the same time, the linkage between the patients' temperament, their response to therapy, and the nature of the disease affecting them was explored.

2. Objectives of the research project

Type 2 diabetes group. The primary objective of this part of the research study was to evaluate the clinical value of cupping as adjuvant therapy in the treatment of type 2 diabetics.

Hypertension group. The primary objective of this study is to evaluate the clinical value of cupping as adjuvant therapy in the treatment of hypertension in both sanguinous and melancholic forms.

Osteoarthritis group. The primary objective of this study is to evaluate the clinical value of cupping as adjuvant therapy in the treatment of type 2 diabetics.

Common to all three research groups was the secondary objective. This was to assess the effect of cupping on the patients' quality of life. Although this objective was not specified in the original research proposal, the studies lend themselves well to an assessment of the improvement (or otherwise) in the standard quality of life parameters. As this assessment is questionnaire-based, no invasive procedures – blood sampling, for example – were necessary.

The final objective really follows on from previous studies, where the temperament of patients was correlated with their clinical disorder. In this series of studies, the temperament of patients with the different disorders was assessed, and correlated both to their actual condition and to any clinical improvement observed.

3. Literature review

3.1. Outline of Unani-Tibb

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, qualities 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. 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*).

One of the most important functions of the humours is to maintain the ideal qualitative states associated with the temperament of an individual.

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). A patient's temperament is the combination of their physical characteristics and their mental, emotional and spiritual attributes.

The four temperamental types are:

- ◆ Sanguinous (with qualities of Hot and Moist)
- ◆ Phlegmatic (with qualities of Cold and Moist)
- ◆ Biliary (with qualities of Hot and Dry)
- ◆ Melancholic (with qualities of Cold and Dry)

Every person has attributes from all four temperaments with a dominance of one of the temperament types. In addition to each person having a unique temperament, each person also has a combination of qualities. This explains why some people feel colder / hotter than others. The temperament and associated qualities of a person have a great influence on predispositions to illnesses as well as pathological and therapeutic processes.

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). That is, treatment should be *patient specific*.

Governing (lifestyle) factors. These are the lifestyle and environmental factors which collectively influence a person's state of health. They are also heavily involved in the processes which lead 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 (6) the toxin elimination processes. Each of these factors is involved to varying degrees in the Unani-Tibb health maintenance and therapeutic regimens. The lifestyle factors influence our health by the qualities they exert, for example, certain foods such as ginger have heating properties; the weather has hot, cold, moist or dry qualities; movement increases heat; sleep has a cooling effect and anger increases heat. These changes in qualities from the environment affect the ideal qualitative state of our temperament.

Qualities: From the above discussion on temperament, humours and lifestyle factors, we realise how important the four qualities in nature are in health maintenance and the cause of disease. In Unani-Tibb all clinical disorders can be classified according to qualitative and humoral imbalances. For instance,

colds and flu are associated with excessive quality of coldness, whereas osteoporosis is associated with an excess quality of dryness.

Unani-Tibb therapy. Treatment of chronic ailments is carried out by way of four approaches (Bhikha and Haq, 2000). All of them aimed at correcting qualitative imbalances associated with the humours and temperament of an individual.

- (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) Advice and application of changes to the patients governing (lifestyle) factors.
- (4) Regimental therapy, which includes a number of therapeutic interventions, such as purging, diuresis, meditation, massage and fasting. *Cupping – both dry and wet – is a major part of regimental therapy.*

3.2 The therapeutic role of cupping

Description. Cupping is the practice of applying a partial vacuum by means of heat or suction in one or several bell-shaped vessels (suction cups) to specific and different parts of the skin. The procedure is one of the oldest and most effective methods of releasing toxins from the body's tissues and organs. Cupping is a safe, non-invasive and inexpensive technique. It is used to alleviate the pain and discomfort arising from disorders of the lungs, heart and other internal organs, and muscle spasms, joint pains, and numerous other conditions.

History. Cupping has been practiced since ancient times. Hippocrates describes both dry and wet cupping in his *Guide to Clinical Treatment*. He recommended it for the treatment of angina, menstrual and other disorders. Later, Galen was a practitioner of the procedure. After a long period of neglect, cupping was revived in the Islamic age. Strict adherence to rules of application was demanded, with close attention paid to process, timing and patient condition. Traditional healers in many parts of the world use cupping or versions of it in their healing repertoire. The technique has historically been used by practitioners of conventional medicine for many centuries to treat a range of diseases. It is also an important aspect traditional Chinese medicine.

Mode of action. Cupping causes the tissues beneath the cup to be drawn up and swell, and an increase in blood flow to the affected area. This enhanced blood flow under the cup draws impurities and toxins away from the nearby tissues and organs to the skin, from where they are expelled. The release of the vacuum redirects "toxic" blood that had pooled at the site and redirects it to other areas of the body, thus allowing "fresh" blood to replace it. This facilitates the healing process. Localised and deep-tissue healing takes place. Cupping diverts toxins and impurities from important organs – such as the liver or kidney – to the less important organ, the skin. In dry cupping, the toxins are brought to the underlying skin; in wet cupping the toxins are brought out of the body, onto the surface of the skin.

Physiological effects. Cupping assists the actions of Physis. Practitioners of cupping contend that this process strengthens the immune system, so encouraging the optimum functioning of the body. Cupping assists the liver by increasing blood perfusion, so removing the metabolic load imposed by the disease and perhaps any drugs used to treat the disease. It also supports the immune system, by acting on the reticulo-endothelial system to help it in opposing the actions of invading microbes. In addition, cupping supports the nervous system, by helping to reverse ischaemia, which can lead to conditions characterised by cerebro-metabolic insufficiency, such as memory disturbances, epilepsy and emotional conditions. Finally, cupping supports the renal system, by helping to reverse the ischaemia which underlies many disorders. Cupping is also involved in the release of cortisol and serotonin, important mediators in pain and stress. Cupping also stimulates acupuncture points, and releases biological opioids called endorphins.

Clinical value. The benefits of cupping have been extensively researched and documented. Cupping is recommended for people with recurring, refractory headaches, skin disorders, stomach pain, boils, disorders of the heart and circulation, such as varicose veins and hypertension, joint and neck pains, for example, arthritis and rheumatism, diarrhoea and vomiting, menstrual cramps, bronchitis, colds, asthma, infertility, impotence, and haemorrhoids, amongst other ailments. The clinical benefits of cupping continue for several days after the procedure.

Types of cupping. There are two forms of cupping; (a) dry cupping, as described above; and (b) wet cupping, in which the skin immediately below the cup is cross cut superficially several times (*lacerated*) so that blood would actually be drawn by the vacuum from the skin into the cup. Dry cupping is always used before wet cupping is considered. That is, wet cupping is only applied when repeated use of dry cupping has proven to be ineffective clinically. For both forms of cupping, the patient should be advised to increase their water intake. The use of whichever form of cupping is at the discretion of the practitioner.

Practical application. The vacuum in the glass or hard plastic suction cup is usually created in one of two different ways. In the traditional method, the cup is heated by a flame from an alcohol soaked cotton pad or taper, and then applied immediately to the skin. As the cup cools, the air inside contracts, creating a partial vacuum, so sealing the jar to the skin. The device can be released easily by hand. These days, a hand operated vacuum pump is attached to the glass cup, and suction applied by manual action. Patients about to undergo cupping (especially the wet version) should be advised to take a supplementary herbal tonic, such as *Enerlift*.

Cupping in action. The patient to be cupped should be relaxed and comfortable, both physically and mentally, in a warm draught-free room. The procedure, objectives and consequences of the technique should be explained clearly to him or her. Generally, the heated cups, of appropriate size, should be placed on flat sections of the skin, which should be hair-free, with no bony protuberances, and relatively thick. When more than one cup is used simultaneously, the cups should be separated by several centimetres. Cupping can also be carried out in parallel to massage and acupuncture.

Post cupping advice. Patients are advised to get up slowly after a cupping session. It is recommended that they avoid solid foods for 3 hours afterwards, but increase water intake up to 3 litres. Sexual activity is not advised for 24 hours afterwards.

Safety concerns. The following safety aspects should be adhered to by the cupping practitioner:

- The practitioner must wear disposable latex gloves whilst carrying out both types of cupping.
- The cups used must be thoroughly sterilised immediately before use.
- Before cupping actually begins, the patient's blood pressure and pulse must be checked.
- The blades used for wet cupping incisions should be disposable.
- The incisions in wet cupping should be superficial, involving the epidermis only.
- An antiseptic cream should be applied to the incisions after cupping is terminated.
- The patient should be questioned on how he or she feels – any unusual sensation or fever.
- All other necessary safety measures should be in place.

3.3. The main clinical disorders investigated

This review summarises the clinical disorders studied by the researchers from both the conventional medical and the Unani-Tibb perspective.

Generally speaking, conventional medicine attaches extensive importance to the role of signs and symptoms in the diagnosis of clinical disorders such as diabetes, hypertension and osteoarthritis. Typical signs include physical parameters, such as blood pressure and laboratory data, such as blood sugar levels, forced expiratory volume, and C-reactive protein. Typical symptoms include nose bleeds, headache, thirst, joint stiffness and pain. 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 patients temperament. Diseases are usually described in terms of qualitative imbalance. For example, the major form of hypertension is described as a hot and moist, imbalance, type 2 diabetes as a moist and hot imbalance, and osteoarthritis as a cold and dry imbalance.

3.3.1. Type 2 diabetes

Description. In conventional medicine, Type 2 diabetes is diagnosed by reference to repeated blood glucose levels, which may be abnormally high for a person at a particular time related to food ingestion. The reasons for such high levels are rarely stated, apart from reference to obesity or the nature of food taken.

Conventional treatment. Treatment of type 2 diabetes, as with hypertension, is based upon lifestyle changes supplemented with drug therapy. Loss of body mass is advocated for those diabetic patients who are substantially overweight, by resorting to a suitable diet, or by undertaking exercise. If drug therapy is resorted to, then drugs which stimulate the pancreas to release more insulin, or make the cells more sensitive to available insulin, or slow down the absorption of intestinal digestion of starch can be used.

Unani-Tibb. In Unani-Tibb, Type 2 diabetes is viewed as a chronic disease which develops as the result of an underlying disharmony in the body's metabolic regulation of carbohydrates and fats. This is seen as the result of poor management of the governing factors, especially diet and exercise. Unani-Tibb arrives at a diagnosis of diabetes based 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 to a moist and hot 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.

Treatment. 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.

The Unani-Tibb approach to diabetes involves measures to assist physis in overcoming excess moisture. This is achieved by modifying the person's governing factors and administering herbal medication.

3.3.2. Hypertension

Description. In conventional medicine, hypertension is defined in terms of arterial 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 proposed, although a reference to too much dietary salt or stress may be mentioned. The disorder is therefore defined in terms of signs and symptoms, and no real effort made to describe the underlying changes – metabolic, hormonal or structural – which precede and aggravate the disorder. Conventional medicine recognises two forms of hypertension; (a) essential hypertension, for which the cause is unknown, and (b) secondary hypertension, which arises as a result of another, co-existing, disorder, such as kidney disease or an adrenal gland disorder.

Conventional management. The conventional medical management of the hypertensive person, once accurately diagnosed, generally involves a two-pronged approach; namely, lifestyle modification and drug therapy. The patient is encouraged by the doctor to attempt and maintain his or her ideal body mass if overweight, restrict salt intake aggressively, reduce alcohol consumption, adopt a prudent eating plan, undertake regular aerobic exercise, and renounces smoking.

If lifestyle modification is ineffective, then drug therapy is instituted. This usually takes the form of a stepwise approach. Starting with diuretics, the doctor may add beta blockers, ACE-inhibitors, calcium antagonists, angiotensin II antagonists, or other agents. The patient may end up taken several drugs, which can make treatment expensive, and prone to many side effects and metabolic disturbances.

Unani-Tibb. In Unani-Tibb, the abnormal rise in blood pressure is explained in terms of changes to the affected person's qualities and humours, and his or her temperament. There are two main types of hypertension; (a) that due to a hot and moist, or sanguinous, imbalance; and (b) that due to a cold and dry, or melancholic, imbalance.

Sanguinous hypertension. In hypertension due to an imbalance in the hot and moist qualities, the most common imbalance found in hypertensive people, there is as an increase in the volume of blood circulating within the body. Those who have a dominant or sub-dominant *sanguinous* temperament are at greatest risk. This form of hypertension results from the person consuming excessive amounts of hot and moist foods. These increase the sanguinous humour, as well as incorrect management of the governing factors. This leads to an excess of hot and moist qualities. This form of hypertension is equivalent in most respects to *essential* hypertension.

Melancholic hypertension. In hypertension due to an imbalance in the cold and dry qualities, there is increased rigidity of the person's blood vessels, especially of the arteries and arterioles, arising from a person having a melancholic (cold and dry) imbalance in the vascular system. This type of hypertension is usually found in those who have a *melancholic* dominant or sub-dominant temperament. The raised blood pressure is due mainly to the person consuming too much 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.

Treatment. The Unani-Tibb treatment of the hypertensive person, once accurately diagnosed, involves a triple approach; namely, (a) the governing factors; (b) dietotherapy; (c) herbal medication; and (d) regimental therapy. Modification to the *governing factors* involves appropriate breathing and physical exercises, adequate rest and sleep, dealing with emotional problems, and the proper elimination of toxins from the body. *Dietotherapy* entails restoring qualitative balance by such measures as eating temperamentally appropriate foods, reducing those which aggravate the qualitative imbalance, such as salt, increasing fluid intake, and avoiding certain items – fried foods, alcohol, caffeinated beverages and pickled foods. *Herbal medications* depend on the type of hypertension affecting the person. Many are now available, each with specific herbs or their extracts, which lower raised blood pressure gradually.

Regimental therapy consists of a range of disparate techniques, one or more of which are selected for dealing with specific clinical disorders. It includes fasting, purging, massage, hydrotherapy, acupuncture, aromatherapy and cupping.

3.3.3. Osteoarthritis

Description. This degenerative disease of the joints resulting from wear of the articular cartilage is considered by conventional medicine to be either primary in nature, with no obvious cause, or secondary to excessive load on the joint, or to inflammation, or from physical damage. It is diagnosed by X-ray, and by the presence of inflammatory cells.

Conventional treatment. Therapy in conventional medicine consists mainly of reducing the weight load on the joint by a weight loss dieting or exercise regime, and by relieving the pain with the use of analgesics and anti-inflammatory agents. Several surgical options are available for severe, intractable cases.

Unani-Tibb. In Unani-Tibb, osteoarthritis is regarded as a degenerative disease of the major skeletal joints, which is a natural consequence of a long-term qualitative cold and dry imbalance. The disorder occurs later in life, as the temperament of the sufferer changes more towards the cold and dry qualities, which aggravates the naturally cold and dry qualities of the connective tissue present in the joints. Other factors involved in its progression are being overweight, hormonal changes, and excessive intake of cold and dry food, and governing factors which lead to a cold and dry qualitative imbalance.

Treatment. The symptoms of morning stiffness, joint pain and swelling, especially after movement, are usually addressed by herbal medication, whereas the qualitative imbalance is redressed by a series of measures involving the governing factors. Diet-wise, the sufferer is encouraged to increase the heat and moistness qualities, by undergoing light exercise where possible, and consuming more moist fruit and

vegetables. Elimination of toxins is increased by a high-fibre diet, increasing fluid intake, breathing exercises and avoiding animal proteins and fats, fried foods and caffeinated beverages.

4. Research methods and instruments

4.1. Study design

All components of the study were of an open, prospective pilot format. Generally, the patients recruited were assessed regards medical history, and were rigorously clinically evaluated prior to the commencement of the study. A full explanation of what was involved and expected, and their rights to withdraw from the study, was given. They were allocated randomly (stated in 2 of 3 studies) to either experimental or control groups, and received cupping therapy at specific intervals over a period of time, at nominated sites. All patients in the three groups received both conventional and Tibb medication for their respective ailments, and were encouraged to maintain this therapy. All patients, both experimental and control, were advised in depth about relevant changes to their governing factors, especially regarding diet, physical activity, elimination and stress alleviation. The experimental parameters were assessed prior to the study, and at specified during and/or after the study.

4.2. Study sample

The research project was carried out at the Tibb Medical Centre, Langa, Cape Town. Patients selected were Xhosa-speaking African out-patients, domiciled in the nearby Langa Township. The educational and economic level of the patients was in the lower quartile.

The number of patients and other relevant information in each component of the study is compiled in the table.

4.3. Data collection / measurements

Temperament analysis. This was 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 was determined according to standard Unani-Tibb and conventional clinical practice. That is, the researchers assessed the patients presenting signs and symptoms, with a clinical evaluation, supported if necessary by the appropriate pathological testing, to confirm diagnosis.

Quality of life. This was performed using the *QoL Patient Evaluation Questionnaire*. The assessment was carried out at the beginning of the study and shortly after completion. The researchers took into consideration the patients' educational background, language fluency, and innate conservative nature.

The parameters measured were:

- | | |
|---|--|
| ◆ <i>Current health status</i> | ◆ <i>Affect of disease on daily work duties</i> |
| ◆ <i>Current quality of life</i> | ◆ <i>Effect of treatment on understanding of the disease</i> |
| ◆ <i>Impact of disease on social activities</i> | ◆ <i>Effect of treatment on feeling of control over health</i> |
| ◆ <i>Emotional state and social activities</i> | ◆ <i>Feeling of positiveness about recovering from the disease</i> |
| ◆ <i>Personal energy level</i> | ◆ <i>Satisfaction with current treatment</i> |
| ◆ <i>Feeling of nervousness</i> | ◆ <i>Recommendation of treatment to friends and family</i> |
| ◆ <i>Sleeping problems</i> | |

4.4. Governing factors / advice

In all three research groups, both experimental and control, the patients were advised on lifestyle matters. The particular advice on the adjustment of the patients' governing factors focused on restoring the qualitative balance. Details of the advice were recorded in two of the groups. The main areas of advice covered the following: dietary matters; physical exercise; breathing exercises; removal of toxins from the body; dealing with emotional and stress-related problems; and encouraging good sleep hygiene. The hypertension group specified governing factor recommendations for both the sanguinous and melancholic forms of hypertension, with most effort directed towards diet and emotions.

4.5. Timeframe for the study

The research project took place over a four-month period. The actual practical period ranged from four to six weeks.

4.6. Ethics statement

The study involved the active and willing involvement of all participating patients. It was conducted according to accepted ethical practice. This included:

- A discussion with the patient on the nature and value of the study
- Provision of an information sheet detailing the study
- Informed consent by the patient after reasonable explanation of his or her involvement in the study.
- The option to the patient to withdraw from any stage of the study without explanation. All patients were aware that they were free to discontinue their active involvement in this study, without prejudice.
- An assurance that there was no personal involvement of the participants that exposes them to physical or mental trauma.

Disorder studied	Type 2 diabetes	Hypertension	Osteoarthritis
<i>Patients recruited</i>	Experimental 10 Control 10	Experimental 10 Control 10	Experimental 10 (f) Aged 46 to 80 years Control 8 (6f; 2m) Aged 42 to 72 years
<i>Patient allocation</i>	Random to control or experimental	Random to control or experimental	Not stated
<i>Inclusion criteria</i>	Patients not covered by the exclusion criteria	BP > 140/90 mm Hg	Osteoarthritis of specific joint
<i>Exclusion criteria</i>	Infants, patients with heart problems, bleeding disorders, cancer, muscle spasms, pregnant women	None applied due to time constraints. All ages, both types of HT, and all temperaments admitted.	Pregnant women; pats <40 yrs; pats malnourished, dehydrated or with low immune systems or fatigued; alcoholics; previous cupping
<i>Patient information gathered</i>	(a) Vital signs; BP/PR medication and diet compliance; foot, eye exam; urinalysis; medication given (b) Quality of life data: general health status (c) Temperament	(a) Quality of life data: general health status; current qol; occupational effect; satisfaction; psychological & emotional aspects (b) Temperament	(a) Past. Info, medical history, lifestyle (b) Vital signs; BP/PR (c) Urinalysis (d) Pulse, tongue diagnosis (e) Quality of life data: general health status (f) Temperament
<i>Investigational parameter(s)</i>	Blood glucose	Arterial blood pressure, systolic and diastolic, pulse rate, blood glucose	Pain intensity, quality; ROM positions; mobility, swelling, crepitus of affected limb
<i>Instruments used</i>	Glucometer, urine dipstick, sphygmomanometer, ophthalmoscope, cupping set	Sphygmomanometer, glucometer, timer, mass scale; Accutrend cholesterol assay; urine dipstick; cupping set	Pain questionnaire; cupping set
<i>Cupping sites</i>	Back 9 / 10 / 11 / 12 Abdomen 2 / 4 / 6	Back 1 / 2 / 4 / 9 / 11	Shoulder B2 / 4 / 5 Knees LE 5 / 6 / 7 / 8
<i>Cupping characteristics</i>	Time: 15 minutes Vacuum: 2 to 3 pumps Mainly dry cupping	Not stated	Time: 15 minutes 4 sessions in 3 months Massage after use
<i>Medication used</i>	Glucostop; Tibb Diabetes tablets; Tibb Diabetes Plus; Gulmundene Tea	Conventional antihypertensives; <i>Sanguinous HT</i> : Pressure-eeze Forte; Renotone; Coronary Care; Stress Away; Lochol <i>Melancholic HT</i> : Pressure-eeze Forte; Coronary Care; Lochol Melanpurge, Herbolax	Not specified
<i>Practical phase duration</i>	4 - 6 weeks	4 weeks	4 weeks or 4 sessions in 3 months

5. Results and discussion

5.1. Type 2 diabetes

Blood glucose levels were lowered consistently in almost all experimental patients subjected to cupping, when comparing blood glucose levels before (mean 11.98 ± 10.11 SD) and after (9.86 ± 8.93 SD) undergoing cupping (statistically, $p < 0.001$). Some reductions in this parameter were impressive. In the control group patients, there was also a fall in blood glucose levels, although this fall was noticeably inconsistent and less marked.

On quality of life issues, the experimental, cupping group patients showed substantial improvement in patient health parameters when the final cupping session was compared to the initial one. The majority of patients showed an increase in energy levels and improvement in sleeping habits. The experimental group had more patients that completed both their first and last sessions compared to the control group. All control patients treated with medications, both conventional and Tibb, also showed an improvement in the quality of life parameters. They were happy with the treatment received, and willing to recommend it to other people who may benefit.

In terms of temperament, in the experimental group, 40% were dominant phlegmatic with sub-dominant sanguinous, and 30% dominant sanguinous with sub-dominant phlegmatic. A further 20% were dominant bilious with sub-dominant sanguinous, and the remaining 10% dominant bilious with sub-dominant melancholic. By contrast, in the control group 40% were dominant phlegmatic with sub-dominant sanguinous, and 20% dominant sanguinous with sub-dominant phlegmatic. A further 20% were dominant sanguinous with sub-dominant bilious, and the remaining 20% dominant sanguinous with sub-dominant phlegmatic. These observations are largely in line with those obtained in previous projects.

5.2. Hypertension

The statistical analysis carried showed that there was a significant reduction in the blood pressure of the patients who underwent cupping as adjunctive therapy over the four week period, when compared to the patients in the control group.

In the patients undergoing cupping, there was a noticeable improvement in the overall quality of life when the final assessment was compared to the initial. Most patients reported improvements in several parameters, especially their current health status, physical health, emotional state, and satisfaction with current treatment. Improvement was also evident in increased energy levels and better sleeping patterns. The patients were confident about the outcome of their disorder, which suggests that conducting research was a form of education for the patients. The control patients likewise demonstrated significant

improvement in their quality of life parameters, indicating marked satisfaction with their antihypertensive treatment, either conventional or Tibb.

After the four week programme, all patients, both the experimental and control groups, were impressed with the treatment regimen, and responded positively to the current treatment. All patients were personally satisfied with the Unani-Tibb approach, because it allowed them to continue with their occupational activities and social life. A good response was obtained on the perceived value of Unani-Tibb and its affordability

Temperament-wise, the patients who took part in the study, who belonged to the black community, were dominant or sub-dominant sanguinous. This should be noted in the context of sanguinous hypertension being a disorder arising from poor lifestyle behaviour. This again was largely in line with observations made in previous projects.

There was some discussion by the researchers on the nature of hypertension from both the Unani-Tibb and allopathic, conventional perspective. The concepts of baroreceptor sensitivity, peripheral resistance, cardiac output, pulse rate and circulating catecholamines were referred to. The structure and elasticity of a person's blood vessels, and the formation of atheromatous plaques, were mentioned as both a cause and aggravating factor in hypertension. Left ventricular hypertrophy was noted as developing from increased peripheral resistance. Kidney complications resulting from continuing hypertension were also noted, as were the underlying physiological changes. The development of hypertension in response to the patients' obesity, alcohol consumption, and excessive salt consumption was explored, especially as these aberrations are the result of disturbed governing factors.

It was noted that patients who were experiencing substantial emotional turmoil responded slower to cupping therapy compared to those who were relaxed during the treatment period.

5.3. Osteoarthritis

General comments from the patients regarding their day to day activities indicated that a substantial improvement. Typically, activities such as gardening, sewing, climbing and walking all improved. A number of patients who previously made use of a cane as a walking aid noted that they used it less frequently after cupping therapy.

On experiencing pain, all patients reported a marked reduction in pain intensity after cupping, as assessed by the pain faces questionnaire. Specifically, there was an impressive fall from "high" pain levels to "mild" levels in 50% of patients cupped, and a fall from "high" to "moderate" in a further 30% of patients. Control patients also elicited a degree of pain relief, but lower in intensity than that achieved by cupping.

On crepitus (the grating sensation experience on joint movement): of the 13 patients (out of 16) who had it, 3 were free from it after the final cupping session. In those still experiencing it, the intensity was judged to be less. The results indicated a significant improvement brought about by cupping, whilst the control group showed little if any benefit.

Joint swelling was not present in many patients, so no definite comparison can be made, or conclusion drawn. However, joint stiffness was reduced significantly in patients undergoing cupping.

Cupping exerted a drug sparing effect, as many patients who were receiving non-steroidal anti-inflammatory agents, such as ibuprofen or diclofenac, were able to reduce the daily dosage of these agents, or even dispense with them altogether.

The patients undergoing cupping are described in the table above. Only 5 patients attended all 4 cupping sessions, so their data was used. The results indicated that all patients showed a marked improvement in the symptoms of osteoarthritis and their quality of life parameters after they had received cupping therapy. Although there was an improvement in the parameters measured in the control patients, the benefits were more evident in the patients undergoing cupping. There was a minimum of five quality of life parameters improvement in all patients. More than 50% of patients showed significant improvement in a number of important quality of life parameters, such as: positive about getting better (10/10 pats); a feeling of control over the disease (10/10); satisfaction with treatment (9/10); ability to perform daily work activities (7/10); a decrease in sleeping problems (7/10) and nervousness (6/10); increase in energy levels (6/10); and improvement in current health status (6/10). Even further improvement was noted in 2, 3 or 4 parameters; about getting better (7/10 pats); feeling of control (7/10); and associated pain (7/10). Seventy per-cent of patients undergoing cupping reported an improvement in their ability to perform daily work activities, compared to 40% of the control group. Cupping therapy appears to improve quality of life more effectively than lifestyle adjustments and medication alone.

The results show that cupping is effective in reducing pain levels and joint crepitus, and increasing mobility in knees and shoulders affected by osteoarthritis. Moreover, cupping has a beneficial effect on the quality of life of the patients affected.

Regarding mechanism of action, the researchers noted that the reduction in pain is consistent with the hypothesis that cupping stimulates the release of morphine-like endorphins, serotonin and cortisol. These internal mediator substances have been shown to possess potent analgesic activity. The similarity of the acupuncture insertion points, acupressure points and cupping sites used in pain relief was noted by the researchers. In addition, cupping stimulates or activates the immune system, and encourages the secretion of the enkephalins and neurotransmitters. Cupping appears to influence the underlying pain physiological mechanisms.

When the correlation between temperament in patients with osteoarthritis and the degree of clinical improvement was explored by the researchers, there appeared to be no direct linkage. However, they did concede that the sample size was too small to detect such a link, and that further studies in larger numbers of patients are indicated. They did point out that as osteoarthritis is a cold and dry disorder, and that as we age we tend towards increased coldness and dryness, then modification of a person's governing factors should be encouraged in order to mitigate the effects of these humoral changes.

Finally, the cost effective impact of cupping was discussed. The researchers felt that cupping therapy has the potential to reduce the financial burden on both the individual and the community. They noted that

cupping improved the quality of life, so allowing the patient to become more productive. “Correct lifestyle improvement in combination with cupping therapy has the potential to reduce the great cost of arthritis treatment to the state and individual, as medical costs escalate”, the researchers concluded.

6. Perceived deficiencies of the studies

6.1. General

The use of dummy or sham cupping could have been used in the control patients in order to arrive at better comparative data. In other words, cupping could have been applied at sites other than the therapeutically recommended ones. This would have eliminated the possibility of placebo reaction in the comparison.

6.2. Type 2 diabetes

The researchers noted that the time-frame for the study was too small – a point echoed by the other study groups. A study period of at least 3 months would have been more productive of clinically relevant results. In addition, the patient sample size was perceived by the researchers as too small, so disallowing any statistical analysis of the results. One study limitation was identified as language related – the (in)ability of the researchers to communicate effectively with their Xhosa-speaking patients.

6.3. Hypertension

From the patient perspective, the researchers were clearly frustrated by the degree of patient withdrawal. Another deficiency was the relatively short duration of the study, as this did not allow, the researchers felt, real possibility of detecting significant changes in clinical parameters. Yet another was the small number of patients accepted into the study, as this precluded proper statistical analysis. Communicating effectively with the patients was also identified as a negative factor.

A major perceived deficiency of the study was the need to standardise the measurement of the clinical parameters, both metabolic and biometric, as certain discrepancies were noted in retrospect, such as digit preference, rounding up and arising from poor instrument calibration. Inter-centre variation was also identified. Another related to the practical aspects of the study, including the access to equipment and assay procedures that were fully functional, such as weight scales, cholesterol assays. Administrative problems were also highlighted – organizational authority, technical difficulties and lack of support amongst them.

From the researchers' perspective, the lack of on-going supervision was an issue, together with the lack of access to information sources. This latter compounded the challenge that the researchers felt regarding their lack of previous experience in research methodology and quality of life assessment.

6.4. Osteoarthritis

The major perceived deficiencies of this arm of the study were acknowledged as the short duration allowed for cupping therapy, and the small number of patients involved. One consequence of the latter was that there was not a good match between control and the experimental cohorts, as equal numbers of

patients presenting with similar symptoms were not allocated to the two. One relevant point raised by the researchers in this context was the importance of inter-personal variation (in pain perception and threshold) between patients. Other patient factors affecting the study related to communication; the inclination of the patients wanting to please the researchers (the 'Hawthorne Effect') and the difficulty in communicating in English as second language. In retrospect, the researchers felt that the study should have been conducted on one specific joint common to all patients. In addition, not enough time was budgeted for follow-up, which the researchers felt was necessary to evaluate duration of clinical benefit. A more general point referred to the minimal training and mentorship the researchers received prior to the study on the research methodology, practical procedures and results interpretation that were necessary for a satisfactory completion of the study. Finally, the researchers felt that the use of the Face Pain Analogue scale best served the need for an assessment of pain level and its subsequent relief.

7. Conclusions

The conclusions arrived at by the researchers can be briefly summarised as follows.

7.1. Type 2 diabetes

The pilot research study suggests that dry cupping can lower blood glucose in type 2 diabetics, even though they are receiving standard conventional or Tibb therapy supported by advice on the governing factors. The study also indicates that the majority of patients with the disorder are sanguinous / phlegmatic or phlegmatic / sanguinous in temperament. The number of patients involved in the study did not allow for a firm correlation to be established between temperament and the clinical improvement noted in the patients investigated. The researchers felt that further studies over a longer period of active treatment- time are needed in a larger cohort of patients, and to assess the duration of therapeutic effect elicited by therapeutic cupping.

7.2. Hypertension

In spite of the obvious and serious shortcomings acknowledged in the study, the researchers felt the outcome of study was successful. There was marked improvement in the majority of patients in quality of life parameters, with a marked reduction in blood pressure and body mass in several of the patients, and a welcome fall in elevated total blood cholesterol levels. The researchers felt that further, more extensive and better controlled studies should be conducted with closer control of methodology and data capture.

7.3. Osteoarthritis

The research study suggests that adjuvant cupping therapy provides pain relief, significantly improves ROM, and has a positive impact on the reduction of crepitus. It also has a positive impact on patient quality of life and global well-being. In practical terms, the use of the pictorial faces scale for pain intensity was considered useful by the researchers.

Furthermore, the study suggests that cupping therapy is a “safe, effective and relatively low-cost alternative and adjunctive therapy in the treatment of osteoarthritis”. The paucity of firm data did not allow a correlation between the temperament of the patients with osteoarthritis and the degree of clinical improvement. The researchers felt that further studies are needed in a larger number of patients with more homogenous symptoms.

8. Further studies

The researchers collectively proposed a number of studies for future projects. Common to all projects was the need to reproduce the study in a larger number of patients, and for a longer period of time. This would add more power and greater confidence to the conclusions. In this context, the need for better administration, clearer limits of authority, and improved communications were also proposed. Another common study proposed was to assess the duration of effect of cupping, by means of longer, more intensive, patient follow-ups.

8.1. Diabetes

The researchers felt that studies to indicate if cupping could be effective in the emergency treatment of diabetic complications would be fruitful. In addition, the cost effectiveness of cupping in type 2 diabetes would be an interesting project to pursue. In order to achieve valuable response to the cupping technique, the researchers felt that a deeper literature search into clinical disorders with a humoral rather than structural origin would be of value. Translation of published clinical accounts into the English language is seen as a possible further research activity. Conditional on all these proposed studies is the necessity for instruction of the researchers in specific aspects – quality of life assessment, better communication processes, and better pre-project instruction in methodology and process.

8.2 Hypertension

The researchers felt that a longer study period (3 to 5 months, at the least), coupled with longer, more effective follow-up, would provide more valuable information. Furthermore, assessment of patient temperament and its relationship to their clinical response would form the basis of a useful research topic. Also, a research study linking cupping to adjuvant governing factors is a possible topic, which again would be useful to pursue. Again, any further studies require greater preparation on the researchers' part regarding the basic principles and practice of research, combined with higher skills in clinical trial housekeeping – administration, communication channels, record keeping and recruitment of patients. Finally, any future study, the researchers stressed, should have access to equipment and materials which was readily available, reliable and well-calibrated.

8.3. Osteoarthritis

One proposed study would compare patients suffering from osteoarthritis for similar durations of time, and the efficacy of cupping in different joints. The clinical benefit of cupping at different frequencies would also be a subject for future research. Studies which produce more quantifiable data should also be conducted. Finally, studies assessing the combined effect of cupping with modification of the governing factors were proposed by the researchers. Relevant to all studies would be the presentation of information and conduct of the studies in a more language and culture specific format.

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UWC RESEARCH PROJECT REGISTRATION AND ETHICS



UNIVERSITY of the WESTERN CAPE
 DEPARTMENT OF RESEARCH DEVELOPMENT

APPLICATION DATED: 1 March 2007

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ANCE 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: Prof	
DEPARTMENT: School of Natural Medicine		FACULTY: Community & Health Sciences	
FIELD OF STUDY: Complementary Medicine			
ARE YOU:			
A member of UWC academic staff?	Yes <input checked="" type="checkbox"/>	No	<input type="checkbox"/>
A member of UWC support staff?	Yes <input type="checkbox"/>	No	<input type="checkbox"/>
A registered UWC student?	Yes <input type="checkbox"/>	No	<input type="checkbox"/>
From outside UWC, wishing to research at or with UWC?	Yes <input type="checkbox"/>	No	<input type="checkbox"/>

B. PARTICULARS OF PROJECT

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

EXPECTED COMPLETION DATE: **November/December 2007**

PROJECT TITLE:

An evaluation of the value of therapeutic cupping as adjunctive therapy in the treatment of a number of chronic clinical disorders: a pilot study

THREE KEY WORDS DESCRIBING PROJECT: **Cupping, adjunctive therapy, chronic illness**

PURPOSE OF THE PROJECT:

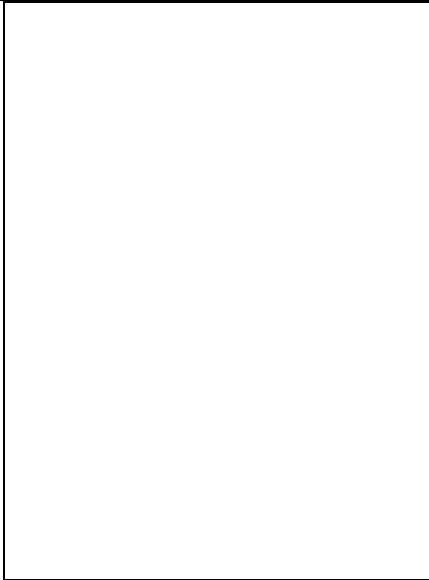
B-DEGREE X M-DEGREE: D-DEGREE: POST GRADUATE RESEARCH:

C. PARTICULARS REGARDING PARTICULAR RESEARCHERS

	FAMILY NAME:	INITIALS:	TITLE:
PRINCIPAL RESEARCHER:	BHIKHA	R.A.H.	PROF
OTHER RESEARCH PROJECT LEADERS:	MANXIWA QUBUDA	F. T.	DR DR

OTHER CO-RESEARCHERS:

1. Bulane, Teboho
2. Fakier, Ayesha
3. Kamden, Zahira
4. Kisten, Najwa
5. Lambis, Marula
6. Staak, Wendy



THESIS: STUDENT RESEARCHER: NOT APPLICABLE

THESIS: SUPERVISOR: NOT APPLICABLE

C. GENERAL INFORMATION

STUDY LEAVE TO BE TAKEN DURING PROECT (days): **Not applicable**

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

COMMENTS: DEPARTMENTAL CHAIRPERSON:

SIGNATURE OF THESIS STUDENT RESEARCHER – WHERE APPROPRIATE:

DATE

SIGNATURE OF THESIS SUPERVISOR – WHERE APPROPRIATE:

DATE

SIGNATURE OF PRINCIPAL RESEARCHER – WHERE APPROPRIATE:

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

Title of Study: An evaluation of the value of therapeutic cupping as adjunctive therapy in the treatment of a number of chronic clinical disorders: A pilot study.

Keywords: Tibb; cupping; adjunctive therapy; temperament; acute, chronic disorders; clinical benefit

1. Introduction

1.1. Definitions

There are basically three paradigms of medical treatment coexisting in South Africa¹. First, there is *traditional medicine*. Second, there is *conventional medicine*. Third, there is *complementary* (sometimes called alternative) *medicine*.

Traditional medicine is the indigenous medical belief typical of a particular region, such as sub-Saharan Africa. This is often termed 'folk medicine' or 'ethno-medicine'.

Conventional medicine is the standard scientific/medical model (or *paradigm*) for Western and developed countries; also termed orthodox or allopathic medicine.

Complementary medicine. This refers to the wide variety of medical or healing systems which are different in theory and practice to conventional medicine. Tibb is included in this category. The term complementary medicine is a vague and confused one in many minds, and is often used interchangeably with: alternative; holistic; natural; and fringe.

Most complementary medical systems are united in one important core aspect. When treating the patient, they act primarily to support the body's inner healing systems, rather than merely suppress the patient's symptoms.

Complementary medicine encourages self-healing and the prevention of disease, rather than reacting to and suppressing symptoms as they arise. In contrast, conventional medicine believes that only medicine and surgery can cure a disorder. Furthermore, conventional medicine is best at treating acute disorders, but complementary medicine has much to offer those who suffer from chronic complaints.

Complementary medicine actually describes three separate aspects of healthcare:

- ♦ *Diagnostic techniques* – pulse analysis, tongue diagnosis, iridology, for example
- ♦ *Therapeutic techniques* – *cupping*, aromatherapy, hypnotherapy, for example
- ♦ *Self-help techniques* – Yoga, detoxification and dieting, for example

The technique of cupping is an increasingly important aspect of Tibb therapeutic practice.

1.2. Cupping

Description. As practiced in Tibb, cupping⁵ is a safe, non-invasive and inexpensive technique. It is used to alleviate the pain and discomfort arising from disorders of the lungs and other internal organs, muscle spasms, joint pains, and numerous other conditions. It has been practiced for many centuries, and is an established technique, with various modifications, in several complementary or traditional healing systems.

Background. Hippocrates describes both dry and wet cupping in his *Guide to Clinical Treatment*. He recommended it for the treatment of angina, menstrual and other disorders. Later, Galen was a practitioner of the procedure. After a long period of neglect, cupping was revived in the Islamic period, in the 7th century. Strict adherence to rules of application was demanded, with close attention paid to process, timing and patient condition. In Europe, cupping was advocated by such medical pioneers as Paracelsus and Ambrose Paré. This technique has been used by practitioners of conventional medicine for many centuries to treat a range of diseases. Cupping is recommended for people with stomach pain, boils, weak circulation, shoulder pain and stiff necks, diarrhoea and vomiting, rib pain, menstrual cramps, headaches, bronchitis, colds, asthma, infertility, impotence, and haemorrhoids, amongst other ailments. Cupping has been practiced in Tibb as one of the regimental therapies.

Application. Cupping (also known as fire cupping, body vacuuming, and the horn method) is the practice of applying a partial vacuum by means of heat or suction in one or several bell-shaped vessels (suction cups) to specific and different parts of the skin. This results in the tissues beneath the cup being drawn up and swelling, with an increase in blood flow to the affected area. This enhanced blood flow under the cup draws impurities and toxins away from the nearby tissues and organs towards the surface for elimination. The time the suction cups are left in place varies according to the patient's age and physical constitution, and the medical disorder being treated.

Clinical value. Practitioners of cupping contend that this process strengthens the immune system, so encouraging the optimum functioning of the body. It diverts toxins and other harmful impurities from these vital organs towards the less-vital skin, before expulsion. The blood which is diverted allows for a fresh 'stream' of blood to that area. *Cupping* also stimulates acupuncture points, and releases biological opioids called *endorphins*.

Versions. There are two versions: dry cupping and wet cupping.

Dry cupping – as described above.

Wet cupping – in which the skin immediately below the cup is cross cut superficially several times – *lightly lacerated* – so that blood would actually be drawn by the vacuum from the skin into the cup.

For both forms of cupping, the patient is advised to increase their water intake.

Dry cupping is always used before wet cupping is considered. That is, wet cupping is only applied when repeated use of dry cupping has proven to be ineffective clinically.

The use of whichever form of cupping is at the discretion of the practitioner.

Integrative medicine

1.3. Value of this research project

The underlying motivation for this study is determining whether adding cupping therapy will have a beneficial effect to the treatment programme of patients suffering from a range of disorders commonly encountered in Tibb clinics. If so, to what extent is this benefit maintained, and how does it relate to the patients' temperament.

This research project is a mandatory part of the UWC Batchelor's Degree in Natural Medicine. It has been introduced in order to expose the students to the therapeutic principles and practice of Tibb.

It also serves as an important vehicle for conducting research in the Tibb sphere³⁻⁴.

2. Aims and objectives of the study

This pilot study will examine the clinical value of using cupping, either wet or dry, on the progress of a number of patients suffering from one of a number of acute and chronic disorders commonly encountered in the Tibb clinics. The patients will maintain the standard treatment offered by the clinic. That is, the cupping adjunctive therapy will not supercede or diminish the established, on-going therapeutic regime. The temperament of the patient will also be assessed, in order to establish whether there is a link between this and the degree of improvement in the disorder.

The specific objectives of this open label research project are to:

- ♦ To select a number of patients who present with chronic or recurrent identifiable clinical disorders.
- ♦ To diagnose accurately the patient’s clinical disorder according to both conventional and Tibb principles with respect to signs and symptoms, specific clinical parameters, personal medical and lifestyle history, and other indicators.
- ♦ To assess accurately the patient’s dominant and sub-dominant temperaments by application of the established Tibb methodology for determining this characteristic.
- ♦ To treat on a regular basis each of the patients with a standard cupping session.
- ♦ To evaluate the progress of the disease, and compare this, patient with patient, with the clinical record before cupping therapy was initiated.
- ♦ To statistically analyse the results both individually and pooled to ascertain the benefit of cupping as adjunctive therapy.

3. Research methods and instruments

3.1. Study design

This research event is a prospective, linear, open, pilot study.

The researchers will carry out the study in groups of two.

The data will be presented either separately for each group of researchers and collectively as a pooled report. Statistical analysis will be carried out using the appropriate technique.

The following clinical disorders which will be the target of this research project are:

Acute	Bronchial pneumonia Vomiting and Diarrhoea Gastritis Lower back pain Gallstones
Chronic/recurring	Bronchial asthma Dysmenorrhoea Hyperglycaemia Primary hypertension

These clinical disorders were identified on the basis of frequency and presentation of these disorders that the Tibb clinics in Manenberg and Langa.

3.2 Study sample

The research project is designed for each research group of two students to evaluate three of the above disorders in a total of fifty patients. Ideally each group should evaluate a minimum of ten patients per illness condition. (... in total) to evaluate fifty (50) patients with one of the chronic

clinical disorders listed above. Ideally, each research group should include at least 5 patients from each of five disease categories.

3.3. Cupping practice

Both dry and wet versions of cupping therapy will be employed. The version used per patient will be selected by the researcher, under the supervision of the Unani-Tibb doctor at the respective clinics.

3.4. Measurements

Initial clinical status. This will be determined according to standard Tibb and conventional 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.

Clinical progress. This will be determined before cupping is begun, and at each future contact, before the next cupping session is conducted. Standard tests used by the clinic will be employed.

3.5. Timeframe for the study

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

3.6. Results

The results will be presented individually in the form of a report by each research group.

The appropriate statistical techniques will be employed in order to assess the significance of the results. It will also provide pointers towards further studies if the results justify this.

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 1*)
- 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 Tibb

1. R.Bhikha & M.A.Haq. 2000. Tibb – Traditional Roots of Medicine in Modern Routes to Health. South Africa.
2. R.Bhikha. 4 Temperaments, 6 Lifestyle Factors. (2006). Ibn Sina Institute of Tibb, Johannesburg.
3. Progress Report on Research Project No. 03/09/15. Faculty of Community and Health Sciences. UWC. 14/03/05
4. 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
5. Postgraduate Diploma in Unani-Tibb Modules 1 – 11. (2003), UWC.

EVALUATION SHEET FOR DETERMINING TEMPERAMENT OF PATIENT

Patient name _____

Age _____ Sex _____ Date _____

Dominant: _____ Subdominant: _____
 Student Name: _____ Student No.: _____

CATEGORY	SANGUINOUS HOT & MOIST	PHLEGMATIC COLD & MOIST	BILIOUS HOT & DRY	MELANCHOLIC COLD & DRY
SECTION A				
FRAME	Medium to large frame, more muscle	Medium to large frame, more fat	Medium frame, lean	Thin, bony frame (short / tall)
GAIT	Macho stride	Slow pace	Firm stride	Quick, anxious pace
SPEECH	Clear, moderate to loud	Slow, soft	Sharp, talkative, loud	Fast, less vocal, soft
SKIN TEXTURE	Moderate in softness and moistness, warm	Cool, moist, soft	Warm, dry	Dry, rough, cold
COMPLEXION	Reddish or shiny	Whitish or pale	_____	_____
EYES	Moderate to large in size, bright, reddish with prominent capillaries	Moderate to large in size, watery, dreamy, attractive with bluish tint	Small to moderate in size, sharp, penetrating with yellowish tint	Small in size, active, darting, dry, sunken with greyish tint
VEINS	Apparent	Not apparent	Prominent	Noticeable
SECTION B				
PERSONALITY TRAITS	Persuasive, sociable, outgoing, talkative	Calm, accommodating, patient, good listener	Resourceful, outspoken, dominant, driver may be short tempered	Thoughtful, logical, analytical, tend to be perfectionists
EMOTIONAL TRAITS	Playful, cheerful, excitable, disorganised, tends to exaggerate	shy, self-contained, indecisive	Aggressive, angry, irritable, impatient	Fearful, insecure, suspicious, anxious
MENTAL ACTIVITY	Balanced response	Calm, cool minded	Critical, decisive, sharp minded	Restless, enquiring, philosophical, imaginative
CLIMATIC PREFERENCES	Likes cold, dry conditions, winter and autumn	Likes hot, dry conditions, summer and spring	Likes cold, moist conditions, winter and rainy weather	Likes hot, moist conditions, summer and rainy weather
SLEEP PATTERNS	Moderate to deep, 6-8 hrs	Heavy, at least 8 hrs, Tendency to oversleep	Low but sound, 5-6 hrs, Tendency to insomnia	Interrupted, irregular, insomniac
APPETITE	Healthy appetite with a moderate to excessive thirst	Slow, steady appetite, low thirst, can skip meals	Good appetite, excessive thirst, cannot delay meals, becomes irritable	Irregular and variable appetite and thirst
DRINKS - TEMPERATURE	Prefers cold drinks	Prefers hot drinks	Prefers cold drinks	Prefers hot drinks
HEALTH PROBLEMS	Hypertension, diabetes, congestion, esp. in head	Phlegm-related respiratory disorders	Inflammation, rashes or redness, hayfever,	Colon and gas-related disorders, insomnia



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