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CONTENTS

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Contact information
AJACM
PO Box 1635
COORPAROO DC QLD 4151
AUSTRALIA

Phone: + 61 7 3324 2599
Fax: + 61 7 3394 2399
E-mail: ajacm@acupuncture.org.au
Web: www.acupuncture.org.au/ajacm.cfm

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Editorial

I am very pleased to see this issue arriving as the news breaks that the Chinese medicine profession will be included in the National Registration and Accreditation Scheme for the Health Professions from 1 July 2012. Until now, Victoria has been the only state in Australia which has had registration for the Chinese medicine profession. In the next three years, much work needs to be done to prepare for national registration.

The opening ceremony of the Australasian Acupuncture and Chinese Medicine Annual Conference (AACMAC) in Melbourne on 23 May 2009 was specifically dedicated to celebrate this breaking news. In her keynote presentation following the Conference Opening Ceremony Dr Louise Morauta, Project Director of the National Registration and Accreditation Implementation Project, outlined the process leading up to that time and how registration would be implemented. She also pointed out three main issues that would be mandatory for all nationally registered professions: professional indemnity, continuing professional development and identity checking. Professor Vivian Lin, President of the Chinese Medicine Registration Board of Victoria, shared with us the Victorian experience, the challenges that national registration would face and the balance between the registration board, the association and the universities. You will find more in her guest editorial in this issue.

Not everyone recognises the contribution of Chinese medicine to human health or understands its philosophy. In 2006, an article entitled 'Farewell to Chinese Medicine' evoked a nation-wide debate about its future in China. In this issue, there are three short papers about this 'farewell' debate. Although the debate happened in China, it is relevant to us in Australia. Chinese medicine is under much questioning from various groups of society; some are political, some are academic and some are economic. I hope these three papers will stimulate thought in this area. We look forward to hearing your views.

Acupuncture assisted in-vitro fertilisation is a research topic that attracts much attention from medical specialists, acupuncturists and the public. In this issue, our Australian researcher, Associate Professor Caroline Smith, and her colleagues look further into the mechanism underlying this use of acupuncture.

Continuing from our previous issue, we have a paper about Shen. The authors, Qu and Garvey, review the classic literature and discuss the relationship between disturbed *shen* and modern diseases such as Attention Deficit Hyperactivity Disorder (ADHD).

In response to your wishes, we publish our first interview of a prominent 80-year-old Chinese medicine doctor in Nanjing, China, Professor Zhongying Zhou. In this interview, we ask him how to understand modern diseases with Chinese medicine theories, how to improve our clinical practice, and if we need to understand western medical science and modern research methods. Professor Zhou gives detailed accounts of how he used *Wei-Qi-Yin-Xue* theory to understand epidemic haemorrhagic fever and develop treatment approaches. He shares with us his personal experience of studying Chinese medicine. We hope you will find this article helpful for your personal development.

As usual, there are reviews of recently published Chinese medicine books and a current research report. Some of you might recall a systematic review published in the British Medical Journal early this year. It found that real acupuncture was as good as sham acupuncture in relieving acute and chronic pain. This review has received wide publicity on the radio, in newspapers and on the web. In Current Research and Clinical Applications you will find an analysis of the deficiencies of the review and the flaws in some of the recommendations.

Again, we bring you a plateful of ideas and discussion. We hope you will enjoy the reading. Please do not forget, we want to know your thoughts on the debate and the views presented.

Zhen Zheng
Editor-in-Chief

Guest Editorial

Vivian Lin* DrPH, MPH, BA
Professor of Public Health, La Trobe University
President, Chinese Medicine Registration Board of Victoria

Looking Back to Look Forward: Lessons from Chinese Medicine Registration in Victoria

Introduction

Australian health ministers agreed on 9 May 2009 to incorporate Chinese medicine (CM) practitioners into the national registration scheme from July 2012. As Victoria has been the only jurisdiction to register CM, it is useful to reflect on the issues faced by the Victorian Chinese Medicine Registration Board (CMRB, 'the Board') since its inception 9 years ago, in order to consider what lessons might be offered as the profession begins to plan for national registration. Equally, consideration of the past and present developments in the Australian health system may offer some pointers to the upcoming challenges and opportunities for the Chinese medicine profession.

What has the CMRB done?

The most basic part of the Board's 'core business' is to assess and register practitioners, through 'grandparenting', approving courses, and conducting exams. To this end, the CMRB processed and assessed more than 1600 registration applicants (and refused 170 of them) since its commencement, approved 20 courses (in 5 institutions), and conducted around 50 examinations.

The regulatory role of the Board requires that all complaints (now called notifications) be investigated. Since the Board's establishment, 139 investigations have been undertaken, representing a higher number than such boards as chiropractic and osteopathy, but lower than medicine, nursing and psychology. Many complaints arise because of miscommunication between practitioner and patient, or because practitioners have not fully understood the expected standard of professional ethics. The Board has endeavoured to resolve problems through a variety of means, such as warning letters and mentoring. Nonetheless, there have been 16 formal hearings and 4 referrals to the Victorian Civil and Administrative Tribunal (VCAT), plus 16 informal hearings and professional standards panel hearings.

The Board has taken its duty of protection of public health and safety seriously, including where individuals are holding out as qualified practitioners. There have thus been 24 successful prosecutions.

Ideally, however, the Board should be supporting good professional practice, as well as setting basic standards. To this end, the Board has issued 20 guidelines for professional practice and 19 related to legislation processes.

Of course, there can never be too much communication – with the practitioners, the government, other registration boards, and other stakeholders. CMRB maintains a highly informative website, produces annual reports that try to document the work fully, and issues regular newsletters whose bilingual content has grown significantly over time. In addition to specific consultations on guidelines, the Board established a reference group with practitioners and consumers, an initiative that became a model for the new Victorian Health Practitioner Registration Act 2007. Regular meetings with presidents, registrars, and legal members of other Boards were most helpful in learning from their experiences, establishing cooperative working relations, and ultimately having trust placed with CMRB to endorse other registered practitioners who wished to use the acupuncture title.

Some board presidents have remarked that the CMRB within a very short time has had to work on all the issues, that other boards have had some of these issues, and they have had them spread over a longer time span.

* Correspondent author; e-mail: registrar@cmrb.vic.gov.au

Aust J Acupunct Chin Med 2009;4(1):2–5.

It can be expected that these tasks and obligations will be mirrored at the national level. It must be remembered, too, that the establishment of underlying policies and systems (including governance arrangements) are pre-requisites to smooth implementation of the statutory responsibilities. A national system will be even more complex.

The biggest challenges for the Board

Over the past nine years, the Board has faced any number of difficult decisions, about individual cases as well as about policy. Many of these will resurface for the national registration board when it comes into existence.

The first big challenge was in setting the grandparenting standards. In particular, how to strike the right balance between people's right to livelihoods, the need to have an extended regulatory net to capture those whose skills might be questionable, and the ideal standards that the profession wished to achieve.

Equally difficult were the questions about how to set examinations, and whether overseas courses should be approved. In the ideal world, there would have been mutual recognition with registration boards in other Australian states, if not international mutual recognition. The reality was that CMRB was on its own.

The two longest standing policy development projects related to infection control guidelines and preparing the Board's submission for scheduling of herbs. The former was held up by delays within the Victorian Department of Human Services, whose cooperation was important to ensure the guidelines were seen to be relevant to all acupuncturists, whether registered by CMRB or endorsed by other boards. The latter was a much more complex exercise in pulling together the scientific material, and in a form that would satisfy both federal and state governments.

The three issues that the Board found most troublesome were:

(1) What to do about yet one more advertising complaint. Despite guidelines, newsletter articles, hearings, and prosecutions, the message just doesn't seem to get through that use of testimonials is not an acceptable practice in the Australian health care system.

(2) Yet one more explanation needed about the Board's role regarding health funds. This applies both to practitioners and to health funds, where practitioners had difficulty understanding that access to health funds was a matter for professional associations, not the registration authority. Conversely, health funds often failed to comprehend that the CMRB was not a professional association, and that its role was comparable to any other registration board.

(3) When one more practitioner refers to him or herself as a member of the board, thus illustrating continued confusion between what is a professional association vs what is the registration board.

A continuing challenge for the Board is developing effective communication with the profession. Despite various communication channels, and increasing effort at translations, there remain underlying difficulties for overseas trained practitioners coming to terms with the Board as a regulatory authority and the Australian regulatory regime.

Some of these challenges may surface with national registration, but at least there are some experiences in Victoria to draw from.

What contributes to Board effectiveness?

Within Victoria, the CMRB has a good reputation amongst boards for its approach to decision-making and its operational systems.

A good administrative system is the bottom line for delivering the core business. Having good governance policies (ranging from managing conflict of interest to media representation) is essential to instilling a culture of deliberative decision-making.

Some of the notable moments that capture the ethos of the CMRB include:

- At the first strategic planning day, practitioner members recalled the first term of the Board being the first time in their professional involvement where they could agree to disagree while respecting differences, and then finding ways forward.
- Vigilant and reflective decision-making was seen multiple times when Board members sought to consider systematically whether decision-making criteria had been consistently and fairly applied, whether for grandparenting or consideration of financial hardship.
- Focus on the legislative objectives and the role of the Board has been unwavering, with Board members, from time to time, reminding each other that the principle task for the Board is to protect public health and safety.

- Whenever a new issue arises and no policy has been established, the Board consistently strives for clarity about the policy issue first. Only when the policy framework has been agreed, and tested against hypothetical scenarios, does the Board return to the issue at hand and then apply the policy framework to the individual instance.

- The Board aims for team work and complementarities of skills in constituting committees, working groups and hearing panels, so as to draw on each others' strengths and perspectives.

- When a complaint arrives about the Board's own work, it is taken as a matter for reflection and learning. While there are often two sides to every story, a defensive attitude in the first instance seldom contributes to problem solving.

Beyond internal operations of the Board, maintaining good relations with other boards and the government has also been most helpful in the Board's ability to discharge its statutory obligations well. That the Board is seen in a good light by others also reflects well on the professionalism of Chinese medicine practitioners.

Issues still requiring attention at the national level

There will be many tasks confronting a new national board. At the organisational level, consideration will have to be given to whether separate state structures will be necessary and affordable; and if not, then how best to put into place consultative mechanisms. The most important policy issues will relate to national standards for registration – for grandparenting, course approvals, examinations and post-graduate specialties. With practitioners currently registered (which includes Victorian practitioners as well as some interstate practitioners at present) moving automatically across to national registration, the alignment between Victorian standards and any new or different national approaches will require careful deliberation. In the longer run, the question of international mutual recognition will also need to be placed on the policy agenda.

Beyond the administrative and policy developments, there are broader issues that will require attention. The CMRB has been keenly aware that overseas-trained members of the Chinese medicine profession have to make adjustments not only to the language of clinical consultation and practising in a different healthcare system context, but also to develop a deep understanding of Australian community expectations in relation to complementary healthcare. Miscommunication and misunderstanding are often at the heart of complaints, and these are cultural issues as much as they are linguistic problems.

At the same time, there remain misunderstandings within the Australian community and the Australian health system in relation to the role and value of Chinese medicine practice. Some have doubts about the evidence base for Chinese medicine, while others are concerned about the over-promotion of the efficacy of Chinese medicine treatments. The frequency of acupuncture treatment regimes and the dispensing of herbal medicines by Chinese medicine practitioners can be misinterpreted as over-servicing or a commercial practice. So there is a need to both promote a greater community understanding of Chinese medicine practice as well as to ensure ethical practice amongst practitioners.

To address these broader challenges will require a collaborative and cohesive approach across professional associations, educational institutions, and the registration board. With the requirement in the national registration system for compulsory continuing professional development (CPD), an ongoing partnership will need to be institutionalised quickly as well. Fundamentally, the registration board should be interested in quality improvement and minimisation of disciplinary action.

Additional interfaces that need to be worked on at national level

Registration is, of course, not just an activity of and for the profession. It is a regulatory responsibility delegated by government to a range of health professions. As such, there are a myriad of interfaces with the health system and with other areas of health policy that will require attention by a national board.

The most critical areas of interface will relate to:

- endorsement to practise acupuncture by other health practitioner registration boards to ensure comparability in the standards of practice within the Australian health system

- practitioner registration and product regulation by the Therapeutic Goods Administration (TGA) in relation to scheduling of herbs, but also with other authorities in terms of use of endangered species, quality of herbal supplies, monitoring of adverse events, etc

- the different state systems for complaints management and disciplinary procedures to ensure appropriate legal processes are in place as well as equitable processes for complainants and practitioners alike.

The CMRB experiences at the state level will have relevance for how to manage these interfaces at the national level.

Opportunities for engagement with the broader health system

Since the advent of the Rudd government, the pace of health reforms has quickened. These represent opportunities and challenges for the profession as a whole, with the need to follow a range of policy developments and to monitor the timing for engagement and input.

National registration has been one aspect of the national health workforce reforms. There are other dimensions that will have implications for the profession. Issues to watch include the proposal to develop generic competencies for health professionals, multidisciplinary teams, and workforce substitution (including prescribing rights).

The National Healthcare and Hospital Reform Commission (NHHRC), the Preventative Health Taskforce (PHT), and the National Primary Health Care Strategy will all report in mid-2009. The NHHRC has proposed four foci for reform: taking responsibility, connecting care, facing inequities and driving quality performance. These principles all have relevance for the Chinese medicine profession. For instance, the profession has a great deal to contribute in relation to supporting consumers taking greater responsibility for their health and well-being and for improved care coordination for chronic conditions. The profession within Victoria has also demonstrated its commitment to supporting disadvantaged communities, offering services to victims of the 2009 bushfires, to clients in alcohol and drug services, and in low-income communities. The question about quality performance might put a focus within the profession about what mechanisms exist to assure and improve quality and outcomes in professional practice.

The profession can equally consider how it might contribute to prevention in relation to the PHT's focus on obesity, tobacco, and alcohol. It is expected that National Men's Health and Women's Health Strategies will also be released in 2009, and no doubt there will be specific areas of clinical practice where the Chinese medicine profession can make a significant contribution.

Given Chinese medicine practitioners are used by many for primary care, either as a first point of contact, or in conjunction with a general practitioner (GP), the National Primary Health Care Strategy might be of particular importance, to see how the Chinese medicine profession should take its rightful place in the Australian healthcare system.

Conclusion: Some lessons from Victoria

Planning for national registration is expected to begin formally a year in advance from the date of the national system's commencement (1 July 2012). The key lessons from the CMRB since its establishment, that could be offered early on to a national board are:

- Stay focused. Stick to the knitting. Registration is about protecting public health and safety.
- Adopt good governance principles and practices. Good decision-making processes engender trust, which is a critical foundation for any group.
- Be meticulous about administrative decision-making. The Board is accountable for carrying out its statutory responsibilities.
- Appreciate diversity. Within the framework of protecting public health and safety, there is scope for different styles and emphases in professional education and practice.
- Reach out and communicate broadly with all stakeholders. The array of stakeholders is broad, and it is important to keep in mind the interests and needs of each group.
- Remember it should be win-win for both the community and the profession. It is in the interest of everyone to ensure inappropriate conduct and unethical practices are weeded out.
- Take a rightful place in the mainstream. Chinese medicine is appreciated by the Australian community, and it can engage successfully with the health system and health policy at large.

Letters to the Editor

Dear Sir/Madam

Please explain the association between constipation and neck pain, lower back pain and headache. Perhaps, it is just poor think [*sic*] and lack of clinical skills.

Edwin Y Miao
18 December 2009

Reference: AJACM 2008;3(2):22–27 Acupuncture for the Treatment of Normal Transit Constipation: A Case Report JZ Kremer & JC Deare

Authors' response

In the seventy-fifth chapter of the *Suwen*, Huang Di states, 'Do not forget that the myriad things of the universe have an intimate relationship with one another. They present as varied as yin and yang, internal and external, male and female, upper and lower, but they are all interconnected'.[1] As an holistic medical system, Chinese medicine regards the body, mind and spirit as an integrated, energetic whole. Thus while seemingly independent signs and symptoms may arise in an individual, at a fundamental level these expressions of disharmony are regarded as manifestations of a single underlying pathology.

For six months prior to the documented treatments, the patient had been taking a powerful laxative that would normally only be prescribed for 1 to 2 weeks. The long-term purgative action of this agent had depleted the patient's body fluids, dried her stools and injured the Kidney Yin. Kidney Yin deficiency had given rise to lower back pain and Empty Heat had further dehydrated the patient's intestinal fluids, so compounding the existing constipation.

This connectivity of symptoms was also evident in the patient's neck pain, which resulted from a fractured cervical vertebra suffered in childhood. The neck pain centered on the point LI 18 *Futu*, was regarded as an obstruction of the Large Intestine channel from which subsequent headaches had developed. This channel obstruction was also disrupting the function of Large Intestine organ (as above, so below) thereby contributing further to constipation.

Since the Large Intestine is responsible for excreting all turbid wastes from the body, it can be understood that any obstruction of this function will cause the entire system to suffer through increased toxicity and a reduction of free flow. Thus a person with long-term constipation may experience a worsening of pre-existing conditions including – low back pain, neck pain and headache.

Your comment suggests that while the holistic philosophy that underpins Chinese medicine has been established in texts both ancient and new, those who have fully grasped the implications of these subtle formulations remain relatively few.

Reference

1. The yellow emperor's classic of medicine: a new translation of the *neijing suwen* with commentary. Ni MS, translator and commentator. Boston and London: Shambhala Publications; 1995. p. 287.

Jason Kremer
Correspondent Author

Does Acupuncture Improve the Endometrium for Women Undergoing an Embryo Transfer: A Pilot Randomised Controlled Trial

Dr Caroline Smith*[1,2] PhD
Dr Meaghan Coyle[3] PhD
Prof Robert J Norman[1,4] MD

1. Centre for Reproductive Health, School of Paediatrics and Reproductive Health, The University of Adelaide, Australia
2. CompleMED, The University of Western Sydney, Australia
3. Private practice, Sale, Victoria, Australia
4. Repromed, Adelaide, Australia

ABSTRACT

Background: There is a growing body of research suggesting acupuncture may increase pregnancy and live births, when administered on the day of embryo transfer. The physiological effects of acupuncture that may influence the outcome from embryo transfer remain unclear. Aims: To examine the effects of acupuncture on uterine endometrium thickness and pattern, and the level of hormonal medication during an IVF cycle. Design: Randomised controlled trial. Subjects: Women undergoing an IVF cycle with a planned embryo transfer at day 3 or day 5. Setting: A reproductive medicine unit in South Australia. Intervention: Women were randomly allocated to acupuncture or standard care. Women in the acupuncture group received three treatments, the first undertaken on day 9 of stimulating injections, and two on the day of embryo transfer. Outcome measures: The primary outcomes were change in endometrial thickness and pattern, and levels of plasma progesterone, and oestradiol during the IVF cycle, through to seven days post-egg retrieval. Secondary outcomes included number of oocytes retrieved, number of oocytes fertilised, and biochemical pregnancy rate. Results: Endometrial thickness and pattern and levels of hormonal medication did not differ between groups on the day of embryo transfer or in the luteal phase ($p > 0.05$). There were no differences in any secondary outcomes. Discussion and Conclusion: The results of this pilot study suggest acupuncture did not influence the endometrium or levels of hormonal medication during the IVF cycle. The small number of subjects and incomplete data make conclusions difficult, and consideration must be given to whether the measurement parameters were sensitive to changes from acupuncture, or whether the study sample was too small to detect a change. Interestingly, for the women who received acupuncture, there was a non-significant trend towards a higher fertilisation rate and numbers of women proceeding to embryo transfer.

KEYWORDS acupuncture, infertility, randomised controlled trial.

* Correspondent author; e-mail: caroline.smith@uws.edu.au

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Introduction

There is a small but growing body of research examining the effectiveness of acupuncture as an adjunct to in-vitro fertilization (IVF). There are two systematic reviews reporting on a benefit from acupuncture when it is used as an adjunct on the day of embryo transfer (ET) for women undergoing assisted reproductive technology (ART) (OR 1.65, 95% CI 1.27 to 2.14).[1] A recent Cochrane review reported evidence of benefit when acupuncture is performed on the day of ET on the live birth rate (OR 1.89, 95% CI 1.29 to 2.77).[2] However, further research is required.

The endometrium in IVF cycles is subject to an altered endocrine environment, and factors influencing endometrium receptivity are poorly understood.[3] The thickness of the endometrium, morphology and uterine artery blood flow however have been identified as potential, important variables influencing the success of the implantation by the embryo.[4] Endometrium thickness is required to optimize the pregnancy rate and is partly a reflection of uterine artery blood flow. Pregnancies generally occur where the endometrium achieves a thickness of greater than 8 mm.

Conventional science has hypothesised that acupuncture works by neurological, neuro-hormonal and psychological mechanisms. Needle insertion into the skin and deeper tissues results in a particular pattern of afferent activity in peripheral nerves. The mechanisms through which acupuncture might influence female fertility could involve central effects on the release of neurotransmitters including ß-endorphin, which in turn influence gonadotropin releasing hormone (GnRH) release and impact on pituitary gonadotropin secretion, ovarian follicular growth, ovulation and fertility.[5–7] Acupuncture may also exert a sympatho-inhibitory effect which may reduce uterine artery impedance and thereby increase uterine and ovarian blood flow. Stener-Victorin (1996) demonstrated that when acupuncture was administered to 10 infertile women, blood flow impedance was reduced in women receiving acupuncture ($P < 0.05$).[8]

It has been suggested that this improved uterine blood flow could improve the growth and thickness of the endometrium. Acupuncture might also impact on local humoral factors that are involved with the regulation of implantation. A study by Paulus however found no difference between groups on the endometrium thickness and plasma oestradiol on the day of transfer.[9] The pulsatility index of uterine arteries before and after transfer was also not found to differ between groups ($p > 0.05$). In another trial, Quintero evaluated the effectiveness of acupuncture as an adjunct to IVF and found acupuncture significantly reduced the amount of gonadotropin used ($p < 0.05$), however no effect on the pregnancy rate was found.[10]

The physiological effects of acupuncture that may influence the outcome from embryo transfer remain unclear. There is currently no data available on whether acupuncture treatment administered earlier in the cycle effects the growth of the endometrium over the subsequent days following embryo transfer. The aim of this research was to examine a potential mechanism arising from acupuncture that may affect endometrial receptivity and subsequently increase the success of pregnancy rates. The research examined the effects of acupuncture on endometrium thickness and pattern from baseline, at embryo transfer and in the luteal phase, and the level of hormonal medication (plasma progesterone, and plasma oestradiol) during the IVF cycle through to seven days post-egg retrieval. The study also aimed to pilot the processes and procedures for undertaking further research in this area.

Methods

PARTICIPANTS AND METHODS

We recruited women to this trial from Repromed, a reproductive medicine unit in Adelaide, South Australia between October and December 2007. The research was approved by the Women's and Children's Hospital research and ethics committee, Adelaide. Women undergoing an IVF cycle with a planned embryo transfer at day 3 or day 5 were eligible to join the study. Women who were planning a frozen embryo transfer, or who were planning to have acupuncture were excluded from the study. Eligible women were identified by a research nurse at Repromed. All women received hormonal stimulation as per Repromed treatment protocols.

INTERVENTION

Women were recruited to the trial on day 9 of their IVF cycle. After obtaining their written consent, subjects underwent a traditional Chinese medicine (TCM) differential diagnosis to identify the predominant TCM syndrome, and baseline data was collected. Women were randomised to acupuncture or standard care groups. Randomisation was undertaken by the study acupuncturist, by taking the next sequentially numbered sealed opaque envelope. An independent researcher developed the computer generated randomisation schedule. The number of cases in each randomisation block was 2 and 4 and this was not revealed to the acupuncturist.

The two acupuncturists who administered the acupuncture over the study period were accredited members of the Australian Acupuncture and Chinese Medicine Association Ltd. Both acupuncturists have previous experience in this area, and with administering acupuncture clinical trials and private practice, (CS four years training and fifteen years clinical experience, MC four years training and nine years clinical experience). The majority of women saw the same acupuncturist for all

treatments. The trial was administered in private acupuncture clinic rooms, a 10 minute drive from the fertility centre. For women receiving acupuncture, an individualised acupuncture treatment was administered on day nine of the IVF cycle, as per our previous trial.[11] Treatment was administered according to TCM pattern differential diagnosis, and in consideration of the 'stimulation' stage of the IVF cycle, for example, supporting Kidney yin and building blood. The second and third acupuncture treatments were administered on the day of embryo transfer, and administered before and after the embryo transfer. The acupuncture treatment administered prior to embryo transfer included points PC 6 *Neiguan*, SP 8 *Diji*, LR 3 *Taichong*, ST 29 *Guilai*, and CV 4 *Guanyuan*, and auricular acupuncture points *Shenmen*, *Zhigong*, *Neifenmi* and *Naodian*. The treatment administered after embryo transfer included acupuncture points ST 36 *Zusanli*, SP 6 *Sanyinjiao*, and SP 10 *Xuehai*, and auricular acupuncture points *Shenmen*, *Zhigong*, *Neifenmi* and *Naodian*. Modifications were made to the Paulus treatment protocol[9]; we substituted CV 4 *Guanyuan* for CV 6 *Qihai*, to provide greater support to the Kidney qi. We excluded LI 4 *Hegu*, due to its use contra-indicated in early pregnancy, and to promote menstruation[12] and GV 20 *Baihui* was excluded due to the multiple use of acupuncture points to calm the patient.[9] Acupuncture was applied bilaterally, with the exception of the four auricular acupuncture points used on the day of transfer. Before the transfer, two points were needled in the right ear, and the other two points were needled in the left ear. After embryo transfer the side of auricular acupuncture was reversed. Seirin brand 0.22 x 30 mm acupuncture needles were inserted to tissue level and stimulated manually to elicit the *deqi* response. Needles were retained for 25 minutes in each treatment.

Women randomised to the standard care group received the standard Repromed treatment protocols only. Women allocated to this group were also offered acupuncture at no cost if they were to undergo a future embryo transfer.

Primary outcome data was assessed from ultrasound and blood tests. An assessment of the endometrium was made recording the pattern and thickness of endometrium by vaginal ultrasound. The ultrasound was performed by a nurse at the clinic who was blind to the subject's study group. A routine ultrasound scan was undertaken at day nine to assess timing for egg retrieval. Further ultrasound measurements were undertaken at the time of embryo transfer, and an additional non-routine ultrasound was undertaken one week following egg retrieval. The endometrial pattern was categorised by the study nurse blind to group allocation. Classification of endometrium pattern was made based on three criteria proposed by Gonen and Casper[12] as follows: type A, an entirely homogenous, hyperechogenic pattern without a central echogenic line; type B, an intermediate isoechogenic pattern, with the same reflectivity as the surrounding myometrium and a poorly defined central echogenic line; or type C, a multilayered 'triple-line' endometrium, consisting of a prominent outer and central hyperechogenic line and inner hypoechogenic region. Routine blood collection was undertaken on day nine of the IVF cycle for plasma oestradiol and progesterone, and additional blood was taken on day seven following egg retrieval. Nurses taking the blood were blind to the woman's group allocation. Secondary outcomes included number of oocytes retrieved, number of oocytes fertilized, and biochemical pregnancy rate, and were collected from clinical case records.

This was a pilot study, there was no data reported on the thickness or pattern of the endometrium in the literature to guide a sample size power calculation. The aim of the study was therefore to have 20 subjects available for analysis. The initial analysis examined the baseline characteristics of women randomised to the trial. The main analyses used an 'intention to treat' approach and compared differences in the primary study outcome measures between the two groups over time using repeated-measures analysis of variance. Comparisons were also made between groups in binary variables using the chi-square test. Data on serum was analysed using the Mann Whitney test. The analysis was undertaken by the investigator blind to study group. Levels of significance were reported at $p < 0.05$. Data were analysed using SPSS version 11.5.

Results

Forty six women were approached to participate in the trial (Figure 1). Eighteen women declined to participate in the trial, the reasons given included not wishing to be randomised to the study, the woman was already having acupuncture, or they were unable to attend for all proposed acupuncture sessions. Twenty eight women agreed to be randomised to the trial, and fourteen women were allocated to each group. One woman was withdrawn from the trial when she was unable to attend for measurements of the primary endpoints following randomisation. Six women were unable to complete their participation in the trial due to their treatment not progressing to embryo transfer; five of these women were in the control group, and one woman was in the acupuncture group.

The mean age of women participating in the trial was 35 years (Table 1). The majority of women had completed at least one IVF cycle, had a body mass index just above the normal range, and 64% were childless. Over 64% of women had experienced infertility for greater than two years, and the main reasons for infertility were unexplained (25%), or male factor (28%). Almost all women had finished high school (96%), 92% had completed vocational training award or university degree, and 86% were employed outside the home. Fifty percent had used

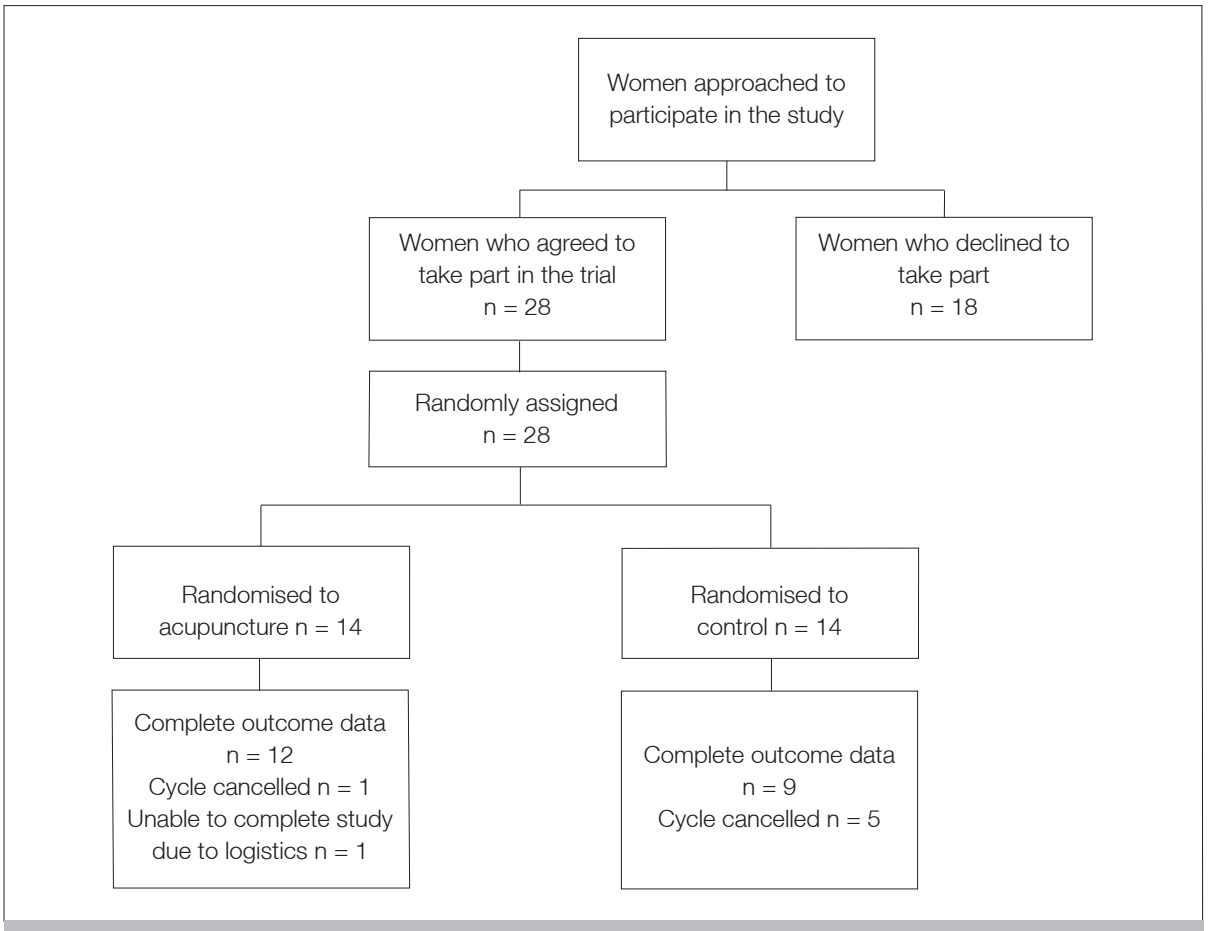

FIGURE 1 Trial flow chart

acupuncture previously. No differences existed between groups, suggesting randomisation produced comparable groups at baseline. We also present details of women's TCM diagnosis by group (Table 2). A Kidney deficiency was diagnosed in over 50% of women. The most frequent diagnosis was Kidney yang, and Qi stagnation. There were no differences in TCM diagnosis between groups (p = ns).

The primary and secondary outcomes are presented in Table 3. Endometrial thickness did not differ between groups at baseline, the day of embryo transfer or in the luteal phase ($p > 0.05$). Data on outcomes at three time-points were available from nine women; however, there was no difference in endometrial thickness or pattern between groups over time. There were no differences found between groups for other study outcomes: plasma progesterone and oestradiol levels at baseline and 7 days post-egg retrieval, number of oocytes retrieved, number of oocytes fertilized, and biochemical pregnancy rate.

Discussion

The findings from this pilot study provide no preliminary results that acupuncture administered prior to and on the day of embryo transfer has an influence on endometrial thickness or pattern, or plasma levels of progesterone and oestradiol levels. However, the small numbers of subjects, and incomplete data make conclusions difficult, and consideration must be given to whether the current measurement parameters were sensitive to changes from acupuncture, and that the pilot sample size was too small to demonstrate any small changes in the primary endpoints. We can conclude that the effect of acupuncture on these outcomes is not large. We were unable to measure blood flow in this study and the degree of endometrium vascularisation remains unknown. Interestingly, for the women who received acupuncture, there was a non-significant trend towards a higher fertilisation rate and the number of women proceeding to embryo transfer. Although not an outcome of the study the pregnancy rate was also not found to differ between groups, and may be explained by the small sample.

TABLE 1 Characteristics of the women at trial entry

	Acupuncture n = 14	Control n = 14
Age (years)	36.0 (5.1)	35.7 (5.0)
No. of previous IVF cycles		
0	2 (14.3)	3 (21.4)
1–3	10 (71.4)	6 (42.9)
4+	2 (14.3)	5 (35.7)
Duration of infertility (years)		
<2 y	5 (35.7)	5 (35.7)
2–4	9 (64.3)	7 (50.0)
5+	0 (0.0)	2 (14.3)
Parity		
0	7 (53.8)	11 (78.6)
1+	6 (46.2)	2 (21.4)
Reason for infertility		
Male factor	4 (28.6)	4 (28.6)
Maternal age	4 (28.6)	3 (21.4)
Tubal	1 (7.1)	1 (7.1)
Unexplained	4 (28.6)	3 (21.4)
Endometriosis	0 (0)	1 (7.1)
BMI	26.1 (4.3)	23.9 (4.8)
Finished high school	13 (100)	13 (92.9)
Completed tertiary education	12 (92.3)	13 (92.9)
Employed outside the home	14 (100)	13 (92.9)
Previous use of acupuncture	7 (50.0)	7 (50.0)

Values are number (%) of women or mean (SD)

TABLE 2 TCM diagnosis by group

	Acupuncture n = 14	Control n = 14
Kidney yang	8 (57.1)	6 (42.9)
Kidney yin	5 (35.7)	5 (35.7)
Blood deficiency	1 (7.1)	3 (21.4)
Heat	2 (14.3)	0 (0.0)
Qi stagnation	8 (57.6)	6 (42.9)
Blood stagnation	3 (21.4)	3 (21.4)
Sp Qi deficiency	5 (35.7)	3 (21.4)

Values are number (%) of women

Resources for the trial were to allow data analysis from 20 women. Although resources were allocated to 28 women randomised to the study, seven women withdrew due to their IVF cycle being cancelled. We also encountered some logistical difficulties with obtaining measurements of the endometrium. For embryo transfers occurring at the weekend we did not have access to staff who would undertake measurements for the study. We also found for those women proceeding to embryo transfer, some were reluctant to return for their blood and ultrasound measurements. These are important factors identified from the pilot relating to feasibility and study design, which will guide researchers with planning future research in this area.

One potential limitation of the study was the times scheduled for measurement of the endometrium and hormonal measurements. We scheduled measurements following embryo transfer (day 3 or day 5), and day seven, post-egg retrieval. This was based on an assumption that any acupuncture effect would be detectable at these time points. Although the day of embryo transfer varied between day 3 or day 5, both groups of women would have received hormonal stimulation to ensure the endometrium thickness met the IVF centre criteria. The current literature provides no evidence for when, and for how long, biophysical changes may occur after acupuncture; it is possible that any changes that may have occurred between and during the test interval have escaped detection. A study design with frequent measurements after initial exposure and longer intervals between measurements as time passes, may allow for detection of any acupuncture effects; however, the intensive requirements of this type of design may not be acceptable and practical for women receiving IVF treatment.

While there is a growing body of evidence for acupuncture improving the pregnancy rate with IVF treatment, the mechanism of action remains elusive. Research examining the potential mechanism of acupuncture following embryo transfer has focused on measuring uterine blood flow and changes within the endometrium. These preliminary studies suggest no effect from acupuncture. The aims of acupuncture treatment when administered on the day of embryo transfer are to increase blood and energy flow to the uterus, to sedate the patient and to stabilize the endocrine system.[9] Other potential mechanisms should be given consideration. Several papers have suggested that psychological state can impact on the chance of success with an IVF cycle.[12] There is little research examining the effect of acupuncture on the psychological state (either through

TABLE 3 Primary and secondary outcomes by study group

	N	Acupuncture	Control	Significance p value
Endometrial thickness				
Baseline	12/9	9.9 (1.8)	9.7 (1.4)	0.89
Embryo transfer	9/3	11.5 (2.0)	11.1 (2.0)	0.79
7 days post-egg retrieval	11/5	11.9 (3.0)	14.6 (3.7)	0.14
Endometrium pattern				
Baseline	10/8			0.63
B		4 (40.0)	5 (62.5)	
C		2 (20.0)	1 (12.5)	
B-C		4 (40.0)	2 (25.0)	
7 days post-egg retrieval	11/5			0.48
B		10 (90.9)	5 (100.0)	
C		1 (9.1)		
Oestradiol nmol/L				
Baseline	12/10	2.5 (1.9) (11.71)	2.2 (1.1) (11.25)	0.87
7 days post-egg retrieval	12/5	2.4 (1.7) (9.29)	2.2 (1.4) (8.30)	0.72
Progesterone nmol/L				
Baseline	11/11	3.2 (0.7) (12.36)	3.5 (2.2) (10.64)	0.56
7 days post-egg retrieval	12/5	389.6 (6.2) (9.17)	313.4 (221.4) (8.6)	0.87
Number of oocytes retrieved per subject	13/11	8.9 (6.2)	8.4 (5.6)	0.85
Number of ooyctes fertilised per subject	12/11	4.5 (4.4)	2.4 (2.4)	0.19
Biochemical pregnancy	12/9	2 (16.7)	2 (22.2)	0.74

Values are number (%) of women or mean (SD) with mean rank

biophysical measures or self-report questionnaires) of women undergoing IVF. Research in these areas, for example, cortisol levels as an indicator of relative levels of stress, may provide more information about possible mechanisms of acupuncture.

There is a need for further research in this area to clarify possible mechanisms of acupuncture. It is recommended that clinical trials incorporate collection of other biophysical and psychological measures to further the knowledge base.

Conflict of interest statement

The authors have no conflict of interest.

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Clinical Clinical trial registration <www.anzctr.org.au> registration number 12607000015448.

Clinical Commentary

IVF is a common and accepted form of treatment for many couples seeking assistance with achieving a pregnancy. Acupuncture may increase clinical pregnancy and live birth rates when administered on the day of embryo transfer, and interest is turning to exploring potential mechanisms. Our small pilot feasibility study found insufficient evidence to suggest acupuncture had an effect on the endometrium and serum levels of oestradiol and progesterone. The clinical implications of this study provide practitioners with no insight to a possible mechanism. The study does assist clinical researchers working in this discipline with the design and planning of future research.

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On the Psychological Significance of Heart Governing *Shen Ming*

Lifang Qu MMed
Shanghai University of Traditional Chinese Medicine, Shanghai, China

Mary Garvey* MHSc
College of Traditional Chinese Medicine, University of Technology, Sydney, Australia

ABSTRACT

According to the *Huangdi Neijing, Suwen* Chapter 8, the heart is the ruler of the body and the host for spirit brightness (*shen ming*). The paper examines the meaning and contribution of the heart with spirit brightness (*xin zhu shen ming*) to Chinese medical thinking. From earliest times, Chinese medicine's analysis of health and illness included the physical, sensory, emotional, social and cognitive aspects of the person's lived experience. The *shen*-mind with *ming*-brightness was said to radiate peace, virtue, clarity and intelligence, and the cultivation of *shenming* was thought to enhance one's physical health and longevity. In Part One, we discuss the conditions that influence the development of *shenming* and the maturation of mental-emotional intelligence. In Part Two we discuss its opposite, the heart without spirit brightness (*xin zhu bu ming*) to identify its mechanisms and the consequences for health. *Xin zhu bu ming* leads to the distortion of sensory perceptions and emotional responses, and refers to a person with mental-emotional instability and poor adaptive ability. Daoism, Confucianism and Buddhism identify the influences affecting *shenming*-spirit brightness and explain the connections between ethical conduct, correct qi, and mind-body health. Mental-emotional development and the cultivation of *shenming* is discussed and contrasted with the social consequences and clinical manifestations of human mentality without spirit brightness.

KEYWORDS Chinese medicine, intelligence, mental health, mental illness, mind and body, personality, psychology, self-cultivation.

Introduction

Although the Chinese medical tradition did not develop a distinct branch of medicine for psychological disorders, it analyses all manifestations of human life without separating physical, mental and emotional features. This means Chinese medicine is uniquely equipped to identify and treat body-mind illnesses because from ancient times it 'perceived the interior of the living body as a cosmos, combining cognitive ingredients, social ideals, physical data, and sensual self-awareness'.[1] The heart (*xin* 心) was seen as a physical organ as well as the abode of the spirit-mind (*shen* 神). The *xin-shen* received and coordinated sensory perceptions, generated cognitive processes, and managed emotional responses; and while the heart lodged the *shen*, the *shen* for its part governed the body form and its external appearance.

One of the earliest explanations of the relationship between the *xin-shen* (心神) and the body form (*xing* 形), between the inner spirit-mind and the external appearance, can be found in a Huang-Lao (Daoist) text of the early Warring States period (475–221 BCE). 'If the heart [in this context *xin* 心 is the heart-mind] is complete within, the [body] form will be complete without ... When a man is capable of being correct and quiescent, His flesh is full, His ears and eyes sharp and clear, His muscles taut, and His bones sturdy'.[2]

* Correspondent author; e-mail: mary.garvey@uts.edu.au

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Porkert explains *shen* as 'configurative force', meaning the 'directing influence' which shapes the body form and guides the materialization of qi.[3] Hay agrees with this reading of '*shen* as the force which shapes the materialization of [qi], in a process from active states (yang) through structured states (yin)'; he adds that the *shen*'s influence also 'conditions the character and the cohesion of the personality'.[4]

While the *Huangdi Neijing (HDNJ)* does not comment on contemporary notions of psychology as such it does contain many references to the *xin-shen* (heart-mind). This paper will examine a small section of the *HDNJ Suwen* Chapter 8 that describes the *xin*-heart as the sovereign ruler (*jun zhu* 君主) and host of the shen, and affirms the role of the heart with respect to spirit brightness (*shenming* 神明). *Shenming*-spirit brightness refers to a person with intelligence, perspicacity and clear insight,[3,5] and the heart's relationship with *shenming* invokes some of the core features of the Chinese perspective on human mentality.

According to the *Suwen* Chapter 8: 'the heart fills the role of sovereign ruler from whom emanate directing influence [*shen* 神] and clear insight [*ming* 明]'.[3] From this we may condense Chinese medical psychology to two basic ideas:

1. the heart-host with spirit-mind brightness (*xin zhu shen ming* 心主神明); and its opposite,
2. the heart-host without brightness (*xin zhu bu ming* 心主不明).

The first statement uses the *Suwen*'s analogy – the heart is the ruler and host of spirit-mind brightness – to indicate a healthy mind and personality. The second statement, the negative of the first, indicates a state of mental disarray and personality problems. The *Suwen* Chapter 8 is a key chapter describing the duties and relationships of the body's visceral systems, and here is some of the context for the heart and *shenming* statements above:

> The heart holds the office of eminent ruler, spirit brilliance emanates from it.
> … Therefore, the ruler with *ming*-brightness radiates virtue, peace and mental clarity, if one cultivates life one keeps the *shen* bright and has health and longevity. If the ruler governs with *shenming*, the country is great and glorious.
> If the ruler-host does not radiate brightness the twelve offices [the senses and their orifices] are in danger, the spirit path is closed and obstructed, the body form is severely damaged, if one cultivates life without *shenming* it is disastrous, if governing without *shenming* then the country will be ruined.[3,6-8]

The *Suwen* here condenses the complexity of psychological phenomena to emphasise two characteristics: the heart-host with and without the clear insight of *ming*-brightness (*ming bu ming* 明不明). *Xin zhu shen ming* and *xin zhu bu ming* form the basis of Chinese medicine's perspective on human consciousness and its ideas of psychological health and illness.

Our paper will discuss the significance of this short section of the *Suwen* Chapter 8 for human life and mentality, and the implications for medical practice. Our examination of this topic shows that the expression *xin zhu shen ming* not only encapsulates the notion of a healthy mind but refers to a state that facilitates our ability to cultivate heart-mind brightness. In Part One, we concentrate on *xin zhu shen ming* and its cultivation. In Part Two the discussion will shift to the problems of psychological obstruction and disorder resulting from *xin zhu bu ming*.

Part 1: *Xin zhu shen ming*

In the *HDNJ*, the body is analogous to a nation with a governing bureaucracy of offices that coordinate and manage its qi functions, movements and resources. In the *Suwen* Chapter 8, the *HDNJ* uses the importance of *shenming* for the ruler governing the nation to explain *shenming*'s directing influence on the human form, its life and health. Within the body/nation, the internal viscera and their associations are systems and configurations of orderly process, power and influence, and the *HDNJ* repeatedly emphasises the idea of health and illness as states of order and disorder respectively. The *zang*-viscera govern (*zhu* 主) the sense organs, body tissues, and the transformations and distribution of substances. The idea of *zhu*-governance bound together the body form (*xing* 形) and its functional processes, including its mental-emotional processes, and the *HDNJ* endowed the heart with clarity and intelligence (*shenming*).

The heart's governance of the five *zang* and six *fu* is a well understood tenet of traditional Chinese medicine (TCM), and all the *zangfu* have their own responsibilities that follow the associations of systematic correspondence. *Zhu* (主) also means to host, as in to receive or entertain. So just as a country's head of state, the *jun* (君) gentleman, lord and sovereign, receives its important guests, *xin zhu ming* means that the heart-host provides lodging for the *shen* and cultivates *ming*-brightness. If the heart-host receives *ming*-brightness, the people communicate harmoniously through all the nation's agencies and officials. And if the heart-ruler exerts his authority in a 'goodly manner' the effects of virtuous leadership spread throughout the empire.[8]

XIN ZHU – THE HEART RULER AND HOST

So to help its readers understand *xin zhu shen ming*, the *HDNJ* describes the living body as a nation with the heart as its eminent ruler – ultimate authority and control resides with

the head of state, who receives and takes care of the nation's guests. In the microcosm of the human form this is the role of the heart-mind (*xin-shen* 心神). To perform these functions the heart-mind and the ruler of a country must be bright and clear rather than marred, dull or confused. If the heart-host is without brightness, then intelligence, cultured life and general health are in danger.

In fact all the *zang* contribute to psychological health and intelligence (*shenming*). In reference to the *Suwen* Chapter 2 and *Lingshu* Chapter 8, Rochat de la Vallee says, 'When the clear and pure essences are nourished through the work of the five *zang*, then life is brilliant and the radiance of the spirits, *shen ming* (神明) is able to appear'.[9] In its management of the body's administrative offices (*zangfu* systems and *guan*-offices), the heart-mind receives and co-ordinates all their materials and influences, and to effectively govern the human form and its life functions, the *xin-shen* must have *ming*-brightness rather than dullness or confusion. A nation's ruler in fact needs exceptional qualities (*ming jun* 明君) to govern the country well and bring prosperity to its people, and just as the ruler with *ming*-brightness brings great glory to the country, the heart-host with brightness brings a cultured life with intelligence and longevity.

XIN ZHU SHEN MING – HEALTHY PSYCHOLOGY AND PERSONALITY

Many inherited and lifetime factors contribute towards *xin zhu shen ming*. At conception the new life begins with the inherited essence and spirit (*yuan jing* 元精 and *yuan shen* 元神) that provide the foetus with basic developmental resources, information, and instinctual functions. After birth, pre-natal resources are stored in the life gate (*ming men* 命门) and kidneys, and according to Li Shizhen (1518–1593) *yuan shen*, the pre-natal spirit-mind, is stored in the brain – 'the house of the original spirit'.[7] The pre-natal *yuan shen* governs instinctual functions, such as breathing, heart beat and digestion. These abilities are unlearnt and inherited from our biological evolution.

Post-natal consciousness (*shi shen* 识神) consists of the sensory information, feelings, thoughts and perceptions we experience during our lifetime,[10,11] and the heart is the host of the post-natal spirit-mind. So, the brain (*nao* 脑) houses the *yuan shen* (元神) and the heart is the ruler-host of the *shi shen* (识神). After birth, post-natal *shi shen* activities combine with those of the five spirits (*wushen* 五神), five yin viscera (*wuzang* 五藏 [五脏]), five senses (*wuguan* 五官) and five tissues (*wuti* 五体) functions, responses and processes. Their harmonious interactions accomplish human life so that one is able to act in the world.

At birth the *shi shen* is in an uncultured, unenlightened state, having little intelligence (*meng mei*, veiled and dark 蒙昧), and as the person develops and matures it gradually evolves towards a state of clarity (*ming xi*, never in a dark state, having good judgement 明晰). The psychological processes involved are lengthy and complex and in Chinese medicine, they are regarded as the development of the *shi shen* from *meng mei* to *ming xi*. Our progress towards *ming xi* from birth refers to the development and maturation of mental-emotional intelligence and cognitive powers such as analysis, discernment and judgement.

The development of *shi shen* psychological resources and character are strongly influenced by family environment, cultural, social and economic background and the level and style of education received; and intelligence (*li zhi* 理智) relies on the correct course of development. So what is correct for the development of intelligence and healthy psychology?

Sivin's examination of the *HDNJ* texts notes their use of political terms for early medical ideas. Health and illness are described as 'order' and 'disorder' respectively; *zhi*-treatment (治) is another political term meaning 'to overcome disorder'.[12] 'Sivin's explanation … enables one to perceive bodily health and healing in continuity with the self-cultivation of the superior man and the management of family, local, and state affairs'.[13] The notion of 'correct' (*zheng* 正) also links the cultivation of social and personal ethical conduct with familiar Chinese medicine concepts concerning correct qi (*zheng qi* 正气), and its opposite, evil qi (*xie qi* 邪气). *Xie*-evil is often translated as pathogenic in contemporary texts, replacing *xie*-evil with a more biomedical interpretation and avoiding the moralistic connotations of 'evil' for Westerners. Yet *zheng*-correct and *xie*-evil are purposely borrowed from the socio-political sphere of administrative ethics and invoke the moral dimensions of social relations.

Ethical conduct and the cultivation of virtue have been major topics of Chinese philosophy since very early times. Many Daoist and Confucian classics and other pre-Qin texts contain discussions on how to train and cultivate oneself. The *Book of Changes* (*Yi Jing* 易经) 'provides guidance for choosing appropriate action if action is called for and an inspiration for self-disciplining and self-cultivation of oneself toward better moral development'.[14] To cultivate the goodness of human nature, Mengzi (372–289 BCE) emphasised four virtues – benevolence (*ren* 仁), dutifulness (*yi* 义), propriety (*li* 礼), and moral intelligence (*zhi* 智). He stressed that one's qi (气) – in this context, *xin* is the heart-mind and qi is one's 'moral and physical energy – should not be forced', but gently lead by the will (*zhi* 志).[15] For the Confucians in particular, practices assisting the processes of ethical enhancement included rituals that helped bind their participants to upright behaviours.[16]

While Confucian texts argued for the cultivation of strength, respect and wisdom, the Daoists preferred non-assertiveness, quietude and simplicity. They replaced Confucianism's 'conformist methodologies for one that was non-imposing (*wuwei*) and did not seek to control the spontaneous expressions of the people (*Daodejing* 49)'.[17] Chinese Buddhist texts meanwhile identified wholesome and unwholesome mental factors, their resultant mental states, and appropriate corrective strategies. For example, ignorance and mental cloudiness lead to misperceptions and confusion and could be corrected by cultivating mental clarity. Aversion and ill will could be countered by loving kindness, selfish attachment by equanimity, laziness by effort and enthusiasm, and so on. In this way they developed a simple 'operational definition' of mental health and its cultivation.[18]

Overall, in terms of personal intentions and behaviours, the meaning of 'correct' in Chinese culture and medicine seems to have taken more account of one's social responsibilities and effectiveness than does the Western preoccupation with internal struggles and individual agency. The *HDNJ*'s political state/embodied self analogy becomes less metaphoric and more directly connected when we keep the two (social and personal) levels of lived experience in mind.

HEART-HOST IS CULTIVATED BY THE ETHICAL PERSON

Confucianism urges everyone to become a true gentleman (*junzi* 君子), a wise, ethical, exemplary person. Such a person always works to improve and strengthen him– or herself and to move forwards, so for example in the *Yi Jing's Great Appendix* the Heaven (*qian* 乾) and Earth (*kun* 坤) hexagrams state that:

> The [true gentleman] due to ['Heaven moves in strength'] is himself ceaseless in activity,

and:

> The [true gentleman] uses this rich virtue ['Earth power'] to support all creatures.[19]

The exemplary person with the power of heaven is untiring and consistently strong in character. With the power and devotion of earth s/he is able to bear all things, good and evil, without exception.[20]

In the *Daodejing*, Chapters 8 and 33, Laozi says:

> The highest good is like water. Water benefits everything by giving without taking or contending.
>
> It needs observation to know others, but reflection to know oneself. Physically strong, one can conquer others; mentally strong, one can conquer oneself. Content, one is rich; with strong will, one can persevere.[21]

Confucian, Daoist and Buddhist philosophical currents proposed injunctions that created a system of rites and dutiful actions, admonitions that encouraged the development of kindness and humanity, and simple moral rules that helped one abstain from harmful acts and guard against unwholesome influences. Daoist texts in particular linked the five precepts (against killing, stealing, sexual misconduct, lying, intoxication) and the five virtues (benevolence, wisdom, righteousness, propriety, faithfulness) with the *wuxing* (five transformative phases 五行) and the *wuzang* (the five yin organ systems). They explained that 'bad behaviour comes from a lack of control over the senses', that indulgence in the senses disturbs the *wushen* and causes 'confusion and darkness' and that in that state the *wuzang* can no longer function properly. Thus, 'Morality becomes an aspect of psycho-physical health and the proper qi-flow in the individual'.[22]

According to Buddhism *shenming* brightness is like a mirror which cannot become darkened by negative factors and misperceptions: if *shi shen* is correct (*zheng* 正), this means there is *ming*-brightness, and if *shenming* is bright, then the heart is correct and negative ideas cannot form. Furthermore, the inter-promoting qualities of host brightness, bodily health and a cultured life are said to give longevity. The wise and ethical person therefore practises virtue, temperance and restraint, and ethical behaviour shapes one's mental-emotional life and personality. Determination applied to continued, focussed, ethical practices helps to develop healthy psychological resources and to cultivate the body and mind.

So to correct the heart and brighten the *shen*, one must conquer oneself, know oneself, be content, and be strong. Thence: *xin shi jian feng*, *xin zhu jian ming*, *ren ge jian quan* (心识渐丰, 心主渐明, 人格渐全). Heart recognition is gradually plentiful, the heart host is gradually bright, and the person is gradually perfected.

To summarise the discussion so far we can say that the meaning of *xin zhu shen ming* in the *HDNJ* has three interlocking parts. Firstly, the heart is the host of the *shen*: the term heart-mind (*xin-shen*) refers to this meaning. Secondly, the *xin-shen* is to the body form as the ruler is to a nation: this part includes the heart as ruler of the *zangfu*. Thirdly, the *shen* must be *ming* and the heart governs/hosts *shenming*. Here in Part 1 we have examined the importance of *xin zhu shen ming* for the cultivation of positive mental and physical resources. In Part 2 we will continue the discussion to focus on *xin zhu bu ming* – the mechanisms and consequences of *bu ming* dullness and confusion.

Part 2: *Xin zhu bu ming*

In Part One – *Xin Zhu Shen Ming* – we discussed the *Suwen*'s analogy of political governance and how it draws attention to the role of a country's head of state. With regard to human life systems, the heart is the head of state. As befits its role, the heart governs and coordinates the *zangfu*, their functions and associations, and as host the ruler brings *shenming* to the nation and its people. In Part One we saw that the *Suwen* Chapter 8 affirms the correct and eminent fulfilment of the heart's role – *xin zhu shen ming* – and that for contemporary readers, this refers to a healthy mental-emotional state.

Where there is *xin zhu shen ming* the person's mental-emotional stamina and stability are strong; their adaptive abilities and responsiveness to change are positive and appropriate. Their emotions are not easily disturbed or only briefly disturbed, and they are not easily roused to extreme emotional responses. Such a person does not easily suffer from psychological disturbance. Their clarity and brightness (*shenming*) can be observed in their appearance, eyes, temperament and conversation.

Suwen Chapter 8 says that if the head of state (the heart) is dull and confused (*bu ming* 不明) the country (the body) is in chaos and its citizens are in danger. Thus, *xin zhu bu ming* is the basis of psychological obstructions (*zhang ai* 障碍), personality flaws (*que xian* 缺陷) and abnormalities (*bian yi* 变异). Generally speaking, the person whose heart is without *ming*-brightness has very little mental stamina; their emotional stability and adaptive ability are poor, and their psychological responsiveness and regulative ability are reduced. They cannot face, adapt to, or manage social or environmental changes. They cannot deal appropriately with social interactions, or with success, defeat, setbacks or frustrations. When faced with failure, their emotions and mental state are easily disturbed and their reactions are disproportionate because it is very difficult for them to regulate their heart state. In this situation extreme behaviours such as suicide and murder can occur, and they are more likely to suffer from psychological disorders and psychosis.

The post-natal *shi shen* (ordinary consciousness 识神) resides in the heart. The heart-*shen*'s management of sensory information, feelings, thoughts and perceptions is determined by the development of its *shenming* clarity and intelligence. The cultivation of *shenming* is influenced by inherited and acquired tendencies and involves all the *zangfu*, their associated tissues, substances and senses. In particular, orderly *shi shen* activities include the reception, co-ordination and analysis of information from the external world and received by normal sensory and perceptive functions. Specifically, those sensory functions are: visual perception (*yan shi* 眼识), auditory perception (*er shi* 耳识), olfactory perception (*bi shi* 鼻识), taste perception (*she shi* 舌识), and tactile perception (*shen shi* 身识). The heart-mind (*xin-shen* 心神) receives, coordinates and manages this complex stream of information and influences, so the orderly functioning of the five sense organs (*wu guan* 五官) belongs to the function of ordinary human consciousness, the *shi shen* (识神).

The *shi shen* is also called *shen shi* (神识) – the recognition, understanding and acquisition of knowledge and skills. *Shen shi* is heart *shi*, which means that everything we do depends on the heart. The heart-*shen* without *ming*-brightness is dull, confused and muddled; its reception, analysis and interpretations of sensory information are disordered and distorted. But *shen shi* recognition and understanding is not a singular function – it is performed by the unified activities of the five spirits (*wu shen* 五神) and their associated senses.[23] The role of the senses, our reception and interpretation of the external world, is crucial to how we experience life.

Even before the compilation of the *HDNJ*, Mencius (c. 371–289 BCE) and Xunzi (330–227 BCE) emphasized that the senses are ruled by the heart-mind and can interfere with ordering the person. Even earlier, in the *Spring and Autumn Annals* (770–404 BCE), the ears, eyes, nose and mouth were the four officials that guarded against excess pleasures that could enter and corrupt the body, and if the *shen* 'fixed on an external desire it could find itself permanently exiled from its dwelling place'.[2] In an essay called *Jie bi* (Dispelling obsessions), Xunzi explained that the 'sense appetites react mechanically to attractive objects, which cover (*bi* 蔽), that is, blind or obsess them', and similarly, the heart-mind can be 'obsessed, so that it blindly pursues a wrong course thinking it to be right'.[15] Disordered sensory perceptions distort our lived experiences and cause negative emotional responses, which then influence *zangfu* functions and lead to the situation described in the Suwen Chapter 8 where, 'if the host does not have *shen ming* then the twelve sense orifices are in danger, the spirit path is closed and obstructed, the body form is severely damaged' (see Part One).

Negative influences on a person's emotions and mentality can easily lead to a variety of somato-psychic illness (*shenxin ji bing* 身心疾病) such as hypertension, asthma or diabetes, or to psychological disorders, psychosis, self-harm or suicide. The cultivation of *shenming* was discussed in Part One. Here we will discuss other influences, negative influences, and their ramifications for medical practice.

XIN ZHU BU MING – DISORDERED PSYCHOLOGY AND CULTURED LIFE IN DANGER

Buddhism holds that a person's psychology is determined by two main kinds of influences – inherited and acquired. Inherited tendencies are sometimes called instinctual or acquired at birth,

and refer to a person's innate psychological disposition (such as extroverted/introverted, gentle/rough, sanguine/insecure). 'Acquired influences' mean that one can gradually form and develop some characteristics by study and cultivation (such as prudence, patience, stability, experience). Cultivated tendencies are acquired with practice and habit (*xin xun* 新熏).

From birth, the five senses begin to take in the outside world and the heart-mind begins to be 'smoked' or habituated (*xun xi* 熏习). Environmental influences are sometimes called 'smoking and dyed' (*xun ran* 熏染) – *xun*-smoking means subtle, on-going influences, and *ran*-dyed refers to more sudden or specific influences. 'Acquired at birth' is determined by inherited factors, while 'acquired with practice' is determined by life circumstances and personality factors. Together, inherited and acquired influences decide the degree and nature of *xin zhu shen ming*.

Whether an adult's heart-host (*xin zhu*) is bright or dim is decided in part by childhood experiences, and environmental factors will influence the person throughout their life in different ways and degrees. Generally, a wholesome and positive environment enriches the person, because the more positive the environment the more one can cultivate correct (*zheng* 正) recognition and understanding (*shen shi* 神识), and then the potential for the development of heart-*shenming* is very high. The cultivation of heart-*shen* brightness ideally should start from birth and early childhood. But at any stage of life positive influences can repair and correct (*xiu xi* 修习) unwholesome ideas and habits, they can replace harmful perceptions and habits with benevolence and kindness, and change the heart-host-*shen* from *bu ming* to *ming*.

As we know, a normal healthy mental-emotional life in childhood does not guarantee a healthy mind in later life, and nor does an unstable early environment lead inevitably to psychological illness. But a person growing up in an unstable, unsafe or unhealthy environment can form dysfunctional mental-emotional patterns and social disposition more easily than one growing up in a stable, safe and positive environment. They see more social darkness and are more sensitive to it; they grow up with higher levels of anxiety and suspicion and can more easily form delusions, paranoia, dysfunctional personality traits, or anxious/depressive responses.

XIN ZHU BU MING – HEART-HOST WITHOUT BRIGHTNESS

According to Chinese medicine, normal human development includes the development of the heart-*shen*, and heart-*shen* maturation is influenced by complex social and environmental factors, mechanisms and *xunran* (smoking/dyeing) influences. Historically, Chinese societies embraced the ethical principles of Daoism, Confucianism and Buddhism. In every age, East and West, a person's character and morality is shaped by social systems, personal actions, and the 'habitus' of injunctions, admonitions, precepts and laws that forms the reality and identity of a community and its members.[22]

Family, friends and educational environment have a deep and lasting impact on the complex factors and processes of psychological development and maturation. Schooling and family life generally provide positive *xunran* influences and environment, but not in every case and not all of the time. Today for example, there are many external influences that encourage the desire for material possessions, fame, wealth and success. If those influences are persistent and persuasive they can perpetuate habits and heighten desires that result in negative psychological states. Over time this can cause the heart-mind to change from *ming* to *bu ming*, and a person who cultivates such desires may risk more seriously damaging behaviour such as corruption and embezzlement.

Medically, *shenming* clarity and brightness are qualities we associate with the senses (*guan* 官) and their orifices (*qiao* 窍), the eyes, ears, nose and so on. A sense orifice is a body aperture, a window to the external world, and by the time the *HDNJ* was compiled, the Chinese had noted many of their physiological features, processes and interactions. Sensory information and activities enable human consciousness; but sensory desires can 'distract the heartmind from its ability to think and accomplish its aims [and lead] toward inauspicious and immoral extremes'.[16]

Because sense orifices belong to the *shen* orifice (*shen qiao* 神窍), the correct reception and analysis of sensory information relies on *xin zhu shen ming*. When there is *xin zhu bu ming*, the *shi shen*'s senses and perceptions are distorted and misguided. As in the *Suwen* Chapter 8, this is *shi dao bu tong* (使道不通) – the road where the *shen* is coming and going is obstructed. A person in this state for example, can hear but cannot listen or understand. *Shi dao bu tong* means in effect 'psychological obstruction' because misguided sensory information negatively affects psychological activities, mental clarity and all aspects of human life. In these cases the person's five sense organs still receive information from the external world but their inner experiences are deviated and abnormal.

Chinese medicine attempts to ascertain the clarity and brightness of the senses and their apertures, as well as that of the heart-*shen*. The orifice of the heart (*xinqiao* 心窍) encompasses all the sense orifices because it coordinates, analyses and interprets the information they receive: the heart-*shen* orifice signifies the alertness, receptivity, strength, clarity and flexibility of human consciousness. Medically, the heart orifice must be clear and open; if it is blocked, the heart-*shen* is confused and lost.

From the point of view of Chinese medicine psychology, the analysis of mental, emotional and spirit diseases helps to demonstrate this relationship to the heart-*shen ming bu ming*. The expression *cai mi xin qiao* (财迷心窍) means 'wealth confounds the heart orifice', and describes a person who is obsessed by the desire for wealth. They want only affluence and possessions and will attain them by any means. Similarly for money – *qian mi xin qiao* (钱迷心窍) – when 'money confounds the heart orifice' it means the person's mind is dimmed or filled up with money, so much so that they will go to extremes (such as fraud, theft, robbery) to acquire it. *Mi* (迷) means to be confused and lost, and to be fascinated by – 'fascination' here meaning an obsessive or fixated attention. Where there is *xin mi* (心迷) the heart is confused and lost. The expression is used medically and in common language to indicate that the heart-mind is obstructed, blocked or dimmed, and that the person has lost their bearings. Many mental-emotional factors can overcome, confuse and bewilder the mind.

In cases where *qing mi xin qiao* (情迷心窍), feelings and emotions overfill and obstruct the heart orifice. Lovers' suicide is an example – when emotions are high, intelligence (clear insight) and actions are misguided. *Quan mi xin qiao* (权迷心窍) applies to someone who is obsessed with power – they crave leadership and control, and become ruthless in their pursuit of an ever more powerful position. Even beauty can dim the heart orifice (*se mi xin qiao* 色迷心窍). An example could be the person who becomes sexually inappropriate, addicted, or aggressive because they continually lust after younger and more beautiful sexual partners. If their heart is *mi*-fixated they will experience this kind of sexual dysfunction, if *ming* their sexual behaviour is appropriate.

Medically, the terminology for this kind of *shen* disorder is *tan mi xin qiao* (痰迷心窍) – phlegm misting the heart orifice; sometimes this is given as *tan meng xin qiao* (痰蒙心窍) – phlegm clouding the heart orifice. The other common TCM pattern is *yu zu xin qiao* (瘀阻心窍) – blood stasis confounds heart orifice. Phlegm and blood stasis are pathological products that obstruct the orifices leading to clinical manifestations such as blurred vision, diminished hearing and smell, or slurred speech or aphasia. In the context of mental-emotional disorders, they often result from liver qi stagnation: qi stagnation leads to blood stasis, or to the stagnation of untransformed body fluids, which in turn leads to obstruction of the heart orifice. All three patterns (liver qi, blood stasis, phlegm stagnation) are common in cases of depression, mania, severe insomnia and psychosis.

The post-natal cultivation of *xin zhu shen ming* can prevent the formation of negative mental-emotional habits and tendencies and the obstruction of the heart orifice. But it is worth keeping in mind that while orifice obstructions can be inherited and/or gradually cultivated over time as described above, they can also be accidentally induced by physical trauma. For example, in older patients with senile dementia or children with ADHD, a variety of patterns can be found including phlegm and/or blood stasis obstructing the orifices. In Hou[24] phlegm-clearing and stasis removing medicinals are given in cases of 'undernourished orifices due to obstruction of channels caused by blood stasis', and modifications of Wang Qingren's (1768–1831) *Tong Qiao Huo Xue Tang* (Opening Orifices and Activating Blood Decoction) are recommended for ADHD and senile dementia patients. Blood stasis obstructing the orifices patterns in children may have its origins in a history of birth injury, and in older patients, a history of TIAs or simple lack of mobility will impair the circulation of blood.

Conclusion

Just as greed and arrogance corrupt good governance, anger and discontent pollute the heart-mind. In the *HDNJ*, the *xin-shen* as eminent ruler means that, just as the country cannot do without its head of state for one day, the body cannot do without the *shen*; and just as the ruler with *ming*-brightness brings peace, safety and glory to the whole country, *xin-shen ming* brings mental clarity and accomplishment to human life.

Xin zhu shen ming is both a description encapsulating the healthy mind, and the causal influence for its ongoing process and development. *Xin zhu shen ming* gives us the ability to regulate our psycho-emotional receptivity, responsiveness and adaptability so we can respond to life's successes, failures and infractions reasonably and constructively. *Xin zhu shen ming* also guides the formation of positive life values and personal qualities – to cultivate cognitive and emotional intelligence, and acquire psychological resilience the *shen* must have *ming*-brightness. Without *ming*, the *xin-shen* is dim and obscured.

Xin zhu shen ming guides the gradual maturing of a person's character and humanity, the development of their *xin-shen* and *wushen* activities from simple to complex, from veiled to unveiled, from dull to clear and bright. Furthermore, *shenming*'s clear insight is the light of virtue. When it shines, 'the person has presence, their eyes are bright, they radiate liveliness',[8] and its brilliance and radiance manifests everywhere throughout the empire/body.

The level or degree of *zhu ming*/*shen ming* is different for every person, and human psychology has great potential and malleability. Although at the beginning of life everyone's *shi shen* (ordinary consciousness) is veiled and dim, correct educational and developmental conditions cultivate the *shi shen* towards a healthy, bright, unveiled intelligence. Over time, if one continually accumulates positive influences, habits, knowledge and experience, one's *shen shi* (understanding and recognition) gradually improves and the heart-host becomes brighter.

The *HDNJ*'s *Suwen* Chapter 8 states two essential features for Chinese medicine psychology: the heart-host with brightness enables normal, healthy human life and mentality; the heart-host without brightness causes abnormal, unhealthy human life and mentality. *Xin zhu shen ming* and *xin zhu bu ming* therefore are the basis of a fundamental topic (*ming ti* 命题) in Chinese medicine, but healthy psychology is not only a matter for medical research and practice.

A person's psychology is related to inherited factors, cultivated by personal effort and shaped by early influences and events, family, personal relationships and the wider socio-cultural environment. The *xin-shen* can be influenced and trained throughout one's life; it can change from dim to bright but also from bright to dim. The accomplishment and maintenance of healthy psychology (*xin zhu shen ming*) and the effective prevention of abnormal psychology (*xin zhu bu ming*) is both a personal and social responsibility.

Clinical Commentary

Xin zhu shen ming 心主神明 (heart governing spirit-mind brightness) is a fundamental topic in Chinese medicine because it is essential to its analysis of health and illness. The paper identifies the consequences, mechanisms and manifestations for our patients of the *shen* (spirit-mind) with and without *ming*-brightness. Medically, we associate the clarity of *shenming* with the sense orifices, including the heart orifice. If the sensory and heart orifices are obstructed the person experiences mental dullness and confusion, and their sensory perceptions and emotional responses are distorted and inappropriate. The *xin*-heart without *ming*-brightness negatively affects not just our mental-emotional life, but also our physical state and our ability to cultivate life and good health.

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GLOSSARY OF TERMS

bi	蔽	cover, conceal; obsess, blind
bi shi	鼻识	olfactory perception
bian yi	变异	abnormal changes, abnormal personality/ character traits
bu ming	不明	without brightness, dull and confused
er shi	耳识	auditory perception
junzi	君子	the ideal of a true gentleman or exemplary person
jun zhu	君主	eminent ruler
li zhi	理智	*li* is logical and reasonable, *zhi* is wisdom and intelligence
li	礼	propriety, courtesy
meng mei	蒙昧	*meng* means covered, or blindfolded; veiled and dark/dim; here the expression means there is little intelligence (*ming*) when one is born
mi	迷	confused, lost, fascinated, fixated attention, obsessed
ming	明	clear, clean, bright, radiant, brilliant [On the left side of the character is the sun and on the right side is the moon. Together they give light night and day so we never lose our way.]
ming jun	明君	exceptional qualities
ming men	命门	life gate, gate of destiny
ming ti	命题	named topic, proposition
ming xi	明晰	*ming* means bright, and *xi* is an accomplished ability for analysis, discernment and judgement; with *ming xi*, the person is never in a dark state – *ming* xi is the opposite of *meng mei*
nao	脑	brain
que xian	缺陷	deficient, lessened, sunken, defect, drawback, flaw; in this context, a personality defect
ren	仁	benevolence
she shi	舌识	taste perception
shen	神	spirit-mind
shenming	神明	intelligence, spirit-mind brightness, radiance, brilliance
shen shi	身识	tactile perception
shen shi	神识	recognition and understanding
shen qiao	神窍	spirit-mind (mind, heart) orifice
shen xin ji bing	身心疾病	body-mind (somato-psychic) illness – physical illness that develops or worsens due to psychological stresses or emotional disturbances

GLOSSARY OF TERMS (continued)

shi shen	识神	ordinary (acquired, post-natal) consciousness
tan meng xin qiao	痰蒙心窍	phlegm obscures, dims or blindfolds the heart orifice (see *meng mei*)
tan mi xin qiao	痰迷心窍	phlegm blocks the heart orifice
wu guan	五官	five offices (meaning, the five sense organs)
wu shen	五神	five spirits
wu xing	五行	five transformative phases
wu ti	五体	five tissues
wu zang	五脏(五藏)	five yin organs [In the *HDNJ* all references to the 脏/臟 *zang* are written藏, without the flesh radical. Because our topic is about *shen*, we feel the original character is more suitable.]
xie	邪	evil
xin	心	heart – the *zang*-organ system; in early Chinese texts *xin* also means the mind
xin qiao	心窍	heart-mind orifice
xing	形	(body) form
xun ran	熏染	literally, smoking and dyeing; an expression for gradual/immediate influences on and changes in human psychology and personality – *xun ran* meaning gradual and sudden changes respectively; the binome also meaning to contaminate or corrupt
xun xi	熏习	*xun* – gradual ('smoking') practices; *xi* – practice, habit or 'habitus'
yan shi	眼识	visual perception
yi	义	dutifulness, righteousness
yu zu xin qiao	瘀阻心窍	blood stasis blocks heart orifice
yuan jing	元精	original (inherited, pre-natal, ancestral) essence
yuan shen	元神	original (inherited) spirit-mind (consciousness)
zhang ai	障碍	blocked sight/eye, or obstruction on the road; in this context meaning psychological obstruction
zheng	正	correct
zhi	智	moral intelligence, wisdom
zhi	志	will, mind
zhi	治	treatment
zhu	主	ruler-host

Farewell to Chinese Medicine?

EDITOR'S NOTE: In 2006, Professor Gongyao Zhang, a professor of Philosophy from the Central South University in Changsha, China, published an article in *Medicine and Philosophy*. In the article entitled 'Farewell to Chinese Medicine', Professor Zhang said that Chinese medicine was neither scientific nor empirical. He used a number of examples to illustrate that some Chinese herbs were poisonous and to argue that some were used without any backing from evidence. In a later article published in 2009, he stated that Chinese medicine was fake science, subjective and lacking evidence. He argued that the health care systems of China should not include Chinese medicine.

Since 2006, there has been much debate on this topic in China.

AJACM received a letter from Associate Professor Zhou about Zhang's article and its impact in China. We invited two scholars, Dr Barry Butcher, an historian of Science and Professor Bin Xu, an academic of acupuncture, to respond to the article by Zhang. Each of them chose a particular angle for their response. We hope you will find these three articles stimulating.

The Future of Traditional Chinese Medicine

Shu-Feng Zhou* MBBS, PhD
Division of Chinese Medicine, School of Health Sciences, RMIT University
Melbourne, Australia

ABSTRACT

China is the only country in the world where conventional Western medicine and traditional Chinese medicine (TCM) are practised alongside each other at every level of its healthcare system. TCM has a unique theoretical and practical approach to the treatment of disease, which includes herbal remedies, acupuncture, acupressure and massage, and moxibustion. As with most modalities of ethnic traditional medicines such as Ayurveda (traditional Indian medicine) and naturopathy, the theoretical and diagnostic basis of TCM cannot be fully explained in terms of Western medicine. In recent years, the Chinese government has significantly increased financial support for TCM in the hope that it is modernised and even integrated with Western medicine. However, there is argument that TCM should be abolished from the health care system in China. The future of TCM may be evidence-dependent, relying on more evidence of the effectiveness and safety of TCM treatments. Detailed pharmacology and toxicology research of all Chinese herbal medicine should also be conducted.

Traditional Chinese medicine (TCM), a pride and prize of the nation, is now faced with a tough challenge. A recent on-line petition letter written by Professor Gongyao Zhang from the Central South China University (Chansha, China) has caused a furore in China. In this letter, Professor Zhang strongly advised the central government of China to abolish TCM. Zhang strongly believes that the Chinese government needs to adopt a more practical medical system with all healthcare resources focused on evidence-based Western medicine. He criticised, 'TCM has no clear understanding of the human body, of the functions of medicines and their links to disease. It is more like a boat without a compass: it may reach the shore finally but it's all up to luck.' Thereafter, about 200 people signed their names in support of this petition. Dr Zhou-Zi Fang, a famous person who has revealed a number of academic misconducts of Chinese scientists at his popular website <www.xys.org>, claimed to completely agree with Zhang's idea.

* Correspondent author; e-mail: shufeng.zhou@rmit.edu.au

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However, the Ministry of Health and the State Administration of TCM of China have refused this petition, 'The idea of abolishing TCM is a denial of science, an ignorance of Chinese history and dumping of traditional cultural heritage.' An official from the Ministry of Health of China, Mr Mao, has recently emphasised, 'Traditional Chinese medicine is an essential component of China's medical care system.' Many professional TCM practitioners in China also opposed the petition. Dr Yonghua Yang, a medical professor with the Human Academy of TCM, said '50% percent of his patients suffering from terminal cancer disease opt for traditional Chinese medicine treatments.' Some doctors of TCM said, 'While it is increasingly popular in the West, TCM is being criticised and ignored in China.' The traditional Chinese medical industry, with a total production value of nearly 81.026 billion yuan (about 10.125 billion US dollars), accounted for a quarter of China's overall medical industry in 2005. Mao said the Chinese government has helped develop traditional Chinese medicine and Western medicine equally in China.

China is the only country in the world where conventional Western medicine and TCM are practised alongside each other at every level of its healthcare system. TCM has a unique theoretical and practical approach to the treatment of disease, which includes herbal remedies, acupuncture, acupressure and massage, and moxibustion.[1] As with most modalities of ethnic traditional medicines such as homeopathy, Ayurveda and naturopathy, the theoretical and diagnostic basis of TCM cannot be explained in terms of Western medicine.

In recent years, the Chinese government has significantly increased financial support for TCM in the hope that it is modernised and even integrated with Western medicine.[2] China will make an effort to standardise 500 traditional Chinese medicine remedies and procedures over the next five years. The standardisation work will cover remedies, procedures, traditional medical terms and acupuncture standards, according to the State Administration of TCM (SATCM). The lack of widely accepted standards has long been a hurdle for TCM in being recognised and used in other countries. The new standards will help improve the quality of traditional medicines and make them more acceptable to other people. China currently has approximately 3000 traditional medical hospitals that dispensed medical treatment to nearly 300 million people in 2006.

Chinese herbal medicines may provide important and unique therapies for some diseases that result from a disrupted network in the body (eg. cancer and diabetes).[3] For these diseases, a single drug that targets a single protein molecule may not provide satisfactory clinical efficacy.[3] Most TCM practitioners now agree that TCM must be evidence-based, thus randomised controlled trials of common treatments are needed to establish the effectiveness and safety of treatments. Detailed pharmacology and toxicology research of all Chinese herbal medicine should also be conducted. As for experts engaged in the research and development of traditional Chinese medicine, they are unanimously optimistic about the future of TCM. They consider the recent challenge to traditional Chinese medicine is a result of a lack of confidence as well as misinterpretation. Dr Yuansheng Tan, a young TCM doctor said that since traditional Chinese medicine has survived challenges even more severe than this, he was sure that it will be able to cope with the latest one. At a time like this, voices like his help to make the public hopeful again about the future of traditional Chinese medicine.

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Some Thoughts on Medicine as a Science – A Layperson's Contribution to the Controversy Over TCM

Barry W Butcher* PhD
Senior Lecturer, School of History, Heritage and Society
Deakin University, Geelong Campus at Waurn Ponds, Victoria, Australia

Almost fifteen years ago the late and much lamented historian of medicine Roy Porter published a typically provocative article in the Times Literary Supplement entitled *A professional malaise: how medicine became the prisoner of its success*.[1] Porter's claim was that as Western medicine had become more scientific and increasingly able to improve health and control disease and life threatening processes such as childbirth, so it had become a site of social concern, scepticism and academic attack. New medical discoveries in the second half of the twentieth century, ranging from antibiotics to immunosuppressant drugs had built on nineteenth century discoveries such as the germ theory and the role of parasite vectors. To these could be added genetic engineering and stem cell technologies promising to overcome previously incurable diseases such as Parkinson's disease and various forms of cancer. As Porter made clear, we in the West now live in a world remarkably free of life threatening illnesses, and despite the threat posed by new diseases such as HIV/AIDS we could confidently expect that the application of science would continue to guard the health of the people. So why then the attacks and criticism mentioned above? Porter himself pointed the way to what is almost certainly the correct explanation:

> Today, with mission accomplished, medicine's triumphs are dissolving in disorientation. Medicine has led to vastly inflated expectations, which the public has swallowed. Yet as these expectations grow unlimited, they become unfulfillable. The task facing medicine in the twenty-first century will be to redefine its limits even as it extends its capacities.[2]

Fifteen years on and the crisis in Western scientific medicine is as prominent as ever in both the popular press and academic discourse; stem cell research, the overuse of drugs, high hospital mortality rates, the rise of antibiotically immune 'superbugs' and a plethora of public complaints about medical malpractice and bureaucratic stuff-ups are just the start. Porter was right – for all its triumphs, Western medicine is suffering from a malaise.

I was brought back to Porter's article recently when asked if I would contribute something to the current debate over the scientific basis of traditional Chinese medicine (TCM).[3] Now let me make it clear right away that I am not a practitioner or consumer of TCM (though I did once have a large malamute dog whose spinal paralysis was much helped by acupuncture… but that's another story). I am instead a trained professionally employed historian of science who has at various times studied the philosophy of science and has taught courses with grandiose titles such as 'Medicine, Healing and Society' where I have sought to introduce students to the idea that there are other ways of seeing the worlds of sickness and health than that presented to us as part of the scientific culture in which we in the West supposedly live, breathe and have our being. It is, then, from the perspective of an historian that I approach this current debate over TCM, and it is with the history of Western medicine that I will begin in order to pose questions about the scientific nature of the various disciplines that constitute its modern form. My approach will be selective and (hopefully) provocative but nonetheless will, I think, be illuminating.

The history of Western medicine has been traditionally presented as part of the post-enlightenment agenda of progress from superstition and darkness to science and light. While the crudest of such histories are now recognised as being simplistic, and indeed often historically inaccurate, there remains in the literature a tendency to a Whiggish interpretation of medicine's history, at least in the Western world. This is particularly true of its story in the nineteenth century, where it is generally seen as taking off as a scientific endeavour as part of the professionalisation of science generally. The success of William Budd and John Snow in tracing the epidemiology of diseases such as typhoid and cholera,[3] coupled with Edward Jenner's earlier demonstration of the value of vaccination for small pox[4] were practical steps to improved public health but had limited scientific underpinning – they were the result of practical actions in the main – most notably Jenner's successful inoculation of the eight-year-old James Phipps and Snow's removal of the Broad Street pump as a means of convincing authorities that the 'cause' of cholera could be sourced to a specific water supply.[5] Gradual acceptance of the germ theory after 1860 led to antiseptics of course – though it was not known at the time how these worked to kill the germs themselves. Improvements in technology allowed for better surgical procedures, the outcomes of which were much improved with the arrival of anaesthetics in the 1840s. Again, the actions of anaesthetics

* Correspondent author; e-mail: barry.butcher@deakin.edu.au

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were not explainable by contemporary science – they worked and in medicine that was all that mattered.

So where is the science in Western scientific medicine? Experiment, observation and theorising are certainly accepted as part of the process, but unlike the hard sciences, the biological basis of medicine means that there is what sociologists of science would define as a degree of 'slop' to be accounted for. Genes may be the basis of all biological organisms but, unlike the laws of physics, the laws of life are remarkably wobbly; medicine deals with complex individuals and while certain processes can be applied to populations with every confidence of a successful outcome – immunisation perhaps being the most obvious example – at other times either individual morphological, physiological and even anatomical factors must be considered, or dependence on fairly crude statistical analysis be relied on. Examples of the first case would be individual response to drugs, the role of allergies and so on. The second case might include the need for large epidemiological studies (which often show minute differences in outcomes). Thus, while general laws of life can be drawn up, and students taught how the body functions, for instance, in the final analysis the medical practitioner in the West as much as in the East must take account of the individual patient's situation.

Without question the greatest improvement in the health of the populace came through improvements in hygiene; the non-medico bureaucrat Edwin Chadwick's obsessive pursuit of means to provide clean water and remove excreta from the burgeoning industrialised cities led to the creation of legislative control over water quality and the construction of hundreds of miles of underground sewerage systems.[4] The application of science? Yes, the scientific theory of miasmas, the then dominant idea that disease was caused in some way through the filth and odour all too evident on the streets of London, Paris, New York and so on. Miasmas – not germs, as Chadwick and almost all his supporters were very keen to stress. On the basis of this 'failed' theory, more lives have been saved and more lives improved than almost all other advances attributed to medicine. And it should be noted here that one could apply the same 'failed' theory today in those places around the globe where water supply and the removal of human waste would reduce mortality from the 'diseases of filth' that are still among the biggest killers of young children.

Note that I am not here engaging in a process of bashing Western medicine; on the contrary I accept its spectacular successes and its scientific claims – even those it proposed in the nineteenth century which we now know to be incorrect. What I am suggesting – and this will not be news to anyone with even a passing knowledge of recent developments in the philosophy and sociology of science – is that science itself is a dynamic system of changing theories and practices. It is all very well to intone that science is based on observation, theory, experiment and repeatability and that if we take heed of all these we will end up with 'objective' knowledge of the world. Well, perhaps we might – for now. Tomorrow's 'objective knowledge' might be very different. Even in the hardest of hard sciences, physics, there have been occasions when the great men have got it spectacularly wrong, the best example being Lord Kelvin, the doyen of British nineteenth century physicists telling students in Baltimore in 1904 that all the major discoveries in physics had been made and that their job would simply be mopping up around the edges. In 1905 a post office clerk in Switzerland published something about relativity and the rest – including much of Kelvin's life work – is, as they say, history.

Few philosophers of science would now claim that there is a scientific method suitable for application to all branches of the sciences; and the 'softer' the science, be it psychology, biology or medicine (let alone any of the social sciences) the less likely are we to find a 'one size fits all' methodology. From Francis Bacon in the seventeenth century to Karl Popper and Thomas Kuhn in the twentieth, there have been heroic attempts to somehow fence off science from all other knowledge systems in order to protect its supposedly peculiar epistemological status.[4] None have convinced all, though all have their adherents. In the end we have to take our own counsel as to what we see as comprising science as opposed to non- or pseudo-science; a scary thought perhaps but we can console ourselves with the point made by the radical sociologist of science Harry Collins; insofar as any knowledge system can be said to be rational then science is probably the best of the lot.[6]

So where does this leave the current debate over the scientific status of TCM? Frankly, I'm not sure it really matters but because the question has raised so much heat (if not much light) it might be worth addressing, if only briefly here; and as an outsider to TCM perhaps I can do so, shall we say, more objectively than some of those working from within the discipline. So here goes.

Medicine both East and West has traditionally been seen as an art; diagnosis, prognosis and treatment, have until very recently been as much a matter of subjective experience on the part of the practitioner and patient in the West as they remain today in TCM. I would suggest that one might interpret the move away from the subjective to the objective mode in Western medicine as a prime cause of the malaise identified by Roy Porter. The sufferer is now a site of disease rather than a being with an individual personality and a social role to play. The word holistic gets thrown around with careless abandon too often these days and can become a catchcry for every oddball system of medicine, but TCM can rightfully claim to be holistic in the proper sense of the word – it takes the whole person seriously and does not reduce him or her to a diagnostic entity.

The high costs associated with modern Western medicine and the pressure for cost saving via improved throughput at the level of the general practitioner mean that any real interaction between the doctor and the patient is likely to be facile at best. Something here to be learned from the East perhaps?

Critics of TCM rightfully draw attention to its failures; wrong diagnosis, incorrect treatment, overdosing and poisoning and so on. Critics of Western medicine rightfully draw attention to its failures; wrong diagnosis, incorrect treatment, overdosing and poisoning and so on. Mud-slinging is easy, whoever is doing it and in the area of medicine it's not hard to make it stick. Where would the commercial television stations be without their current affairs programs being able to run stories of appalling medical mess-ups?

Critics of TCM also seem to have a strong case in the area of accountability, by which I don't mean at an individual practitioner level only, but as an entire system of medical knowledge. I have already hinted above that I don't really think it matters whether the underlying theory is objectively provable, but I do think it matters that the potential patients in TCM can have some way of knowing that the treatment they are going to receive is likely to be efficacious. Given the long history of TCM and its development of herbal, drug and other treatment regimes, this should not pose a problem for researchers keen to test its efficacy. This may or may not be done through the application of Western scientific techniques, depending on what it is that is actually being assessed, but if we take the overall thrust to be something akin to the evidence based approach of Western medicine, then it ought to be possible to construct a methodology suitable to analyse TCM (and bear in mind here that evidence based medicine is the product of Archie Cochrane's fertile mind in post-war Britain; it is not something intrinsic to the long history of Western medicine per se).

Let me finish on a personal note. Five years ago I was diagnosed with type 2 diabetes and subjected to some solemn lecturing by my GP on the subject of what I could and could not now do; what I should eat, what exercise I should undertake and so on. In the intervening period I have read widely on the subject of diabetes and so far as possible I have kept up with the most recent research and, falteringly, tried to follow some sort of lifestyle that improves my chances of living a reasonable life. What have I learned? That I should look for low glycaemic index (GI) foods – and there are many to choose from on the supermarket shelves so I have been assiduous in seeking them out – but wait, there's more, for it turns out according to current research that low GI foods are no good without accompanying fibre…so my assiduity in that area has been misplaced. I have learned not to eat potatoes – well, actually, recent research suggests I can, and the same goes for bananas. I learnt originally that I should eat six small meals a day rather than the traditional three; now it seems I should go back to three because the six meals a day formula applies only to type 1 diabetics. Fructose was OK five years ago; now it's as deadly as any other form of sugar, but then sugar is not so deadly apparently as it was five years ago, fats seem to be the villain just as much now. What I am trying to say here is that scientific medicine can be problematic in certain circumstances; new knowledge overturns old knowledge, to the dismay of the sufferer, and presumably to the medical researcher and GP. I doubt TCM would fare any worse or better in this respect.

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Farewell to Professor Zhang Gongyao's Ideals

Bin Xu* BMed, MMed, PhD
Chuanhui Ju BMed
Nanjing University of Traditional Chinese Medicine, Nanjing, China

A National debate

In China, arguments between proponents of traditional Chinese medicine and critics who wish it would give way to biomedicine are not new. However, the publication of Professor Zhang Gongyao's article,[1] essentially repeating the same argument, has caused a flurry of debate. The author even launched an online petition to do away with Chinese medicine.

In the two years since the article was published in 2006, more than two hundred and twenty papers and reports published in China offered a response to Zhang's assertions. A quick search of the internet resulted in more than two hundred and forty thousand hits and more than ten books have been published in this area of discussion. It is indeed rare to have so much literature with regard to the retention or abolition of TCM within such a short time in history. Zhang's paper has led to a new wave of discussion.

Among all the discussion papers, four articles by Zhang Boli, a member of the Chinese Academy of Engineering[2–5] and other scholars essentially refute Zhang's arguments from a range of perspectives. They put the view that TCM has made a great contribution to the proliferation and prosperity of Chinese nation and the development of world civilization. They also suggested that it is narrow-minded, irrational and even self-belittling to suggest that TCM be abolished. Many other scholars also joined the discussions offering views from differing perspectives, including history of science, scientific methods, local knowledge, and intrinsic problems of TCM. None of the scholars agreed with Professor Zhang's argument. Of the ten books published, all but one defended TCM. The one exception is the Fang Zhouzi which essentially outlines a litany of criticisms of TCM.

Not long after the quick responses to Zhang's critique of TCM, he was quoted in the Xiaoxiang Morning News saying, 'I have never talked about the abolishment of Traditional Chinese Medicine'….'My so-called goodbye means that it's advisable for Traditional Chinese Medicine to return to civil society; we should make it as our emergency, or last choice, instead of removing it completely'.[6] However in another of Zhang's polemics published in his blog he invokes Confucius as a way of engendering support for his assertions, arguing that Confucius did not believe in shamans,[7] the implication being that TCM is not far from being a form of witchcraft. The article has been viewed more than 16 000 times and commented on by about 2600 visitors during 2006–2009. More than 90% percent of the visitors were opposed to Zhang's views.

During a speech entitled 'Why do I Claim to Remove Traditional Chinese Medicine from Chinese Health Care System'[8] at the second International Conference of Oriental Medicine Present and Future in Seoul in January 2009, Professor Zhang cited a study by Changchun University of TCM, saying that by 2008 the population that blindly believed in the effectiveness of TCM had declined from 88% to 58%. We were unable to access Zhang's cited source for these statistics. On the contrary, we found that a survey conducted in January 2007 reported that in Jilin province in the northeast of China, 58% of the people surveyed believed that TCM was very effective and could treat the root syndrome; 25% thought that TCM was effective for chronic diseases but not for acute diseases.[9] These data display a completely different picture from Zhang's assertions.

As an acupuncture educator and researcher, I haven't felt the significant impact of these discussions, whether it is positive or negative, on my clinical practice in China. TCM hasn't suffered much on account of the 'farewell' incident. The general feeling of TCM doctors in China is that the public need for TCM treatment has increased rather than decreased.

TCM Research in China (2006 – 2020)

Furthermore, research in TCM is valued highly by the central government and the Chinese government is devoting substantial amounts of money to further the promotion of TCM in China till 2020. For instance, the 'TCM Theory Special Program' established in 2005 has invested RMB 70 million each year. Currently there are four acupuncture projects underway: 'Acupuncture Specific Feature Research' with an investment of RMB 14 million; 'Acupuncture Anaesthesia Research' with RMB 23 million; 'Research of Moxibustion Basic Principles and Application' with RMB 11 million; and 'Meridians and Points Therapeutic Effects Research'.

* Correspondent author; e-mail: xuuuux@sina.com

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The Eleventh Five-Year Plan has also funded many TCM research programs. One of these projects is 'Discovery of New Drugs'. It includes transformation of Chinese herbal medicine species, research into Chinese herbal medicine standards, and discovery and evaluation techniques of new Chinese herbal medicine and a total of RMB 500 million has already been invested. In addition to these nationally funded programs there are also many programs funded at the provincial level. Some are also privately funded.

The State Administration of TCM has commenced feasibility studies on the application of TCM key laboratories and the construction of research-based TCM hospitals. In 2008, the central government published ten items of 'Standardized Manipulations of Acupuncture and Moxibustion'. In the same year, the Chinese Association of Acupuncture-Moxibustion completed four programs including 'Research Plan of the Advantages of Acupuncture-Moxibustion' and 'Clinical Practice Guidelines for Acupuncture and Moxibustion'. The latter involved clinical practice guidelines for the following five diseases: depression, herpes zoster, dysphagia of apoplexy, migraine and Bell's palsy.

The growth of TCM also impacts on education. In recent years, the People's Medical Publishing House has published forty 'Teaching Materials for National Higher TCM University's Post-Graduate Education'. These texts include basic, classical and clinical aspects of TCM and Chinese herbal medicine.

An increasing number of students have enrolled in TCM programs and at least five TCM universities have more than ten thousand students, including Nanjing, Chengdu, Guangzhou, Tianjin and Heilongjiang Universities of TCM.

In China, support by government funding authorities and private enterprise is substantial. TCM is healthy and developing rapidly in China. The overwhelming response to Zhang's assertions suggest that his opinions fail to accord with educators, researchers, practitioners, government funding authorities and critically, the consumers of TCM – the general public. One positive consequence of Zhang's opinion could be that the TCM community extend itself and continue to demonstrate the value of TCM in China and in the rest of the world.

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Interview with Professor Zhou Zhongying of NJUTCM, Nanjing, China

Minwei Zhu* MMed
Nanjing University of Traditional Chinese Medicine, China

Zheng Zheng PhD
Discipline of Chinese Medicine, School of Health Sciences, RMIT University, Melbourne, Australia

This article reports an interview that the AJACM had with Prof Zhou Zhongying in China in Dec 2008.

Professor Zhou is 80 years old, and has been practicing and teaching TCM for 60 years. He is one of the most prestigious traditional Chinese medicine (TCM) experts in China. Recently he has been authorized as a representative of TCM's inheritances, a project under the International Non-Material Culture Heritage Program of China.

Prof Zhou was a representative at the 7th National People's Congress of the People's Republic of China, a member of the State Natural Science Fund Assessment Committee, a senior editor of the 'Journal of Traditional Chinese Medicine' and the editor for over 30 (TCM) textbooks and books on internal medicine. He was the president of Nanjing University of Traditional Chinese Medicine (the former Nanjing College of TCM). He practises more than 20 hours a week at the Jiangsu Provincial Hospital of TCM and other hospitals.

One of the authors (ZMW) has observed at Professor Zhou's practice for more than twelve months. Professor Zhou sees a large number of patients who have not been successfully treated by other therapies or TCM doctors. Successful as he is, he always patiently listens to every case and carefully examines the treatments that patients had. To him, the best way to assess TCM and to ensure its development in modern society is its clinical effectiveness.

In the following interview, we intended to find out his thoughts on some common questions that bother young doctors and TCM students.

Zhu: Please tell us your experience when learning TCM?

Zhou: I was born in 1928 in Rudong County of Jiangsu Province of China. By my generation, my family has practised Chinese medicine for five generations. At the age of 13, I started to follow my father in his clinic and sometimes at patient's home, learning Chinese medicine. My father explained to me while he treated patients and taught me to read medical and cultural literature whenever he had time. For masterpieces of TCM, he not only made me understand the meaning but also asked me to learn and recite them fluently. I learnt this way for 6 years until I was 19 years old. Actually this was the fundamental period of my medical life. Even now I can still recall some of the masterpieces I learned at that time. I believe that period was a valuable initiation to Chinese medicine and it has formed a solid foundation upon which my achievements have built.

In 1947 I left my hometown to study the advanced course for TCM physicians in Shanghai Medical College of Chinese Medicine. In 1955, I went to Nanjing to continue my study in the Advanced TCM School of Jiangsu Province for another two years. During that time I also practised TCM when I had no classes.

At the age of 28, I was transferred to the Affiliated Hospital of Nanjing College of TCM. I have been working there as resident doctor, chief medical doctor and specialist since then. I also taught at the college, now the Nanjing University of TCM. I am still a professor and supervisor of PhD students.

Zheng: Given the long history of Chinese medicine, many young TCM doctors think we have little chance to develop new theories and we can only follow the classics. Is it possible to develop TCM theories?

Zhou: I am a clinical doctor and at the same time a TCM lecturer. I want to help patients effectively and to pass TCM down to the next generations. I try to develop and innovate TCM theories. I give you an example. After some time of clinical observation and theoretical studies, I found out that haemorrhage in some diseases, such as epidemic haemorrhagic fever, pulmonary tuberculosis, bronchiectasis and peptic ulcer, is caused by both heat and blood stasis. If you apply blood heat-clearing or stasis-removing drugs separately, you will not get satisfactory results. So I put forward a new point of view of the pathogenesis of the mixture of stasis and heat to describe the progress of many diseases.

* Correspondent author; e-mail: zhuminwei@yahoo.cn

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Let's see the causes. Fire-heat is a very important pathogenic factor and it might originate from many sources: six exogenous pathogens turning to fire after further invasion into the interior of the body; extreme emotional disturbance generating fire; mental exhaustion stirring up empty fire; long-term depressed mood transforming into fire; indulgence in fatty, sweet and greasy food generating fire; obstruction of phlegm and stasis producing fire; and overuse of warm and dry drugs consuming body fluids and inducing fire. Once fire-heat is produced, it becomes a pathogenic factor. Blood stasis is often a result from a disorder of Qi or blood circulation. If a person has a chronic disease, his or her qi and blood will be consumed. Qi deficiency fails to propel blood flow and blood deficiency results in a slow blood circulation, leading to blood stasis. Blood stasis itself may generate fire heat if it is not resolved within a short time. When heat and stasis are combined, they form a new pathological basis for a variety of exogenous and endogenous diseases. Fire and stasis tend to stick to each other and usually make the treatment very difficult.

To me, cooling the blood to resolve stasis and clearing heat to dissolve heat stasis is the essential strategy for treating many diseases of stasis heat syndrome. But this pathogenesis wasn't mentioned in the previous TCM classics except for scattered records, probably owing to incomplete and superficial understanding at that time. Consequently there is no comprehensive discussion or systematic treatment, nor strategies and drugs for this syndrome in TCM classics.

In 2001, I treated a 60 year-old male patient. He had two attacks of epistaxis each year for four successive years. During the last year the symptoms became worse. Each time before the bleeding, he felt hot rushes in the nose and throbbing of the blood vessels. The blood usually poured out with a bright red color, sometimes it filled a basin. He felt dry of the mouth in the morning and evening and liked to drink a lot of water. He had dry stools, a red face and red tongue body with yellow sticky coating. The pulse was thready and slippery. He didn't have hypertension but hyperlipidermia and a history of pulmonary TB and emphysema. He was hospitalised twice in the Provincial People's Hospital but with an unclear diagnosis before coming to my clinic. I analysed his symptoms and signs and believed they were caused by blood heat and stasis. This patient had underlying excessive heat in the lung and stomach. The fire heat tended to rush upwards and stagnate blood to form stasis. Then heat and stasis combine to force blood to overflow. So the treatment strategies should be to clear heat and cool blood so as to resolve stasis and check bleeding. I prescribed seven packages of *Shui Niu Jiao* (*Cornu Bubali*), *Sheng Di Huang* (*Radix Rehmanniae Glutinosae*), *Chi Shao* (*Radix Paeoniae Rubra*), *Mu Dan Pi* (*Cortex Moutan Radicis*), *Zhi Zi* (*Fructus Gardeniae Jasminoidis*), *Xuan Shen* (*Radix Scrophulariae Ningpoensis*), *Da Huang Tan* (carbonised *Radix et Rhizoma Rhei*), *Bai Mao Gen* (*Rhizoma Imperatae Cylindricae*), *Niu Xi* (*Radix Achyranthis Bidentatae*), *Huai Hua* (*Flos Sophorae*), *Zi Zhu* (*Folium Callicarpae Pedunculatae*), *Han Lian Cao* (*Herba Ecliptae Prostratae*), and *Xue Yu Tan* (carbonised *Crinis Carbonisatus*). Seven days later the patient came back with no more bleeding. Hot rushing sensation in the nose, thirst and dry stools were also improved. His tongue margins and tip were dark purplish and the coating was yellow and sticky. The pulse was thready and slippery. I prescribed another seven packages of the same prescription but adding *Sha Shen* (*Radix Glehniae*) and *Mai Men Dong* (*Radix Ophiopogonis*). This was to consolidate the previous effect.

It is a general rule that epistaxis is caused by excessive heat in the lung and stomach and hyperactivity of liver fire, which jointly forces blood to overflow. The nose is the orifice of the lung, the stomach meridians travel along the sides of the nose and the collaterals of the liver meridian go into the throat and enter the nasal pharynx. When the fire heat becomes exuberant in the lung, stomach and the liver, it may flame upwards along the meridians, forcing blood to overflow and injure the collaterals to cause nasal bleeding. Persistent blood heat tends to stagnate blood and cause stasis. So in order to stop bleeding, the treatment strategies should be to clear heat from the lung, stomach and liver, cool blood and at the same time to resolve blood stasis.

Zheng: One of the difficulties that young TCM doctors face is how to understand new diseases and conditions with TCM theories. Could you please tell us how you apply TCM theories to the diagnosis and treatment of modern diseases?

Zhou: Chinese medicine is a complete therapeutic system. Under the guidance of this system, we are able to treat common diseases, modern diseases or stubborn diseases if we apply the method of differentiation of syndromes, ascertain the pathogenesis and treat patients and diseases accordingly. One typical example I have is the TCM understanding of epidemic haemorrhagic fever.

In the 1970s, epidemic haemorrhagic fever spread over many European and Asian countries. Our country was among the most severely affected. I had no idea how to treat this disease when asked to take a medical team to the infected area. We went into the patients' houses in spite of infection and tried to help them with my TCM knowledge. At the same time I collected the clinical materials and studied them with TCM theories. After some time of observation I found the common clinical features of this disease were fever, bleeding, hypotensive shock and renal damage. In Western medicine, the pathological process includes fever, hypotensive shock, oliguria, polyuria and recovery phases. In TCM, we can describe the pathological changes as the Defensive, Qi, Nutrient and Blood

syndromes or stages (*Wei Qi Yin Xue*). The transitions between these syndromes or stages is often so fast that during the Qi stage, sometimes even at the Defensive stage, the pathogenic heat has already involved the Nutrient and Blood systems, manifesting simultaneous Defensive or Qi with Nutrient or Blood syndromes. Exuberant fire in the Qi and Nutrient stages is the most commonly seen syndrome and it may appear together with fever, hypotensive shock and oliguria phases. I also tried to explain the diseases from the theories of *Sanjiao* – Six Meridians. In light of the theories of warm diseases (*Wen Bin*) and cold-induced diseases (*Shang Han*), I analysed the pathological features of each phase and came up with a TCM understanding: the pathological center of this disease was at the Qi and Nutrient stages and fever was due to exuberant fire torturing the Qi and Nutrient systems; thereby even at the Qi stage, we could use nutrient-clearing drugs if there were some signs showing heat invading the Nutrient system, for example: hotness in the body, red face and eyes, haemorrhagic spots in the skin and mucous membrane. This strategy was effective in preventing further invasion of pathogenic heat. Furthermore we added qi-clearing drugs to nutrient-clearing drugs so as to drive pathogenic heat out through the Qi system even when the heat has already moved into the Nutrient system. This idea came from Ye Tianshi, a famous TCM physician in the Qing Dynasty. This method can control high fever and stop further transmission; it is the key approach in shortening the pathological process, reducing aggravated syndromes, enhancing the therapeutic result and lowering the fatality rate. We used Chinese herbs to induce purgation, remove stasis, moisten yin and induce diuresis in patients with epidemic haemorrhagic fever. Altogether we treated 1127 patients. The fatality rate was 1.11%, which was much lower than that of the control western medicine group (5.08%).[1]

This research has obtained the First Class Prize of the National Public Health Ministry of China and the result was sent to the former Soviet Union for international exchange as the highest achievement of TCM treatment for haemorrhagic fever. Based on this experience, I started to do more research on difficult and intractable diseases and initiated 20 projects, including acute renal failure, viral infectious fever, tumor, hepatic diseases, cerebral diseases, hypertension and shock.

Zhu: What are your main secrets of successful TCM treatments?

Zhou: I am happy to share my treatment strategies. Firstly, TCM emphasises individualised treatment. This is a basic rule and also one of the most important guides in treating difficult and intractable diseases. The same disease with the same pathogenic agents may present different pathological changes depending on the age, climate, seasons, geographic regions and individual constitutions. For example, haemorrhagic fever in Jiangsu province was of warm-heat type and that in Jiangxi province was of damp-heat type. Different persons also show different symptoms from the same pathogens.

Secondly, we need to pay attention to the treatment sequence, particularly to these diseases with complicated pathogenic factors. We must be able to catch the main problem and distinguish the primary from the secondary. The general principle is to treat the symptoms for acute conditions and the root cause for chronic circumstances. But in the clinic we also need to be flexible.

The third aspect is to apply compound prescriptions. In the clinic, difficult and intractable cases are often seen involving several *zangfu* organs and presenting contradictory manifestations, for example, exterior and interior, cold and heat, deficiency and excess. The prescription should be made of drugs with both cold and heat properties, possessing potential ascent and descent and purgative and tonifying effects. The concrete method is to determine the essential strategy according to the principal syndrome, then to add the secondary strategies and corresponding drugs to solve the mixed pathogenesis.

The fourth is trial and error and 'reversal thinking'. These two methods can be used when we have tried the conventional methods and failed. If the pathological conditions are too complicated to find out the pathogenesis, try some gentle formulas to ascertain the pathogenesis. Dosages can be increased or more drugs can be added if there are some improvements. If there is no result, try to think of other prescriptions.

Reversal thinking is reanalysing the condition and trying to treat it from the opposite aspect to your original strategy.

Zhu: Would you please give some advice to students on how to study Chinese medicine?

Zhou: In addition to the required courses, I think there are two very important methods. The first is to read and recite TCM classics and the second is to start clinical practice as early as possible. I read a lot of classic works of Chinese literature and learnt by heart many masterpieces of the TCM classics. Even now I can still recite some chapters in *Shang Han Lun* (Treatise on Cold-Induced Diseases) and *Qian Jin Fang* (Prescriptions Worth a Thousand Gold). Sun Simiao and Zhang Zhongjing are my favorite physicians. TCM classics, originating from Chinese culture, are the essential guides to previous physicians' experience. The later generations also enrich and supplement them to make a complete therapeutic system. These are the source and basis of Chinese medicine.

TCM classics can be learnt in two ways. One is to start reading the most elementary ones, namely the four classics, *Nei Jing* (The

Internal Classic of Yellow Emperor), *Shang Han Lun (*Treatise on Cold-Induced Diseases), *Jin Kui Yao Lue* (Synopsis of the Golden Chamber) and *Wen Bing Lun* (Treatise on Epidemic Febrile Diseases), then gradually to read other medical works. This way can lay a solid foundation for later study or even the whole of life if one can memorize more masterpieces even though it may seem boring, dull and confusing at the time of studying.

The other way is to study and remember some practical writings written by the later generations, such as *Tang Tou Ge Jue* (The Rhymes of Chinese Herbal Formulas), *Yao Xing Fu*, (The Odes of Herbal Potency), *Pin Hu Mai Xue* (*Pin Hu* Pulsology), and *Yi Xue San Zi Jing* (Medical Classics of Three Characters). At the same time read *Wen Re Jing Wei* (The Essence of Epidemic Febrile Diseases), *Wen Bing Tiao Bian* (The Detailed Analysis of Epidemic Febrile Diseases), *Yi Zong Jin Jian* (The Golden Mirror of Medicine), *Yi Xue Xin Wu* (Medicine Comprehended)and *Yi Fang Ji Jie* (Collection of Prescriptions with Notes). One should also read books of case analysis by a couple of famous physicians. Books of case analysis are very useful and I still read them. Case studies are close to clinical practice. Advanced study of the elementary TCM classics is still necessary for laying a solid foundation. The classical learning will be better understood and perceived after some time of clinical practice.

Zhu: Why do you think that the TCM students should start clinical practice as early as possible?

Zhou: TCM is a practical science that has originated and developed in people's everyday life, work and clinical practice. So it is quite reasonable to say without clinical practice, there will be no TCM. And there will be no brilliant TCM if there is no clinical practice with its excellent effects.

Nowadays TCM students spend too much time studying books and in their classrooms, but with only a little time in the clinic. Without clinical practice or observation, many students lose their confidence in TCM and prefer to use western medicine instead of TCM. If they could start to practice TCM as early and as soon as possible, and observe and experience the unique results by themselves, I am sure they will have strong belief and apply TCM in their practice confidently.

My confidence in TCM is very firm, which I think is related to my TCM family. In that environment, I was able to observe TCM even when I was very young. Now I am over 80 and I have practised TCM for over 60 years. Even when I was very busy in the leading position as the president of the hospital or university, I still held onto clinical practice. Long-term practice offered me opportunities and inspirations for my clinical experience and academic achievements. I hope that the students today start practice as early and as soon as possible. It can help them comprehend and improve their understanding of TCM theories and it is the only way to become a superior TCM doctor.

Zheng: Some students do not see the necessity of studying Western medicine or understanding modern research. What do you think the place of Western medicine is in our practice?

To improve TCM academic level, we must learn some western medical knowledge, which may help us understand the human body and supplement TCM theory. But the purpose is to make TCM better. It is just like a Chinese saying 'A stone may be as beautiful as a piece of jade in some circumstances'. For example, modern pharmacological research finds out some medicinal herbs possess blood pressure-lowering effect. We may use them to treat hypertension, but the usage must be under the guidance of TCM theories. *Tian Ma* (*Rhizoma Gastrodiae Elatae*) and *Ju Hua* (*Flos Chrysanthemi Morifolii*) have the function to calm the liver and extinguish wind, so they should be used for hypertension due to hyperactivity of liver yang and internal wind. *Xia Ku Cao* (*Spica Prunellae Vulgaris*) and *Huang Qin* (*Radix Scutellariae Baicalensis*) have the function to clear fire and resolve phlegm, so they are used in hypertension due to exuberant phlegm fire. Anti-hypertension is the common function of many herbs, but as a TCM doctor we should use them according to syndrome differentiation.

Zheng: What do you think of today's TCM education?

Zhou: In my opinion, high education of TCM should aim at training tip-top TCM doctors for the needs of society. TCM is a special profession and possesses its own features, just like training Beijing Opera actors. We should know TCM is a traditional medical science. It is a very important strategy to balance the inheritance and its evolution since it will not continue to develop if there is no heritage. Apprenticeship is a good model, which should be taken as a part of TCM education. This is the traditional way of teaching TCM. The apprentice students will learn basic theories, features, clinical effects as well as the master doctors' way of thinking and treatment approaches when they follow the doctors in the clinic. As I said before, clinical practice will not only build up their confidence in TCM practice but also enhance their understanding of TCM. In this way they can inherit and develop it in future.

Zhu and Zheng: Thank you very much for your time and advice.

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Current Research and Clinical Applications

Response to: Madsen MV, Gøtzsche PC, Hróbjartsson A. Acupuncture Treatment for Pain: Systematic Review of Randomised Clinical Trials with Acupuncture, Placebo acupuncture, and No Acupuncture Groups.

BMJ 338:a3115, doi:10.1136/bmj.a3115 (Published 27 January 2009)

Zhen Zheng* PhD

This January, BMJ published a systematic review of acupuncture clinical trials for pain conditions. The authors were from Nordic Cochrane Centre in Denmark. They have been researching the placebo effect in medical interventions for a number of years.

The results of this paper were publicised in many newspapers, radio and online media, and caused a world wide discussion on whether acupuncture was effective. I believe most of you would have read the news or heard of the review. At the time of publication, I was busy working on three Human Research Ethics applications for a clinical trial we planned to conduct in Melbourne and paid little attention to the review. I said to myself it was just another such paper, failing to recognise its wide impact. Then two Human Research Ethics Committees questioned me about the implication of the review on our clinical trial. The committees wanted to know, given there was little difference between real and sham acupuncture as shown by the Madsen review, how we could justify the clinical trial we proposed and if we should consider adopting Madsen's recommendations? A couple of weeks later, a potential patient told me that from his reading there was little evidence supporting the use of acupuncture for pain relief, and asked me what my opinions about acupuncture for pain management were. These incidents highlight the wide and strong impact of research on, not only further studies in the area, but also clinical practice.

ABOUT THE REVIEW

So what is the review about and what are the recommendations? Madsen and colleagues wanted to know if real acupuncture was better than fake/sham acupuncture or no acupuncture for pain relief. To answer the questions, they conducted a comprehensive literature search and utilized a set of selection criteria. Briefly, they selected randomised controlled studies; (1) using invasive acupuncture as the real procedure; and (2) reporting pain intensity measured on a Visual Analogues Scale (VAS) or ranking scale. Thirteen studies with a total of 3025 patients were selected. The study conditions included post-operative pain, scar pain, tension-type headache, migraine, fibromyalgia, osteoarthritis and low back pain. They found that although there was a statistically significant difference between real and sham acupuncture in pain relief [Standard Mean Difference (SMD) –0.17], the effect was small, about 4 mm on a 100 mm VAS, and clinically insignificant. The difference between real and no acupuncture groups was moderate (SMD –0.42). Furthermore, and contrary to the common view, the authors did not find any difference in pain relief between sham acupuncture using invasive methods and non-invasive methods. The authors concluded that the analgesic effect of acupuncture was clinically irrelevant and the psychological effect of acupuncture needs to be studied.

The authors went further to recommend:

(1) '…having the needling done by acupuncture naïve clinicians blinded to the hypothesis of the trial'; and

(2) '…try to separate the effects involved: the physiological effect of needling at acupuncture sites or at other sites and psychological effect of the treatment…'

* Correspondent author; e-mail: zhen.zheng@rmit.edu.au

Aust J Acupunct Chin Med 2009;4(1):34–36.

ANALYSIS OF THE REVIEW

The authors attempted to answer an important question: the difference between real and sham acupuncture for treating painful conditions. Overall the review was executed with well-accepted methods and adequate statistical analysis. The two weaknesses of the review are the main threats to the validity of the study. Firstly, the review did not distinguish between chronic and acute pain in the analysis. Secondly it failed to assess the quality of acupuncture treatment.

Chronic pain differs from acute pain in its pathology and management approaches. Chronic pain is considered not just a symptom, but a disease in itself,[1] whereas acute pain is often self-limiting and disappears as tissue heals. Furthermore, chronic pain affects one's physical function, cognition and emotion. Due to the complexity of chronic pain, the International Association for the Study of Pain (IASP), the main organisation that promotes pain research, education and practice, advocates multidisciplinary pain management. 'The Initiative on Methods, Measurement, and Pain Assessment on Clinical Trials (IMMPACT)'[2] states that pain intensity is only one aspect of any pain condition. When assessing the efficacy of an intervention, one has to consider not only reduction in pain, but also improvement in physical function, quality of life and psychological status. Using pain intensity alone to judge the clinical use of a therapy is not adequate. Thus, using limited data, a single type of outcome assessment, or a single modality to judge the efficacy of acupuncture for pain, is also inadequate.

Even within chronic pain, there are various types. For instance, fibromyalgia (FM), a type of wide-spread pain, is quite different from commonly seen localised musculoskeletal conditions, such as knee pain. One study showed that both real and sham acupuncture increased the blood flow in the muscle of FM patients; whereas in the healthy humans, only real acupuncture had this effect.[3] The results indicated that both types of acupuncture could be similarly effective in FM patients, possibly due to physiological, rather than psychological factors. Experienced acupuncturists would know that only shallow needling, similar to that used in sham acupuncture, should be used in FM patients at the early stages of treatment because patients are often extremely sensitive to needling.

Acupuncture is a complex intervention; even in its technique, it is more than just *deqi* and acupuncture points. Two questions students often ask about *deqi* and yet we do not have the answer are how long *deqi* sensation should be maintained and whether we need to produce *deqi* in all acupuncture points used in the treatment. These questions imply the fine techniques involved in needling. Let me illustrate the importance of this question with an example. In recent years, two clinical trials of acupuncture for tension-type headache were conducted in Germany.[4,5] Both compared real with sham acupuncture, selected similar acupuncture points, and the treatment was delivered by physicians who had similar qualifications. The results were, however, different. For headache days, Melchart's study showed no difference between real and sham acupuncture whereas Endres's study found that real acupuncture reduced headaches by 2.3 headache-days more than sham acupuncture did. Fortunately the authors of the two studies published their research methods and conduct of the trials in great detail,[6,7] which allowed in-depth comparison of the two trials. It became apparent that the administration of acupuncture and the adherence to protocol differed in the two trials. In the Melchart study, one of the eight main centres delivered 214 out of 1507 sessions of treatment, and did not use two of the three mandatory points for 80% of their patients. '*Deqi* was achieved if possible'. In contrast, in the Endres study, mandatory points had to be needled in every patient and in every session, '*Deqi* … had to be elicited at all points', and needles were manipulated 2 to 3 times during the treatment to achieve consistent *deqi*. Independent clinical monitors visited the trial centres repeatedly to ensure the quality of the intervention. The differences between the two trials highlights that the effect of acupuncture is beyond a simple reporting of *deqi* and the acupuncture points selected.

It is not surprising that the recent CONSORT statement on trials assessing non-pharmacological treatments[8] expanded the 'Intervention' section from one item in the previous statement[9] to three items. The recent statement also emphasises the inclusion of experienced therapists. For instance, trial surgeons must be experienced in and comfortable with the studied surgical procedure.

WHAT DO I THINK ABOUT THE RECOMMENDATIONS?

The authors of the Madsen review should have discussed the above-mentioned confounding factors before concluding that acupuncture has only a small analgesic effect that is of little clinical relevance. The suggestion of using 'naïve clinicians' so as to ensure the blinding of therapists is not scientifically sound and clearly against the CONSORT statement as outlined above. Such a suggestion will only introduce more variances. The suggestion is also unethical, being against the International Conference on Harmonization Guideline for Good Clinical Practice (ICH-GCP) E6 (1996). Item 4 states that in order to protect trial subjects, the investigators should meet 'all the qualifications specified by the applicable regulatory requirement(s)' and their qualifications should be up-to-date. What would a subject in an acupuncture trial think when he or she is told that the trial therapist is a 'naïve' acupuncturist? I think any Human Research Ethics Board or Committee that approves such practice in acupuncture trials would be

deemed to be unethical.

The second recommendation is reasonable given the complexity of acupuncture. As practitioners, we ought to be mindful that the procedure of acupuncture enhances its therapeutic effect.[10] As researchers, we ought to find if it is possible to separate the physiological and psychological effects of acupuncture and how.

CONCLUSION

Overall, the Madsen review provokes more questions than it provides answers. Future systematic reviews need to take the quality of treatment administration and adherence to protocol into account. These factors of acupuncture treatment need to be further studied in relation to their impact on the outcomes. In addition, before we understand the underlying mechanisms of fibromyalgia, systematic reviews of pain should not confuse wide-spread musculoskeletal pain with other types of pain.

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Book Reviews

Shang Han Lun Explained

Compiled and Translated by Greta Young Jie De and Robin Marchment
Churchill Livingstone, 2008
ISSN 9780 7295 3881 7

Diagnosis Study Guide

Qiao Yi and Al Stone
Eastland Press, 2008
ISBN 978 0 939616 64 0

Shang Han Lun Explained

The recent publication of *Shang Han Lun Explained* marks an important landmark for the development of Chinese herbal medicine in Australia. Written by two Australian TCM practitioners, Greta Young Jie De, a strong advocate for classical Chinese medicine and Robin Marchment, a specialist in Chinese language, the book offers an accurate translation and in-depth commentary on this important Chinese herbal canon. The book has two aims as pointed out in the preface, firstly to explain the theory of *Shang Han Lun* and secondly to explain how the ideas and principles of the text can be used to treat disease in modern times. The text that it has been based on is the Ming Dynasty's Zhao Kai Mei edition and while the 398 original clauses have been included in the text they have been rearranged by the authors in terms of clinical relevance. This allows the reader to have a continued focus on a concept or disease pattern without having to refer to other pages and clauses. The authors have also made extensive use of numerous summaries, tables and key points to assist understanding and clarify difficult phrases and concepts.

The 543-page book is divided into nine chapters and has sixteen appendices. Chapter one introduces the main concepts associated with the patterns of the six channels. A brief introduction to the historical development of the text and its methods of diagnosis and disease transmission are introduced. Sections on the ebb and flow of qi in the six channels, decoction and administration methods complete this chapter and make it an excellent introduction to the next six chapters.

Chapters two to seven concentrate on each channel pattern individually, commencing from *Tai Yang* and finishing with *Jue Yin*. Every chapter has numerous sections, each focussing on a specific formula conformation or disease pattern. For example, in the *Tai Yang* chapter there are sections on the channel patterns, the hollow organ patterns (*fu*), disease transmission and their treatment, transmuted (deterioration of the disease) patterns and their treatment, transmuted patterns following inappropriate therapy and specific symptoms such as glomus and chest bind associated with the *Tai Yang* pattern. Each concept area commences with the original clause (in modern Chinese characters) and the English translation often followed by the formula, directions for its use and a lengthy discussion on the clause. Interspersed are case studies which demonstrate the clinical usage of a specific formula and modern applications of the ancient formula. These six chapters are extensive in detail and reflect a high level of scholarship and clinical relevance.

Chapter 8 introduces the disease concept of *Huo Luan*, often translated as 'sudden upheaval' or 'sudden turmoil' which refers to a range of acute digestive disorders such as food poisoning or gastritis. Several clauses from the text are used to identify the symptoms and treatment of the condition. Again, numerous case studies are used to highlight the flexibility of several herbal formulas such as *Li Zhong Wan* and *Si Ni Tang* used to treat the condition.

The final chapter focuses on the convalescent period after the disease and the potential for relapse called Yin Yang Exchange and Taxation Relapse. Further relevant clauses are introduced with their appropriate treatment and the rationales of why and how these patterns may have arisen are explained.

The sixteen appendices take up over 100 pages and introduce supplementary information that aids understanding of the text in general. The appendices are: App. 1. Additional Clauses not included in the Main Chapters; 2. The Sequence of Clauses in the Zhao edition of the Text; 3. Clause Index; 4. Summary of Formulas and Indications; 5. Formula Index; 6. *Fu Zi* Research; 7. Index to Symptoms and Ailments; 8. Glossary; 9. Weights and Measures – as used in the ancient text; 10. Han Dynasty Time – the ebb and flow of the six channels; 11. Heavenly Stems and Earthly Branches; 12. Chinese Dynasties and their Historical Periods; 13. Notable Figures in Chinese Medicine; 14. References; 15. Herb Names – Cross Reference of Chinese and Pharmaceutical Names and 16. Bibliography.

This text offers a detailed analysis of one of the most important Chinese herbal clinical manuals. It is the basis for treatment for not only acute disease but also many chronic diseases currently seen in clinics across Australia. The authors have raised the benchmark and have made the learning of classical Chinese medicine attainable by anyone who studies this book.

Reviewed by Chris Zaslawski

Diagnosis Study Guide

Diagnosis is the bridge between theory and clinical practice. Having taught this subject for nearly twenty years, I am always on the look out for new texts. The recent book, *Diagnosis Study Guide* is a welcome addition to the growing number of specialised texts on Chinese medical diagnosis. What is especially useful in this new book is the extensive use of flow charts and the numerous tables that help the student or practitioner understand the pathomechanisms of many symptom/signs and diseases. Also unique to the text is the Questions and Answers for Deeper Insight sections which explain and clarify the theory behind difficult concepts. For example, 'How does blood stagnation cause thirst without a desire to drink' or 'Why does the body temperature increase between 3 and 5 pm in the *yang ming* organ pattern?'

The text is divided into four chapters each concentrating on one of the four methods of Chinese medicine (Inspection, Listening and Smelling, Inquiry and Palpation). Each sign/symptom is given a definition, with the pathomechanism followed by the clinical significance of the sign/symptom. Often a table is used to differentiate between different TCM patterns associated with the symptom/sign. Both tongue inspection and pulse examination are given extensive coverage, as are the ten traditional questions. The text also has a 200-question multiple-choice self-examination with answers, which is a good way to check ones level of understanding. An interesting aspect is that the material has been peer reviewed prior to publication ensuring the accuracy and clarity of the content. While this book has been written for the student, it also has something to offer the experienced practitioner, especially some of the responses for the 'Questions and Answers for Deeper Insight'.

The layout is clear and the text is organised in a systematic and logical manner. The material is 'chunked' and has been written to distil the basic concepts and ideas associated with each diagnostic symptom/sign. This text is an excellent primer before progressing to more complex diagnostic perspectives such as *zangfu bian zheng* and students should consider this text when first beginning the study of Chinese medicine diagnostics.

Reviewed by Chris Zaslawski

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ACKNOWLEDGMENTS

Acknowledgments should:

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AJACM adopts the Vancouver referencing system. A summary of which is available from: library.curtin.edu.au/referencing/vancouver.pdf. The Journal encourages the use of citation managers such as EndNote.

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References should be listed according to the order of their appearance in the text. Please refer to the following referencing examples.

1. WHO Standard acupuncture point locations in the Western Pacific region. Manila: WHO Regional Office for the Western Pacific; 2008.

2. Cahn A, Carayon P, Hill C, Flamant R. Acupuncture in gastroscopy. Lancet 1978;28(1):182–3.

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Submission of manuscripts

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Acupuncture points should be named according to both Pinyin and the numerical code recommended by the World Health Organization Western Pacific Regional Office (WHO Standard Acupuncture Point Locations in the Western Pacific Region. Manila: WHO Regional Office for the Western Pacific; 2008).

Chinese herbs should be named according to both the Pinyin and the Latin name. AJACM reserves the right to correct Chinese herb names to conform with the Pharmacopoeia of China (Pharmacopoeia Commission. Pharmacopoeia of the People's Republic of China 2000. English ed. Beijing: Chemical Industry Press; 2000).

The terminology of Chinese medicine, such as Qi, Yin and Yang, should be in pinyin. Other Chinese medicine terminology and English translations should be in accordance with recommendations of the World Health Organization Western Pacific Regional Office (WHO International Standard Terminologies on Traditional Medicine in the Western Pacific Region. Manila: WHO Regional Office for the Western Pacific; 2007). It is recommended that each manuscript contain a glossary of Chinese medicine terms used.

Chinese characters should be in simplified form and will only be accepted as in-text characters. Downloads for using in-text Chinese characters in MS Word can be obtained from the Microsoft website, www.microsoft.com.

The language used in AJACM is standard Australian English as per the Macquarie Dictionary. Manuscripts will be amended accordingly.

Contact information

All correspondence should be addressed to the AJACM Editor-in-Chief.

E-mail: ajacm@acupuncture.org.au
Fax: +61 7 3394 2399
Post: PO BOX 1635
COORPAROO DC QLD 4151
AUSTRALIA

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