

Problematic Standards: Comparing TCM Textbook Descriptions of Menopausal Syndrome with the Lived Experience of London Women at Midlife and the Implications for Chinese Medicine Research

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Abstract

Almost without exception clinical research seeking to evaluate the effectiveness of Chinese medicine relies on TCM textbook knowledge – accessed directly or via practitioners’ clinical usage – in order to frame its hypotheses. Recent historical research shows that these textbooks, products of a politically directed process of modernisation, constitute complex hybrids of western and Chinese knowledge that are designed to facilitate the integration of Chinese medicine into biomedically dominated contexts of practice. As such they produce a number of unresolved and generally unacknowledged tensions, such as between the emphasis on local illness experience in the Chinese medical tradition and the universality aspired to by biomedical knowledge. To examine the effect of these tensions we have carried out a study that compares local symptom patterns experienced by post-menopausal women in London with the universal patterns described in TCM textbooks. The results of this study confirm our hypothesis, namely that the TCM textbook descriptions of disease are not always grounded in clinical experience even if that is what textbooks claim. This raises questions about the relation of textbooks to clinical practice, and about the validity of clinical research based on textbooks and textbook derived normative practice. We argue that only a multidisciplinary approach that includes an understanding of the historical construction of contemporary Chinese medical knowledge and its relation to clinical practice can overcome these problems and enable a meaningful evaluation and utilisation of Chinese medicine in the context of 21st century evidence-based healthcare.

Introduction

Chinese medicine is widely promoted as an alternative medicine with potential benefits to patients around the world based on a history of continued usage for almost two thousand years. However, linked to the rise of evidence-based medicine (EBM) more objective kinds of proof are increasingly expected also of traditional practices like Chinese medicine in order to justify such claims (1). Such pressures have led to debates within the Chinese medicine community regarding its relationship to the EBM project (2). Some fear that the tools and technologies developed to assess the effectiveness of narrowly defined biomedical interventions may be unsuitable for evaluating the complex process orientations at the heart of Chinese medical practice (3). Others take a more pragmatic view. They see EBM as a means to raise the status of Chinese medicine, improve its clinical practice, and continue a process of modernisation that was initiated in the early 20th century (4, 5).

The present article is intended as a contribution to this debate. It accepts the goals of the pragmatist second position but critically interrogates the processes by which “Chinese medicine” becomes an object of EBM research. To this end we employ an innovative empirical study that compares Chinese medicine textbook descriptions of menopausal syndrome with the actual experiences of menopausal women in London. In order to explain the rationale for this study, it is necessary to provide readers with a brief outline of the history of these textbooks, their role in shaping the management of menopausal symptoms in contemporary Chinese medicine, and the implications of this for EBM research.

In line with recent historical scholarship we will distinguish between “Chinese medicine” as referring to the wider literary medical tradition of China, and a more narrow interpretation of this tradition that was developed and institutionalised in China from the mid-1950s under the direct control of the Chinese state, and that has since been exported throughout the world as “traditional Chinese medicine” or “TCM” (6-8). While Chinese medicine encompasses TCM as one of its many currents,

TCM seeks to hegemonise the interpretation of what Chinese medicine is and how it should be practiced through processes of standardisation, regularisation and bureaucratic control at both national and international levels (9). TCM textbooks are one of the main vehicles through which TCM was created and through which it then achieved a globally dominant position in both professional and popular understandings of what Chinese medicine is (6, 8).

TCM Textbooks and the Problem of Menopause

TCM gynaecology textbooks, first published in the early 1960s, discuss menopausal syndrome under the heading “patterns associated with the cessation of menstruation” 经闭不通 (10-12). Here, menopause is related to a general process of female ageing and decline whose surface symptoms can be traced in every case to what is known in Chinese medicine as “Kidney deficiency” 肾虚. National standards for diagnosis and treatment in Chinese medicine published by the Chinese government in the course of the 1990s (13) closely adhere to these textbooks descriptions (Table 1).

Table 1: TCM National Standards for Diagnosis of Menopausal Syndrome (13).

In the West, key figures in the transmission of TCM to the West like Flaws and Maciocia (14-16) translated these ideas into publications that have since become standard textbooks in their own right. This frequently involved further simplifications. Both Flaws and Maciocia claim that yin deficiency with vacuity/empty/deficiency heat is the single most important cause of hot flushes in Western women. In popular literature directed at prospective patients this is then taken to the extreme of simply equating menopause and Kidney yin deficiency (17).

Table 2: The treatment of menopausal syndrome as outlined in important TCM textbooks from China and the West

There exists clear evidence that the Kidney deficiency model taught to practitioners by means of TCM textbooks dominates diagnosis and treatment of menopausal syndrome by TCM practitioners in both China and the West (18, 19). It also constitutes the main framework in clinical studies that claim to examine the “Chinese medicine” treatment of menopause (20-23) as opposed to those that merely look at the effect of individual formulas or herbs. It is therefore legitimate to speak of TCM textbooks, at least for the case of menopausal syndrome, as constituting normative standards of TCM practice.

TCM textbook authors portray these standards as having emerged naturally over the course of Chinese medical history and, therefore, as having been validated by hundreds or even thousands of years of clinical practice. On closer inspection the theories that underpin TCM textbook accounts of menopause reveal themselves to be of more recent origin however. The first time that menopausal syndrome is discussed in any Chinese medical text can be dated precisely to 1964 when the 2nd edition of national textbooks of Chinese medicine was published (24). Nor are these theories entirely Chinese. Rather, they were constructed by first translating the biomedical concept of menopause as a problem of hormonal deficiency into the Chinese idiom of Kidney deficiency, and then creating a historical lineage for this new theory by way of a highly selective reading of classical sources (25). In doing so textbook editors further tied the TCM discourse on menopausal syndrome to the wider project of Chinese medical modernisation, both of which have been described as “inventions” (25, 26) in the sense of Eric Hobsbawm’s notion of “invented traditions” (27).

[Possibly insert Figure 1 here]

The key remit of the modernisation project carried out during the Maoist and post-Maoist periods was to facilitate Chinese medicine's integration into a biomedically dominated health care system. Medical historians agree that the success of these efforts was due, above all, to the series of national textbooks produced in the late 1950s and early 1960s and their ability to fuse Chinese and Western medicine within the new paradigm of "pattern differentiation" 辨證 (8, 28).

Providing the overarching framework for treating all illness, including menopausal syndrome, TCM pattern differentiation seamlessly integrates Chinese medicine into biomedically-dominated contexts of practice while at the same time creating the illusion of an essential difference between the two medical systems. It achieves this by distinguishing between "diseases" 病, seen to be the domain of biomedicine, on the one hand and "patterns" 證, which constitute the focus of TCM treatment on the other. Diseases are characterised by universality and sameness, while patterns are seen as reflecting the momentary and therefore local expression of disease in an individual patient. It is the ability to intervene at the level of this difference – the level of pattern - that provides TCM with an identity of its own even if diseases now constitute the overarching rubrics through which illness is apprehended (28, 29).

Patterns are defined as distinctive constellations of symptoms and signs that express on the outside of the body and therefore accessible to the senses the underlying pathological processes that are defined as the real targets of TCM treatment. Pattern differentiation is the sorting of information gathered by means the four examinations 四診 - i.e. of inspection 望, questioning 問, palpation 切, and listening and smelling 聞 - into meaningful patterns that physicians learn to identify during their training. These patterns are said to reflect the accumulated experience of the Chinese medical tradition and to be the axis on which TCM practice turns (29).

Although this cannot be explicated here in any detail, the continuity implied in the constitution of TCM around the practice of pattern differentiation hides important breaks between what we refer

to in this article as TCM and Chinese medicine. In Chinese medicine, pattern differentiation emphasises a practice (that of differentiating) and not a thing (the pattern). It is this practice that is able to establish a relation between surface (i.e. symptoms and signs) and depth (i.e. the diseases process). Such practice emphasises individual agency, accomplishment, and self-cultivation and embodies some of the most fundamental assumptions defining Chinese culture (30). In TCM, at least for the case of menopausal syndrome, this relationship has been reversed. Theory (i.e. the new hybrid of biomedical and Chinese knowledge) now explains the presence of surface signs, and this codified knowledge about patterns determines what physicians should pay attention to and how they should act.

[Possibly insert Figure 2 here]

This reconfiguration of Chinese medicine involves another important realignment relevant to our discussion, namely that between the local and the universal. As previously conceived, Chinese medicine begins and ends with individual patient experience. This is outlined in exemplary fashion by the Republican era physician Xie Guan 谢观 (1880-1950), whose works continue to be cited in TCM definitions of Chinese medicine to this day (31):

“A person’s body may be strong or weak, old or young. Disorders may be recent or long-standing, light or serious. Climates may [vary between] cold and warm, dry and moist. The environment may be hard or soft, gentle or strenuous. All these factors [can be classed] as changes of [local] situations, which [can be responded to] by collecting [different] drugs and composing [different] formulas. For in [composing] formulas and combining drugs one should follow what is appropriate to each given case. One [certainly] cannot [simply] apply

routine [treatments].” (32 , 62b)

The development of TCM has moved Chinese medicine in precisely the opposite direction. Patterns are increasingly standardised into so-called types 型 that function essentially as sub-categories of disease. Like diseases, these types are assumed to have universal applicability thereby enabling the global diffusion of TCM textbook knowledge and practice (28). This epistemic shift from local to universal knowledge is amplified in the case of menopausal syndrome, where the definition of types prioritises universal biological change above local illness experience (25). Not surprisingly, the TCM literature almost completely ignores widely documented variations in women’s subjective experience of the menopausal transition and its relation to factors such as ethnicity, culture, diet and place of residence (33, 34). This is the case even where such studies directly involve China (35, 36), and even though TCM’s self-proclaimed focus on the individual should have sensitised it to these issues. Ironically, therefore, at the very moment when western anthropologists based on their fieldwork in Asia began to develop an understanding of menopausal symptoms as expressing distinctive “local biologies” (37), TCM textbooks were busy exporting to the West their re-interpretation of Chinese medicine that grasped menopausal syndrome by means of newly invented universally valid disease types.

It is important to note in this context that other East Asian medical traditions such as Japanese Kampo and Korean Oriental medicine offer substantially different approaches to treating menopausal syndrome even as they draw on a shared literature and stock of herbal formulas (38, 39). The same applies to Taiwan where a recent survey shows Augmented Rambling Powder 加味逍遙散 to be the most commonly prescribed formula in the treatment of menopausal syndrome (40). Augmented Rambling Powder 加味逍遙散 is a famous gynaecological formula that treats heat constraint against a background of Liver and Spleen qi and blood deficiency. Even in mainland China, an extensive and easily accessible case history literature provides evidence that in clinical practice

physicians, including textbook authors or those that textbooks reference in support of their doctrines (41-43), frequently diagnose patterns and use formulas that do not concur with the Kidney deficiency model. This implies that for these physicians the patterns outlined in TCM textbooks have at best the orienting function attributed to them by an earlier generation of writers such as Xie Guan. It also suggests that when TCM physicians and researchers diagnose menopausal women as Kidney deficient (19, (22, 44, 45), then this does not necessarily confirm the actual presence of Kidney deficiency in menopausal women. Rather, guided by normative standards of practice these physicians and researchers may interpret the symptoms their patients bring to the clinical encounter according to what textbooks and national standards say and frame their diagnoses accordingly. This raises the important question as to whether – at least for the specific case of menopause - TCM has the clinical foundations it claims in clinical experience; and if not, what the effects of this disjuncture might be on clinical outcomes and outcome research.

To examine this question and gain a clearer understanding of the scale of the problems outlined above we have carried out an empirical study that compares symptom patterns experienced by post-menopausal women in London with those described in TCM textbooks and national standards while circumventing potential practitioner bias in the diagnosis of what patterns may be present. Our hypothesis is that given the level of diversity in the local experience of menopause consistently reported in the literature, including that between women in London and China (46), we would expect a similar diversity also to be reflected at the level of Chinese medicine patterns.

Subjects and Methods

Questionnaire and sample

The study population consisted of female patients on general practice lists in the London boroughs of Lambeth, Lewisham and Southwark, between the ages of 45 and 55 years. These boroughs comprise ethnically diverse populations such that a comprehensive coverage of the UK's ethnic diversity is found within them. The Index of Multiple Deprivation scores (47) varied across the boroughs, and we actively targeted and recruited GP practices within electoral wards with both high and low scores to reflect the range and maximise generalisability. Data were collected using a self administered postal questionnaire, based on methods developed by Kaufert and Syrotuik (48) and previously used by Lock (49). A general symptom checklist was used, with symptoms considered to be related to menopause embedded within it (50). Menopause was not used in the title or in questions of the survey thus avoiding answers based on stereotypes.

Women were asked to answer 'No' or 'Yes' to recalling a symptom experienced over the last two weeks only. This timescale was chosen to minimise recall bias. The questionnaire comprised forty-five questions of which thirty-seven related to experience of symptoms, and the remainder ascertained menopausal status, age, ethnicity and medication use. Menopausal status was classified as pre-menopausal where the woman stated that she was still menstruating regularly, peri-menopausal where the woman stated that her menses had become irregular over the previous year or had menstruated in the last twelve months but not in the last three. Women who stated that they had not menstruated in the past twelve months were considered to be post-menopausal, and there was an additional category of those having undergone a non-natural menopause. Findings relating to the relationship between symptoms, ethnicity, age and menopausal status in the complete sample are the subject of another (51) paper.

We mailed 1931 survey booklets and 1120 (58%) were returned from patients belonging to all seven participating practices. For the purpose of the present study we analysed data for 179 peri- and 140 post-menopausal women who had listed hot flushes as one of their symptoms. The reasons for

analysing this specific group relate to the somewhat ambivalent definition of the nosological category “patterns associated with the cessation of menstruation” in the TCM literature. That TCM textbooks and National Standards include symptoms relating to a woman’s menses in their listing of symptoms patterns suggests that the term refers to peri-menopause. However, in as much as TCM textbooks explicitly relate the Kidney deficiency model to the cessation of menstruation it can also be read as corresponding to post-menopause. Limiting our analysis only to those women with hot flushes responds to three considerations: first, to the fact that hot flushes (read as “empty heat” 虛熱) are a key sign supporting the Kidney deficiency model in TCM; second, vasomotor symptoms are consistently reported in the literature as being related to menopause rather than ageing; and third, they are deeply embedded in the modern understandings of the menopausal transition that inform not only biomedical and TCM discourses on the menopause but also the understanding of patients themselves.

Ethics

Ethical approval was given by the University of Westminster’s ethics committee. Research Governance Framework Approval was given on behalf of Lambeth, Lewisham and Southwark Primary Care Trusts (PCT) by the Research & Development Centre at Southwark PCT, and NHS ethical approval was obtained through the Greenwich and Bexley NHS research ethics committee.

Analysis

Basic statistical analysis was undertaken using SPSS V.15.0 (SPSS Inc, Chicago, IL, USA, 2006). For those subjects who had missing responses for only one or two symptoms of the entire question set a negative response was imputed for these questions in order to maximise the sample size for the

analysis of symptom patterns. This increased the useable sample size by about 20%. A negative response was imputed for these questions because across the survey the proportion of negative responses was higher than that of positive responses (64% v. 36%)

For the analysis reported in this paper, only thirty-three of the thirty-seven symptoms were included since the two questions relating to hot flushes had been used to select the sub-sample, and two questions with associated logical skips were deleted to avoid multi-collinearity.

Factor Analysis

Exploratory factor analysis using STATA Statistical Software: Release 9 (StataCorp, College Station, TX, USA, 2005) was applied in order to investigate whether there were identifiable dimensions underlying the symptoms in this sub-sample. Factor analysis is commonly applied to data relating to menopausal symptoms to detect symptom clusters, and findings from such studies have been used to argue against a universal menopausal syndrome (52).

Since factor analysis is ideally applied to normally distributed continuous variables, the technique is believed by many statisticians to be inappropriate for binary variables. However, where the binary variables are indicators of underlying continuous variables, it is considered acceptable to apply factor analysis as long as it is based on tetrachoric correlation matrices rather than Pearson correlation matrices (53, 54). Since our data were binary, first a tetrachoric correlation matrix for the thirty-three symptoms was obtained and the Stata module *factormat* was then applied to this matrix using the principal component method, applying varimax rotation with Kaiser normalization.

Results

The response rate for the survey was 58% (n = 1120). With respect to socio-economic status, the mean Index of Multiple Deprivation (IMD) score for our sample from seven wards was 29. The mean

for London is 25, and the national mean is 22, indicating that this urban population represents a more deprived population than for the UK as a whole. For those in the subsample included in the present analysis with ethnicity recorded (n = 138), the breakdown by ethnic group was as follows: white 63.0% (87), black 25.4% (35), mixed 5.1% (7), Asian 4.4% (6) and other 2.2% (3).

The factor analysis identified twelve factors with eigenvalues greater than one, but the position of a break point in the scree plot justified exclusion of seven of these factors. Table 3 shows the remaining factors with their factor loadings. Loadings with the greatest **positive** value for that symptom are indicated in bold, as are any other loadings with an **positive** value greater than 0.4.

Table 3: Factor analysis of symptoms in peri- and postmenopausal London women aged 45 to 55 years who had reported hot flushes as a key symptom (n = 319)

Table 4 lists the symptom patterns derived from this analysis for the data set examined. We also make an attempt to match these factors with symptom patterns and possible formulas based on an extensive review of the most common formulas used in the treatment of menopausal symptoms in China, Korea, Japan and Taiwan. We provide reasons for our choices but accept that these are necessarily subjective. However, our objective defined above, was not to arrive at definitive patterns and treatment strategies for menopausal women in London. Rather, we wanted to elucidate to what degree symptom patterns of peri- and post-menopausal women in London match those described in TCM textbooks.

Table 4: Symptom patterns of peri- and post-menopausal women in London suffering from hot flushes with possible pattern diagnosis and commonly used pattern-matching formulas

Discussion

Comparing the factors/patterns listed in Table 4 with those detailed in Table 1 indicates sufficient difference to confirm our initial hypothesis. That is, the symptom patterns found in our sample of London women do not necessarily match those of TCM textbooks or national standards in the manner that those textbooks and standards claim they should. A majority of the factors can be matched with patterns/formulas that do not reflect the treatment of any significant Kidney deficiency. Vice versa, backache and disorders of fluid metabolism, defined by Chinese Medical Standards (10: 33-36) as key symptoms indicating the presence of Kidney deficiency patterns, are absent in many of the London factors. This implies that for the local London population we surveyed Kidney deficiency is not of necessity the main pattern observed in peri- and postmenopausal women.

Our study therefore suggests that the hybrid of Chinese and biomedicine that constitutes current TCM understanding of menopausal syndrome creates a gap between theory-derived universal textbook patterns and the lived experiences of menopausal women in London. In a narrow sense, the implications of our study are limited to just this one disorder and this one location. However, given the wider imperatives that are driving Chinese medical modernisation it can be hypothesised that they may extend to other localities and other conditions, too. If that were the case - something that only detailed case-by-case studies can tell – this would call into question an entire arrangement of practices around which the integration of Chinese and biomedicine is currently being advanced.

Before outlining these consequences, a number of limitations with regards to the methodology used in this study need to be highlighted. First, additional work is required to verify the factor structure described above, and to explore what patterns emerged if the whole sample or other subsamples

were taken. The factor structure and its relationship with menopausal status, ethnicity and age will be the topic of a forthcoming paper.

Secondly, our examination has been based on self-reported symptoms collected by means of a postal questionnaire. Diagnosis in TCM and Chinese medicine at large is a more complex process in which symptoms are elicited in the course of an inter-subjective examination. This examination process may influence patient recall and body experience and thereby shape pattern differentiation. TCM diagnosis relies on data not accessible by means of the methodology employed here, specifically examination of the pulse and the tongue. Many physicians would consider such data crucial to authentic TCM practice. Hence, it could be argued that our study does not actually replicate TCM pattern differentiation. If our objective were to define actual interventions, whether for the purpose of research or individual treatment, this objection would certainly be valid. What we did was to compare patterns defined by lists of symptoms and signs. In TCM practice, pulse and tongue diagnosis provide just two elements to this list and are not given higher value than others. In practice, therefore, contrary tongue and pulse signs are often ignored.¹ Furthermore, TCM researchers themselves are actively seeking to produce questionnaire-based measuring devices that specifically exclude pulse and tongue diagnosis in an attempt to reduce the subjectivity of pattern diagnosis (56).

While acknowledging the above shortcomings, it should be recalled that we chose this specific method not merely because it allowed us to compare the experience of women at midlife in London with those in other regions in Asia and the West, but also because it provided us with access to

¹ There exist no studies that have examined the influence of pulse and tongue diagnosis in determining how TCM practitioners diagnose menopausal women. However, one of the most influential teachers of tongue diagnosis in the West (55) has indicated to us that in a sample of 100 consecutive patients treated for menopausal syndrome in Hamburg, Germany, only three women had deep-red tongues as would be required for a text-book diagnosis of yin deficiency. 87 women had pale or slightly pale tongues. This suggests that menopausal women in Hamburg also do not correspond to the Kidney deficiency model, or if similar data was confirmed for other locations, that TCM practitioners ignore contrary tongue signs in their diagnosis of Kidney deficiency.

possible symptom patterns independent of the mediation of TCM practitioners. Given the significant role played by TCM textbooks in defining normative approaches to diagnosis and treatment any method that relies on TCM practitioners to determine symptom patterns simply risks replicating textbook knowledge.

Our study thus questions the value of basing effectiveness research solely on either TCM textbook patterns or practitioner experience while simultaneously claiming to be evaluating Chinese medicine as a whole. Such research can help us elucidate the effectiveness of TCM textbook treatments, or of Chinese medicine as currently practiced by specific groups of practitioners – with a very high likelihood that the latter will converge on the former. But such practice never encompasses Chinese medicine as a whole, nor does it necessarily represent “best” practice.

Best practices are generally seen as the outcomes of effectiveness research and not as their primary object of study. In the domain of Chinese medicine research this logic is frequently inverted. It is assumed that best practices have already emerged in the course of two thousand years of continuous usage, and that they are available in TCM textbooks or expert practitioners’ knowledge from where they can be extracted by appropriate techniques (57-61). The task of effectiveness research then becomes merely to confirm whether or not the claims made for such practice are valid or not.

Historical and anthropological studies demonstrating the diversity of Chinese medicine past and present have long questioned the logic that allows one current of a larger tradition, however large its influence, to be substituted for the tradition as a whole. Our study adds a clinical dimension to this critique. It highlights a potential mismatch between treating menopausal women in London on the basis of TCM textbook patterns and those patterns one might diagnose and treat using an older more phenomenological approach. Which of these two approaches produces more effective interventions and might thus help in the definition of best practice awaits further research.

Moving away from the specific case of menopause we argue that clinical research in the domain of Chinese medicine cannot be content with being a process of passive evaluation that for the sake of convenience prefers to remain blind to the issues we have outlined. We therefore suggest bringing together clinical researchers with historians and anthropologists in order to frame meaningful research questions. This interdisciplinary approach would re-orient effectiveness research in the field away from passive evaluation towards investigating how and by what means Chinese medicine can be effectively brought to bear on the health care problems defining life in the 21st century.

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