

# BMJ Open 'Big needles, small bodies' – the absence of acupuncture treatment for infants in contemporary Shanghai: a qualitative study

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## ABSTRACT

**Objective:** To explore contemporary practices and clinical recommendations regarding the use of acupuncture for infants by Traditional Chinese Medicine (TCM) practitioners in Shanghai.

**Design:** A qualitative study consisting of four field visits between February 2014 and March 2015. Data was collected using participant observation, focus group interview, in-depth interview, textbook page analysis and informant validation.

**Participants:** 14 Shanghainese professionals, including interpreters and TCM practitioners, of which seven were acupuncturists.

**Setting:** The Longhua Hospital (paediatric, acupuncture and Tui na departments) in southern Shanghai and the campus of the Shanghai University of Traditional Chinese Medicine.

**Results:** The Longhua Hospital outpatient acupuncture clinic receives 400 consultations on average per day. Children, including patients from the paediatric department, are referred to this clinic. During 3 days of participant observations at this department, we saw two children. No infants. During 3 days at the paediatric department and 1 day at the Tui na department we saw no referrals. Formal interviews and informal conversations with acupuncturists and other TCM professionals revealed that acupuncture was neither routinely practiced nor recommended for infants and small children. Acupuncture was considered potentially painful for this young patient population. Alternative treatment options such as herbal treatments or medical massage were widely available and preferred. Western medical diagnostics and treatment were also used, recommended, and trusted.

**Conclusions:** Acupuncture for infants is not a preferred therapeutic method among TCM practitioners working in contemporary Shanghai. Acupuncture on broad indications in infants appears to be a Western practice with little basis in TCM modern-day practice.

## BACKGROUND

Acupuncture is a part of Traditional Chinese Medicine (TCM). There are three main pillars of TCM: Herbal medicine,

## Strengths and limitations of this study

- This is the first qualitative study exploring actual experiences with and recommendations of acupuncture for infants among contemporary Traditional Chinese Medicine (TCM) practitioners in the city of Shanghai.
- To improve credibility (internal validity) in a setting with language and logistical challenges we used a flexible multiangle approach, and conducted participant observations, interviews, textbook page analysing and informant validations.
- A limitation is the small number of informants, 14 in total and that we were only able to conduct one in-depth and one focus group interview.
- The study was carried out in one hospital in one city, and the transferability (external validity) may be limited.

acupuncture-moxibustion (needling and heating) and Tui na (medical massage). Herbal medicine is the mainstay of TCM in China, while acupuncture-moxibustion and Tui na are regarded as auxiliary and complementary therapies. Acupuncture is used widely in Western Europe, North America and Australia.<sup>1–6</sup> The treatment principles of acupuncture are relatively straightforward, especially for treatment of various pain conditions in adults and the mechanisms for the neurophysiological effects of acupuncture are fairly well understood.<sup>7</sup> In acupuncture, thin steel needles are penetrated through the skin and into connective tissue and muscle fibres to elicit effects. Compared to no treatment or treatment-as-usual, specific needle effects are small, with standardised mean differences (SMD) ranging from 0.15 to 0.23. The overall effectiveness is larger, with a SMD of about 0.5 SMD.<sup>8</sup> This larger overall effect is attributed to acupuncture being a particularly good placebo irrespective of treatment approach or practitioner style or experience.<sup>9</sup>

Acupuncture in children, including infants, has also gained acceptance in the West.<sup>10–13</sup> However, there is scant evidence for treatment effects,<sup>10–11</sup> no clinical guidelines exist and practices vary substantially between countries. Individual textbook recommendations cover the whole range of paediatric indications from ear infections to autism<sup>14</sup> and from asthma to inflammatory bowel disease.<sup>15</sup> There are concerns regarding the ethical aspects of this treatment,<sup>16–18</sup> as it is a potentially painful method.<sup>19–20</sup> In contrast to adults and older children, infants lack the ability to provide informed consent and this requires a higher threshold for interventions.<sup>21</sup> The relatively large placebo effects of acupuncture through the patient's belief in the treatment being effective,<sup>8</sup> deemed important in the treatment of adults, would arguably not occur in this young patient population. Acupuncture in experienced hands is considered safe.<sup>8</sup> It is also, with experienced practitioners, considered safe in children.<sup>22</sup> Yet the scientific evidence on the effectiveness of acupuncture treatment for young children is sparse or non-existent,<sup>10–11</sup> and randomised controlled trials regarding the efficacy of acupuncture for pain conditions in infants are few with conflicting results.<sup>20–23–24</sup> Western-based textbooks of acupuncture argue that acupuncture effects in infants and small children are swift, and often stronger than in adults,<sup>25–28</sup> contradicting the few existing randomised controlled studies.<sup>11–24</sup> These textbook notions seem to be based on references to TCM tradition and on the authors' personal views or clinical observations rather than evidence from randomised, controlled clinical trials. Published case reports and qualitative studies are also generally supportive of acupuncture in infants and small children, and recommend acupuncture for broad indications in paediatric populations.<sup>12–29–30</sup> There is little scientific knowledge regarding the nature and extent to which acupuncture is used for pain conditions in paediatric populations in modern-day China. Chinese-English language textbooks consider herbal remedies as the primary treatment method in children,<sup>31</sup> followed by Tui na, although acupuncture is often mentioned as an adjunct treatment.<sup>32–33</sup> A literature search of major databases conducted by the first author (Cochrane, MEDLINE, EMBASE, AMED, Maternity and Infant Care, Global Health, PsycINFO, Anthropology Plus, Sociological Abstracts, ISI-Web of knowledge, IBSS, AIO, BASE and Wanfang Data, including conference proceedings from academic conferences in China) identified no English-language studies describing contemporary TCM clinical practices or clinical guidelines on the use of acupuncture for infants or small children from the People's Republic of China, Taiwan, Singapore and Hong Kong. Survey studies of TCM in children have been reported from Singapore and Taiwan,<sup>34–35</sup> but we found no English-language studies or published abstracts on TCM practitioners' views and attitudes toward acupuncture treatment for infants and small children.

The purpose of this study was to investigate current opinions and clinical practices regarding needle acupuncture for infants among TCM clinicians in Shanghai.

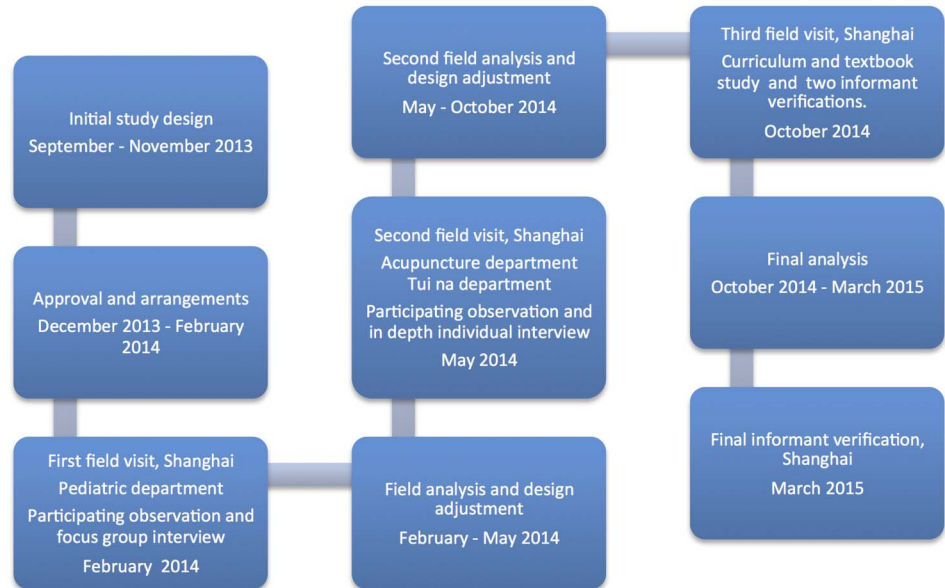
## METHOD

We chose a qualitative approach, with participating observations, interviews and literature searches. An extended, flexible approach was developed and a combination of qualitative methods was used, reflecting the validity threats and logistical challenges of conducting qualitative research on the attitudes towards and use of paediatric acupuncture among TCM clinicians in Shanghai, China. Subject knowledge matters, as described in Kvale and Brinkmann,<sup>36</sup> guided the decision not to do surveys or rely on focus group interview<sup>37</sup> as the only sources of information. The study process was informed by 'Qualitative Research Design' by Maxwell.<sup>38</sup> Special emphasis was on validity threats: We used Maxwell's eight-point checklist to strengthen validity as a guide when designing and carrying out the study and in the analysing process. His recommendations of several information gathering methods to ensure validity was central to our decisions.<sup>39</sup> Long-term involvement—we included four field visits over the course of 14 months. Rich data—we transcribed ad verbatim all field notes, quotes from informal conversations and formal interviews. Respondent validation—we had two stages of informant validation. Intervention—this was not appropriate in our study. Searching for discrepant evidence and negative cases—we did search for and do report discrepant evidence.

Triangulation—we used both participant observation and informal conversations, formal interviews and textbook searches. Numbers—we counted opinions, pages and patients, and report it in a table. Comparison—we had participant observations at three departments and at different times. The main analyses of the transcribed field notes and interviews were informed by Thematic analysis,<sup>40</sup> focused on manifest content, and is further described in the Data Analysis section.

## Setting

The first author conducted four field visits between February 2014 and March 2015 to Longhua Hospital, which is a teaching hospital of the Shanghai University of Traditional Chinese Medicine (SHUTCM) ([figure 1](#)). Longhua Hospital is a municipal TCM hospital with 2000 beds. The acupuncture department is an outpatient clinic with 42 beds, staffed by 10 doctors and 20 interns who receive an average of 400 consultations per day. The paediatric department receives about 130 outpatient consultations per day, with an average of 10 inpatients admitted daily to the unit at any given time. There is also a small Tui na department which runs an outpatient service, staffed by five doctors who receive approximately 50 consultations per day. The WHO Collaboration Centre at SHUTCM facilitated study

**Figure 1** Study flow chart.

access and granted permission to collect data at Longhua Hospital. The first author is a male general practitioner and acupuncturist with 25 years of experience, with an established working relationship with the WHO Collaboration Centre.

### Data collection

The field visits consisted of the following:

1. Three days of participant observation in the paediatric department, 3 days of participant observation in the acupuncture department and 1 day of participant observation in the Tui na department. An interpreter who was either an English-speaking TCM doctor or an English–Chinese linguist was present at any time. We followed the daily routines and engaged in informal conversations with several acupuncturists, and paediatric and Tui na specialists. The interpreters themselves were also a rich source of information.
2. A 90 min, semistructured focus group interview using a predefined interview guide, not pilot-tested. The interview was conducted in English and without an interpreter, outside the workplace. The informants were three leading officials at acupuncture units in Shanghai, all of whom had clinical and administrative responsibilities. They were experienced acupuncturists. No parallel field notes were taken during the interview, and transcripts were not returned. We did not succeed in recruiting regular clinicians for this interview, because they felt they lacked sufficient knowledge of and had minimal experience with, paediatric acupuncture. Five experienced acupuncture clinicians were contacted in succession, all declined for the same reasons. Only then did we decide to go up one level and invite leading officials. We had to take into consideration the probability of group norm answers,<sup>37</sup> but this would also give valuable information and expand the triangulation.
3. A 60 min, in-depth individual interview using a predefined interview guide, not pilot-tested, with a non-acupuncture TCM practitioner who had academic credentials, including work and research experience in Western Europe. The interview was conducted in Chinese with an English–Chinese interpreter outside the workplace. No parallel field notes were taken during the interview and transcripts were not returned.
4. A search in the standard national textbooks used for teaching acupuncture, Tui na and herbal medicine at Shanghai University of Traditional Chinese Medicine, one book for each curriculum. These textbooks are compulsory nation-wide. They form part of the basis for the various 5-year TCM teaching programmes to qualify as herbalist, acupuncturist or Tui na practitioner in the People's Republic of China. The search was assisted by a linguist fluent in Chinese and English. We counted section pages and case pages to gauge the factual emphasis on using TCM therapeutic methods for paediatric populations in the national textbooks.
5. Two stages of informant validation on the main and final results. Main results by one central informant, and final results by two independent informants. We presented main and final results personally in written form on a paper, the first time with five major preliminary findings, the second time with the Results section of the study. The validity of the findings was then discussed, minor ambiguities were corrected and the Results section was then accepted as valid in the opinion of these informants.

A total of 14 informants were included during the field study. Informants had diverse clinical backgrounds representing several TCM specialty areas, including seven acupuncturists (figure 2). There were six women and eight men between 35 and 60 years of age, with a

14 informants in total. Experienced TCM professionals and English-Chinese linguists/translators, 35-65 years		
7 TCM professionals Longhua hospital	5 TCM professionals, other TCM institutions in Shanghai	4 translators
<ul style="list-style-type: none"> <li>• 2 paediatricians</li> <li>• 4 acupuncturists</li> <li>• 1 Tui na specialist</li> </ul>	<ul style="list-style-type: none"> <li>• 3 acupuncturist (2 of them also translators)</li> <li>• 1 Tui na specialist</li> <li>• 1 herbalist</li> </ul>	<ul style="list-style-type: none"> <li>• 2 linguists</li> <li>• 2 acupuncturists</li> </ul>

**Figure 2** Participants informants.

minimum of 10 years clinical experience. To maintain anonymity, further details on the participants are not disclosed.

### Data analysis

All data were used, including notes from participant observations, informal conversations, semistructured interviews and textbook page analysis. The field notes were structured and systematised, including the participant observations and the information gathered from informal conversations. The focus group and in-depth interviews were recorded on two parallel, portable tape recorders and transcribed in verbatim by the first

author. The sound files were transferred to a USB storage pen and securely stored. The original sound tracks on the tape recorders were erased.

The data analyses were carried out using thematic analysis.<sup>40</sup> The analyses were performed by hand and coding was primarily on semantic (manifest) content.<sup>40</sup> We did not seek saturation. The first author read through the texts several times to define broad categories from the interviews and field notes with subsequent coding and recategorisation. The main categories and selected opinion statements were then sequenced into tables. We did not use a coding tree. The initial analysis was then reviewed by the second author before refinement and undergoing final organisation. All quotes have been retained in their original form.

The study is reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist.<sup>41</sup>

### Ethics

The Regional Ethical Committee of Southeastern Norway, REK South East granted this project an exemption from formal approval owing to the lack of patient data (Ref: 2014/197/REK South East). The informants who participated in formal interviews were informed of the purpose of the study and they signed a written consent form. The head or acting head of the three departments at the Longhua hospital were informed of

**Table 1** Results in numbers

<i>I. Patients observed to have acupuncture during 3 days in Longhua Acupuncture department (400 consultations a day, only out-patients)</i>		
Infants	0	
Children	2	
<i>II. The Shanghai TCM acupuncturists (7 informants)</i>		
<i>Do they have experience in needle acupuncture on infants?</i>		
Very little or no experience	5	All acupuncture clinicians, one acupuncturist-official
Some experience	2	Two acupuncturist-officials
Regular or daily experience	0	
<i>III. All Shanghai TCM professionals (12 informants)</i>		
<i>Do they recommend needle acupuncture on infants?</i>		
No	9	All acupuncture clinicians, both TCM paediatricians, both Tui na specialists and the TCM herbalist
Yes, but only as the last choice	3	All acupuncturist-officials
Yes	0	
<i>IV. Amount specifically on paediatric conditions in Standard national textbook in undergraduate Traditional Chinese Medicine (TCM) studies, Shanghai.</i>		
Herbal medicine:		
Special textbook on paediatric herbal medicine:		140 pages
Tui na/medical massage:		
Paediatric section of general textbook:		57 of 248 pages
Acupuncture-moxibustion:		
No paediatric section in general textbook.		
Conditions relating to children:		6 of 328 pages

TCM, Traditional Chinese Medicine.

the purpose of the study and they signed a written consent form.

## RESULTS

### The absence of children

During the 3-day field visit at the acupuncture department at Longhua TCM hospital, we moved freely between the consultation rooms, waiting rooms and reception area. In total, we saw two children. No infants (table 1-I).

### 'Nobody does paediatric acupuncture'. Lack of experience

During informal conversations with clinicians at the acupuncture department, we were informed that children and infants were very seldom referred for treatment, and thus, the clinicians stated they lacked experience with needle acupuncture treatment on children. Several of the acupuncturists reported they had treated only one or two children past year. None of the clinicians had treated infants. As one TCM acupuncturist described, "Not so many children here. I treated two patients last year. Six-year olds. Facial paralysis and poor concentration. No infants." During the formal focus group interview with the leading officials of acupuncture units in Shanghai, two of three reported some past experience in treating children, including infants. However, they did not provide information on whether this occurred on a regular basis (table 1-II).

### 'Not convenient'. Lack of recommendations

Formal interviews and informal conversations with TCM clinicians revealed that acupuncture for infants and a small children was not recommended. The focus group interview confirmed this finding, and the officials from the acupuncture clinics stated that acupuncture therapy for infants and small children was considered 'the last choice' (table 1-III). One TCM acupuncturist stated, "Never used acupuncture, especially with small children. How could you? Not convenient. Big needles, small bodies. We use Tui na and herbs." A TCM paediatrician expressed "Acupuncture is considered invasive. We are reluctant to do that on infants." One exception to this consensus included neurological conditions such as cerebral palsy, neurological birth defects and recently, attention deficit hyperactivity disorder, which is regarded as a neurological disease. For these conditions, needle acupuncture was considered a possible treatment method.

### 'No classic, no modern'. Lack of textbooks and training

In interviews and informal conversations, TCM clinicians reported a lack of specialised textbooks and training in performing needle acupuncture on children. In contrast, textbooks and specialised courses exist for paediatric herbal medicine and paediatric Tui na. Traditional and modern teaching in acupuncture does not distinguish between acupuncture point combinations for

adults versus children. As one TCM acupuncturist explained, "Never been taught pediatric acupuncture in MD China or postgraduate education. No special points, no special treatments, no special meridians, no special organ systems."

A 5-year programme of integrated Western and TCM coursework is required for MD China, which qualifies for certification as a TCM herbalist, acupuncturist or Tui na specialist. A search of the national textbooks at SHUTCM Shanghai University of Traditional Chinese Medicine revealed the following page counts and specific chapter dedicated to children per textbook:

- ▶ National Standard Textbook of Paediatric Herbal Medicine: 140/140 pages.<sup>42</sup>
- ▶ National Standard Textbook of Tui na: 57/256 pages. 1 paediatric chapter (pages 171–228).<sup>43</sup>
- ▶ National Standard Textbook of Acupuncture-Moxibustion: 6 of 328 pages, no paediatric chapter.

In the treatment chapters, children are mentioned on page 254 (enuresis), malnutrition (page 255), polio sequelae (page 255), mumps (page 258), convulsions (page 274) and otitis media (page 266)<sup>44</sup> (table 1-IV).

### 'For now, zero'. The lack of a strong research base

During the focus group interview, we explored the informants' knowledge regarding research on acupuncture treatment for infants and small children. Despite being familiar with numerous studies on herbal treatments and Tui na in paediatric samples, they reported no knowledge of ongoing or existing research on needle acupuncture in infants and small children.

### 'Of course it is painful'. The possibility of pain

Pain as a consequence of needle acupuncture was discussed with all the TCM clinicians, including paediatricians, Tui na specialist and acupuncturists. Prevailing attitudes among clinicians was that acupuncture was painful for infants and small children. The potential for pain was stated as a primary reason for the overall limited use of needle acupuncture in infants. For example, one TCM acupuncturist stated, "We have very few children. No infants. It is hard to make good acupuncture treatment. And it is painful." Two of the leading acupuncture officials diverged in opinion, however, stating that needle acupuncture in children could be painless when performed in the right way with the proper method. One TCM official reported, "There are some special methods, though, for inserting the needle without pain. Too many adults and children are just scared of the needles."

### 'Eighty percent of acupuncture on children is CP or other neurology'. Indications for acupuncture

Acupuncturists and other TCM clinicians expressed the clear opinion that needle acupuncture was indicated for very few paediatric conditions in general. Indications included neurological diseases in which other treatment options were limited. However, two of the TCM



acupuncturists/hospital officials diverged in opinion by recommending broader indications for children, including asthma, malnutrition and digestive problems. Specifically concerning the infant population, there was broad consensus that needle acupuncture was not a treatment option in modern TCM. A Tui na specialist stated, “Acupuncture has such a long history, it never separated kids and adults. But you mentioned under one year, but this only for these acute problems, like convulsions, high fever, emergency. Then they may use needles.”

#### **‘TCM paediatrics is herbs’. The availability of TCM alternatives: Herbal medicine and Tui na**

Historically, several TCM treatments have been available for paediatric patients. In particular, treatments with herbal medicine and Tui na have been specifically developed for children. For contemporary Shanghaiese TCM practitioners working with children, treatment is largely focused on herbal medicine in the form of orally-administered drugs or herbal paste applied to acupuncture points. As explained by a TCM herbalist, “We focus on herbs. And some Tui na. Always like that. If acupuncture points, we use moxibustion.” This approach to treatment was confirmed during the participant observations at the TCM paediatrics department. The vast majority of paediatric outpatients were prescribed herbal treatment combinations, and some were recommended Tui na. If acupuncture comprised the treatment, the specific recommendation included herbal paste, often heated, as a point application. We did not observe needle acupuncture treatment, nor did we observe any recommendations provided for acupuncture during the field visit to the paediatrics department. Penetrating needle acupuncture on infants was not considered a treatment option for most TCM paediatric conditions.

#### **‘Now parents take children to the Western Children Hospitals’. Trust in Western paediatrics**

There are four governmental Children’s Hospitals in Shanghai. These hospitals are large Western medical hospitals with inpatient wards and specialised outpatient clinics staffed solely with medical doctors and other clinical staff educated in Western medicine. The vast majority of paediatric cases in Shanghai, particularly infants and toddlers, are treated at these hospitals. These hospitals provide treatment for a range of illnesses, from minor ailments to chronic or life-threatening conditions. Western medical hospitals are widely regarded as the first choice by Shanghaiese parents seeking assessment, consultation and treatment for their children. The TCM professionals themselves provide recommendations and referrals to the hospitals for infants and small children, as indicated by a TCM paediatrician, “They have better diagnostic equipment at Western hospitals, for example the pediatric ultrasound, for abdominal diagnostics. We do not have that.” A TCM herbalist stated, “Now parents

take children to the Western Children Hospitals. If needed, herbs in addition. Acupuncture is never in their minds”.

#### **‘The whole TCM world is shrinking in China, or at least in Shanghai’. The money and the system**

During the field study at Long Hua hospital, there was a general sense that traditional TCM practice was diminishing in importance and facing challenges from Western medicine, even in the TCM hospitals. The ratio of Western to TCM hospitals in Shanghai is seven to one. By law, all hospitals are required to have a TCM department. Long Hua is an integrated hospital, such that TCM and Western medical approaches to diagnostics and treatment are combined. The TCM clinicians at Long Hua confirmed that TCM is losing ground to Western medicine. In the paediatric department, for example, the majority of the outpatient consultations we observed included a Western medical prescription. For example, the inpatients, many of whom had respiratory tract infections and/or asthma exacerbations, received antibiotics and/or corticosteroid medication. The clinicians reported that traditional Chinese medicine departments were being reduced in terms of beds and staff, and that entire departments in other TCM hospitals had merged or been significantly reduced in size. Financial reasons were identified to explain this trend. In brief, the hospitals are financed through governmental funding as well as patient fees for procedures, medicines and consultation fees. Although basic equipment is free, the more advanced and consequently, more Western equipment is more expensive. All hospitals, including TCM and Western, increase their earnings by focusing on Western medical therapeutics. As such, the general trend in TCM hospitals is toward greater utilisation of Western medical treatment and procedures. An anonymous informant stated, “One surgeon can earn for the hospital as much as a hundred TCM doctors. TCM herbal medicines is cheap little money.”

#### **‘It is a vicious cycle’. The slipping confidence**

Several of the TCM practitioners reported changing attitudes towards healthcare, with increasingly assertive parents and a more critical, consumer-driven approach towards treatment and healthcare professionals, especially for treatment of children. The TCM practitioners were reluctant to advise against parents’ wishes and they were similarly reluctant to do anything that could elicit unpleasant reactions in the child, like crying. Acupuncture was generally considered painful, and in turn, TCM clinicians were increasingly hesitant to recommend acupuncture for treatment in children. This trend perpetuated a cycle which limited experience, limited expertise and lowered confidence. One TCM practitioner reported, “It has also two sides, because at first the parents are reluctant to go, but doctors they need experience. Since they have less and less patients,

they don't have that expertise. They don't have confidence. It is a vicious cycle."

### 'I have one cerebral palsy patient, 6 months old, who tolerates needles with no pains'—the divergent point of view

The formal focus group interview differed in many aspects from the individual, in-depth interviews and the informal conversations with clinicians. Specifically, opinions voiced during the focus group differed with regard to tradition, experience, indications for acupuncture and the question of whether acupuncture was a painful intervention. Among two of the three hospital officials, there was a general reluctance to limit the possibility of acupuncture as a universal treatment option. This viewpoint contrasted with TCM practitioners, among whom there was broad agreement regarding the limitations of needle acupuncture in infants and small children.

## DISCUSSION

### Main findings

This qualitative study explored the use and recommendations for needle acupuncture on infants and small children by TCM practitioners in Shanghai. During 3 days of participant observations at the Longhua hospital outpatient acupuncture clinic, which receives on average 400 patients per day, we observed only two children and no infants. During formal interviews and informal conversations with TCM practitioners representing different specialties, the prevailing opinion was that needle acupuncture for infants and small children is considered painful, is inconvenient and is not indicated for routine clinical practice, except for certain neurological diseases. We learned that TCM methods for children have traditionally focused on herbal medical treatments, and to a lesser extent, on Tui na. Acupuncture had historically been used for certain acute illnesses, which are now treated in Western hospitals. The majority of acupuncturists, and all of the non-acupuncture TCM practitioners, had limited or no experience treating children or infants with needle acupuncture and would not recommend it as a therapeutic option. The exceptions were the opinions of two TCM acupuncture officials. The reason for the non-use of acupuncture in small children seemed to revolve around two main themes (1) internal TCM traditions and practices, which do not support the routine practice of needle acupuncture in infants and toddlers and (2) external system changes which increasingly limit the use of acupuncture specifically and TCM practices in general.

### Internal TCM tradition and practice

The most important reasons for the lack of acupuncture in infants and small children attribute to TCM traditions and practices. Specifically, herbal medical treatments or

Tui na are widely available and universally recommended as a first-choice TCM treatment for paediatric populations.

### External system changes

These were opinioned in informal conversations throughout the study period, and by several of the informants, and are not taken from official sources or literature. The topic might be a sensitive issue. System changes within the general healthcare system in Shanghai over the past years are also relevant in explaining the lack of paediatric acupuncture. TCM departments and practices, including acupuncture, are losing ground to Western medicine, with widespread consequences. Even original TCM hospitals and institutions are losing credentials and resources to Western diagnostics and treatment, which offers greater financial compensation than traditional TCM practices. This is also true for paediatrics.

### Strength and weaknesses

Strengths of the study include the uniformity of the participant observations and the information collected from the TCM clinicians, the variety of sources of information, the triangulation of methods and the validation process.<sup>39</sup> The discrepant voices were two of the officials who had both clinical and administrative responsibilities, who regarded acupuncture as a universal method of treatment. Limitations of the study involved the challenges of conducting qualitative research in situations requiring interpreters, or in which both the researchers and informants have English as their second language. We relied entirely on our Shanghai contacts to gain access and organise interviews with TCM practitioners and officials, and as such, the selection of informants may be biased. It is worth noting that the situation in Shanghai might differ substantially from TCM in other cities and provinces in China. However, the centralised and uniform organisation of education and the practice of TCM in Shanghai and the People's Republic of China, arguably strengthens external validity. An important consideration is the first author's prejudices and standard of reflexivity in the information gathering and analysing process.<sup>45</sup> He is a medical doctor, acupuncturist, with 25 years of clinical experience and 15 years of teaching acupuncture and general principles in TCM. His main field of interest is paediatric acupuncture. He has in recently published a blinding-validated multicenter randomised controlled study on the effect of acupuncture on infantile colic that showed no clinically relevant effect of the intervention.<sup>24</sup> Qualitative research designs run the risk of biased and selective reporting. The use of a diversity of informants, several information gathering methods and a detailed description of the methodological aspects of the process might, however, counteract such bias.

### Implications for practice

This study adds to the ongoing discussion on the evidence, utility and limitations of acupuncture in children, as well as in medicine in general.<sup>46–50</sup> Contrary to our observations in Shanghai, acupuncturists in the Western

world encourage acupuncture for children, including infants.<sup>14 15 30</sup> One rationale underpinning this trend is that acupuncture is widely considered in the West to be an integral part of TCM tradition, for patients of all ages. According to our study, Western beliefs that acupuncture is routinely indicated and recommended for infants and small children within TCM are unfounded. Such beliefs may appear to be a Western interpretation, and are not based on actual Chinese modern-day practices or therapeutic recommendations. Recent controlled trials investigating the efficacy of acupuncture treatment in the infant population<sup>11 20 24</sup> yield conflicting results, and little clear empirical evidence is available to support the use of acupuncture. As such, it appears that the rise of infant acupuncture in the West could be partly attributable to Western acupuncturists' own clinical observations and theoretical beliefs. In line with the principles of biomedical ethics,<sup>51</sup> however, this study underscores that this rationale is insufficient to recommend a potentially painful treatment for infants and small children who lack the competence to provide informed consent.

## CONCLUSION

Acupuncture for infants and small children is neither routinely practiced nor recommended by TCM clinicians working in Shanghai. It is generally considered a potentially painful therapeutic method. Alternative TCM treatments are widely available and preferred by TCM practitioners in Shanghai, including herbal treatments and medical massage (Tui na). Needle acupuncture on broad indications in infants appears to be a Western practice, with little basis in Chinese TCM contemporary practice.

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**Contributors** HS and MB developed the original idea, developed the flexible study process and wrote the initial protocol. HS carried out the field study in Shanghai, transcribed the interviews and field notes and carried out the initial analysing. MB reanalysed the field notes and interviews. HS wrote the initial draft of the article. MB reviewed and structured the article. HS is the guarantor of the study.

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