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The confirmation of treatment effects in Japanese acupuncture

Benjamin Chant*, Jeanne Madison, Paul Coop, Gudrun Dieberg

University of New England, Australia

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ABSTRACT

Background: Japanese acupuncture is gaining international recognition. However, previous research has failed to comprehensively describe the characteristics of Japanese acupuncture by not investigating it within the Japanese clinical environment. This qualitative ethnographic study aimed to identify unique and routine elements of Japanese acupuncture, describe these in detail and examine how they related to treatment principles.

Methods: Between August 2012 and December 2016, ethnographic fieldwork was conducted in Japan. Participants were recruited by chain referral and emergent sampling. Data were collected through participant observation and interviews as well as by analyzing documents. A total of 38 participants were recruited. A total of 22 agreed to clinical observation; 221 treatments were observed with 172 patients. Seventeen participants consented to participate in formal interviews and 28 to informal interviews. Thematic analysis was used to evaluate data.

Results: That practitioners tended to confirm perceived effects of interventions during treatment, was a major theme interpreted from the data. Confirmation was performed continually throughout treatment and at three different levels of timing and anatomical areas (micro, meso and macro). Many markers signified treatment effects which were in general, perceived by observing and/or palpating body tissue. Belief in the instantaneous effects of treatment and the value of effect through technique exemplify the philosophical foundations of confirmation. Continually monitoring treatment results at a range of time and body location increments is an important element of Japanese acupuncture.

Conclusion: This effect confirmation practice model promotes a system of constant feedback gained by repeated intervention and confirmation. This may be a unique feature of Japanese acupuncture.

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1. Introduction

Acupuncture from Traditional Chinese Medicine (TCM) is taught through university courses, and is practiced professionally in many parts of the world.^{1,2} Alongside TCM acupuncture, the awareness of acupuncture from other East Asian countries is gradually expanding. Specifically, acupuncture from Traditional Japanese Medicine (TJM) is gaining recognition as an alternative to TCM acupuncture in Western countries.^{3–5} However, the development of TJM acupuncture through scientific research is insufficient, and there appears to be contradictions and misconceptions about TJM acupuncture in published English language literature.^{6–11}

* Corresponding author at: Inner Path, 100 Barney St, Armidale, NSW 2350, Australia.

E-mail address: bchant2@myune.edu.au (B. Chant).

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Descriptions of health, illness and health care have long been used in the explanation and classification of medical systems.^{12–14} Health care is defined as the practical elements of caring for the health of oneself or someone incapable of doing so themselves.¹⁵ The actions and beliefs informing health care practice are strongly guided by the conventions of culture, society and individual experiences.¹⁶ Thus in order to establish contextually appropriate explanations of health care practices (including acupuncture), it is important to investigate health care from the environment in which it occurs.¹⁷ For this reason, this study investigated TJM acupuncture within the sociocultural environment of Japan directly.

According to the *International Standard Terminologies on Traditional Medicine in the Western Pacific Region*, treatment principles relate to the general rules that should be followed in treating a patient's condition with acupuncture.¹⁸ This study considered it important to expand this definition to include: the methods and techniques that are derived from the principle of treatment and

any tools used in actions taken to improve the patient's health condition. Treatment rules, methods, techniques and tools have been identified as some of the most important aspects of acupuncture practice, and are inextricably linked with the study and practice of acupuncture.^{19,20} Some authors have suggested different acupuncture styles are made up of variations and combinations of treatment rules, methods, techniques and tools which mark them as unique and have used treatment principles as a thematic category to compare, contrast and describe styles of acupuncture.²¹ Investigation with a specific focus on treatment principles was determined a necessary step in describing TJM acupuncture. For the purposes of this research, TJM acupuncture is defined as the acupuncture that has developed, is taught and is practiced in Japan.

The aim of this research was to improve understanding of TJM acupuncture by describing and identifying the treatment principles that are applied in TJM acupuncture. Specifically, this study sought to identify procedural elements of TJM acupuncture, describe these elements in detail and examine how they related to the general rules that were followed, methods, techniques and tools used in treating patients.

2. Methods

2.1. Setting, recruitment and practitioners

This study aimed to describe and interpret the characteristics of TJM acupuncture by investigating it in the diverse social and cultural constructs in which it is found. Therefore, ethnography was selected as the methodology to address the descriptive and explorative aims of this study. The research project was approved by the University of New England Research Ethics Committee (approval number: HE-12-142), and long-term ethnographic fieldwork was conducted in Japan.

Participants were required to be experts in TJM acupuncture and were eligible for recruitment if they held acupuncture qualifications obtained from a Japanese educational institution and were nationally registered practitioners. Prior to recruitment and data collection, practitioners received information sheets and consent forms, which when signed and returned, indicated their participation in the study. Practitioners were recruited through chain referral^{22,23} and emergent sampling²⁴ which is common in ethnographic research when targeting members of a specialized and difficult to reach population.^{14,25,26}

Fieldwork was conducted between August 2012 and December 2016. The study was based in Osaka, and fieldwork was conducted at a variety of prefectures ($n=7$) across Japan. The positioning of the primary fieldworker in this study was one of an Australian trained practitioner of acupuncture with a cultural understanding of acupuncture in Japan and Australia, as well as clinical and educational experiences of acupuncture in Japan and Australia.

2.2. Data collection

A single researcher carried out all data collection. This was accomplished according to the principles of ethnographic fieldwork^{27–29} and involved participant observation, semi-structured interviews and analysis of documents. Participant observation involved shadowing the practitioner, watching them, asking questions and recording what was seen and heard. Recordings in participant observation were informed by the following observation guidelines developed for this study, which were revised iteratively (Table 1). The guidelines included prompts for what should be observed in relation to the environment, procedures, patient–practitioner interaction, tools and techniques.

Observation included taking photographs and audio recordings. Interviews were conducted according to the interview schedule which was revised iteratively (Table 2), and covered topics related to treatment principles, routine elements of the clinical encounter and general practitioner experiences. Interviews were recorded in notebooks and digitally. Additionally, relevant local literature, documents and other artefacts were collected for analysis. Data from fieldwork were collected and recorded in both Japanese and English. Cross language communication was facilitated either by the fieldwork researcher, bilingual interpreters or research assistants working with the researcher.

2.3. Data analysis

As is common in ethnographic research,^{30–32} thematic analysis was the key analytical method. Thematic analysis was conducted after every data collection opportunity and involved translation and transcription of data. Data were analyzed using theoretic and inductive analyses.^{30,33} All transcription and coding were performed by a single researcher. A coding template was developed based on the World Health Organization definition of treatment principles in the *International Standard Terminologies on Traditional Medicine in the Western Pacific Region*¹⁸ (Table 3).

Data analysis was guided by, but not confined to the coding template; additional themes were identified as they emerged through reappearing stories, phrases, ideas, actions and objects, and when they represented some level of patterned response or meaning significant to the research aims through the entire data set. The analysis involved recognizing how different data from multiple collection methods, data sources and environments supported or opposed each other. As is common in ethnography,^{26,34,35} triangulation was used as a method to compare, contrast, corroborate or contradict this variety of data, and analytic bracketing^{36–38} was used to address bias.

3. Results

3.1. Practitioners

A total of 38 practitioners were recruited. This included males ($n=24$) and females ($n=14$) with an age range of young adults (≤ 35) to seniors (≤ 60). The majority of practitioners were qualified in acupuncture and moxibustion only ($n=28$). A number of practitioners also held additional qualifications related to TJM acupuncture including massage ($n=5$), judo therapy ($n=4$) and chiropractic ($n=2$). Practitioner contributions were individually negotiated at recruitment. Some practitioners agreed to be formally interviewed and recorded ($n=18$); others agreed to informal interviews ($n=28$), which were sometimes in addition to a formal interview. Almost half of the interviewed practitioners ($n=18$) participated in follow up interviews. Additionally, some practitioners allowed observations of treatments ($n=22$). Some of the practitioners were observed on multiple occasions ($n=4$). In total, 172 patients were observed during 221 treatments over four and a half years of ethnographic fieldwork. All practitioners were given pseudonyms to maintain confidentiality and protect their identity. Table 4 shows demographic data about practitioners at the time of recruitment, including their pseudonym, gender, age, qualifications and occupation.

3.2. Important themes

Five major themes were identified: treatment tools, pre-intervention preparation, needling, moxibustion and confirmation of treatment effects. Due to space limitations, this research article only reports on the results related to the confirmation of treatment

Table 1
Original Observation Guidelines

<p>Clinic environment</p> <ul style="list-style-type: none"> • Geographic location of clinic in context & importance to its neighbourhood • Spatial elements of the clinics, layout, designs & functionality • Staff, uniform & relationships between organisation members • Sounds, smells & sights within the clinic, aesthetics & intrusions • Administrative aspects • Tools and equipment <p>Clinic rituals</p> <ul style="list-style-type: none"> • Administrative rituals including inventory & book keeping • Preparing for patients • Main body of treatment • Conclusion of appointment • Opening and closing the clinic • Breaks <p>Treatments – patient/practitioner interactions</p> <ul style="list-style-type: none"> • Interpretations of the practitioner in relation to philosophy & aetiology • Diagnosis and methods, depth of analysis and duration • Duration of treatment & certain techniques • Patient/practitioner dialogue • Case taking/return assessment • Tools and equipment used • Treatment plan • Prognosis • Referrals • Case management 	<ul style="list-style-type: none"> • Clinic accessibility • Rationale of participants <ul style="list-style-type: none"> • Receiving a patient • Payment, rebooking & farewell • Time management • Cleaning • Rationale of practitioners <ul style="list-style-type: none"> • Patient/practitioner behaviors • Treatment techniques and principles • Interpreting results of treatment • Advice/ancillary methods • Patient compliance • Record keeping • Rationale of practitioners
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effects. “Treatment effects” is defined as the clinical effectiveness perceived by the practitioners or their patients. The rubric of themes analyzed in relation to treatment principles and the confirmation of treatment effects are shown in Fig. 1.

The confirmation of treatment effects was reflected in procedural routines of clinical acupuncture practice and demonstrated in

practitioner opinions related to the education and practice of TJM acupuncture, health, illness, healthcare and life in general. Some quotes and descriptions of observations with practitioners which exemplify thematic categories are provided below. Practitioners are labelled with a pseudonym, and described as acupuncture and moxibustion, massage or judo therapy practitioner which indicates

Table 2
Original Interview Schedule

Demographic data	
Age	Gender
Birthplace	Educational qualifications
Professional experience	Average patients per week
Average service fee	Average consultation time
Q1 Please describe a typical day in your clinic	
Probe for procedures in relation to receiving, treating and concluding with patients	
Probe for how their procedures have evolved or might be compared to others	
Probe for how or if this changes during the year	
Q2 How would you describe your style of acupuncture?	
Probe for philosophical concepts, diagnostic methods and treatment principles	
Probe for how their style fits in with what they consider as Japanese acupuncture in general	
Probe for how their style fits in with any schools of thought they know about	
Probe for the most important aspects of their style	
Q3 What, if any, are the unique aspects of Japanese acupuncture in relation to acupuncture elsewhere?	
Probe for philosophical concepts, diagnostic methods and treatment principles	
Probe for any procedural differences	Probe for a rationale of their opinions
Q4 What do you think patients expect from your treatments?	
Probe for how clinical encounters have shaped their current practice	
Probe for any differences in patients between them and their colleagues	
Q5 If you gave a workshop or seminar on your style of acupuncture abroad, what would you teach and talk about?	
Probe for philosophical concepts, diagnostic methods and treatment principles	
Probe for a rationale of their opinions	
Q6 In your opinion, what is the future of Japanese acupuncture?	
Probe for what they want to know more about	
Probe for what they want other therapists to know about	
Probe for hopes and fears for the future of acupuncture	
Q7 If you were interviewing Japanese acupuncturists about how they classify, clarify and describe acupuncture, what questions would you ask?	
Probe for a rationale of their opinions	
Probe for other aspects of acupuncture not related to classification or description	
Q8 If after the interview some issues are unclear, the researcher would like to contact you to clarify any outstanding issues. The researcher may also ask for your opinions and interpretations on the data obtained during the study. Do you agree to be contacted for this?	

Table 3
Coding Template for Thematic Analysis

Code label	Description	Examples
Treatment principles	Elements which describe the general rule that should be followed in treatment of the patient's condition. This includes the methods and techniques that are derived from the principle of treatment and any tools used in actions taken to improve the patient's condition	Acupuncture needles, needle techniques, moxa, moxa techniques

both their qualifications and profession. Additionally, some practitioners were senior lecturers at educational institutions; this is included in their label.

3.3. Confirmation of treatment effects

The needle won't go any further in; it feels like it's hitting something and bounces back. The body will reject it from going in any further. . . Then after about 10 minutes, it'll go smooth, the place where the needle was hitting will have no tension at all. (So you check it one more time?) Yes, when it gets to that state it's good. (That'll take about 10 minutes?) Yeah, or 15 to 20 minutes. (Then after you withdraw the needles, what do you do?) I do a final examination. Make sure everything is ok; I check colour, body temperature and the skin condition. I might also ask them if everything feels all right. (Ume: acupuncture and moxibustion/massage practitioner)

Confirming treatment effects means establishing the results of an intervention at a specific treatment location, or by a measure believed to be significant and representative of the patient's general condition. Two sub-themes related to the confirmation of treatment effects were interpreted from the data:

- Timing and area
- Markers of confirmation

3.4. Timing and area

When the area around the insertion point of the needle changes colour to red or white, then this is a good sign that Ki [Japanese language term for Qi] is moving. You can take the needle out at that point. (Iwamatsu: acupuncture and moxibustion practitioner/professor)

Confirmation occurred on three levels: micro, meso and macro. These divisions represent the procedural timing and scale of confirmation over a treatment area (Fig. 2). Micro level confirmation was performed during the application of interventions, such as needling. It included constantly assessing the effects of a performed intervention at the local treatment site, such as changes in tissue tension under the needle. Meso level confirmation occurred over functional areas of body tissue or areas of anatomic significance after the application of micro level interventions. For example, after having inserted and withdrawn needles around a painful shoulder, the shoulder joint range of motion is inspected. Macro level confirmation was found to be applied when practitioners considered ensuring the body as a whole was in a state of good health was important, both to the main complaint and the maintenance of health in general. This may include checking that the practitioner perceived pulse quality or condition of the abdomen has improved after interventions.

Timing of confirmation was a theme identified in data from 74% (n=28) of practitioners. Practitioners expressed micro, meso and macro level confirmation differently and in differing combinations

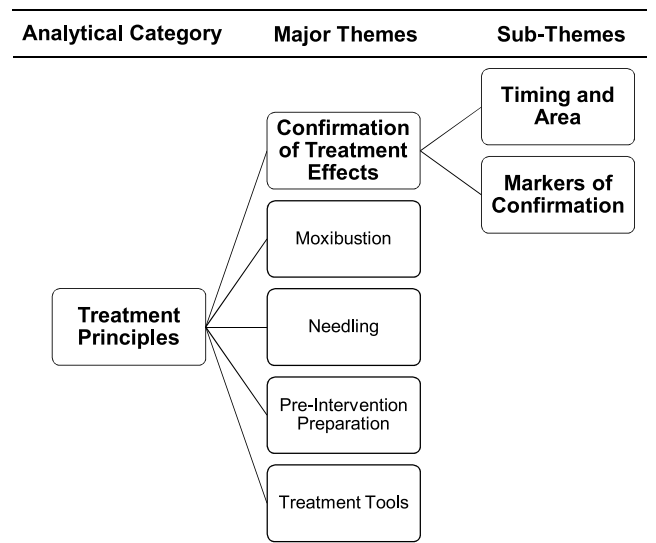


Fig. 1. Thematic categories related to the confirmation of treatment effects. Five major themes related to treatment principles were identified. Confirmation of treatment effects included two sub-themes; timing of confirmation and markers of confirmation. The themes reported in this article are highlighted in bold typeface.

in interviews and observed treatments. Micro level confirmation was found in data from 50% (n=19) of practitioners, meso from 58% (n=22) and macro from 47% (n=18). Micro, meso and macro level confirmation were found to be combined and applied in different degrees of significance by individual practitioners. Practitioners who gave priority to macro level effect confirmation, tended to be those who were committed to treating patterns of disharmony by regulating the pulse, resolving abnormalities on the abdomen or by assessing movement mechanics related to body structure. Some practitioners confirmed changes at the meso level, but generally ignored the macro level; this occurred when practitioners focused on treating functional areas of pathology to address pain, discomfort or some kind of body tissue abnormality. Practitioners gave importance to confirming changes at the micro level when feeling for reactions to individual treatment interventions.

Soliciting a response at the micro level was important because it was thought to have benefits at the local site and also influence treatment effects at the meso and macro level. For instance, changes in tissue tension at the needling site (micro) may have led to a decreased sense of patient discomfort around a dysfunctional area (meso), and an improvement in practitioner perceived pulse quality (macro). The practitioners' skills of manipulating the intervention and their sensitivity in sensing changes in condition were valued as important features of causing and confirming therapeutic effects, especially at the micro level.

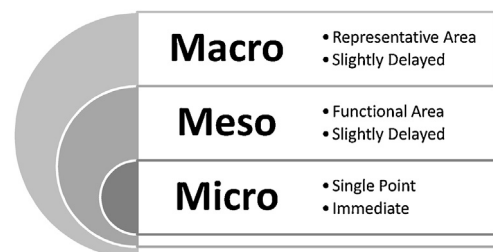


Fig. 2. Timing and areas of confirmation.

Table 4
Practitioner Demographic Data

Practitioner pseudonym	Gender	Age	Qualifications	Occupation
Tsuru	Female	Middle aged	Acupuncture Moxibustion	Clinician
Ginnosuke	Male	36	Acupuncture Moxibustion	Clinician
Asajiro	Male	Middle aged	Acupuncture Moxibustion	Clinician
Takizou	Male	36	Acupuncture Moxibustion	Clinician
Bunzaemon	Male	39	Acupuncture Moxibustion	Clinician
Ume	Female	35	Judo therapy Acupuncture Moxibustion	Clinician
Zenkichi	Male	67	Acupuncture Moxibustion Chiropractic	Clinician
Koremitsu	Male	Middle aged	Acupuncture Moxibustion	Clinician
Genrokuro	Male	36	Acupuncture Moxibustion	Clinician
Kojiro	Male	45	Judo therapy Acupuncture Moxibustion	Clinician
Iwamatsu	Male	48	Acupuncture Moxibustion Massage	Teacher
Kame	Female	35	Acupuncture Moxibustion	Clinician
Shinokichi	Male	46	Acupuncture Moxibustion Massage	Clinician Teacher
Tarobi	Male	Middle aged	Judo therapy Acupuncture Moxibustion	Clinician Teacher
Denkuro	Male	36	Acupuncture Moxibustion	Clinician
Bunshichi	Male	Middle aged	Acupuncture Moxibustion Massage	Teacher
Kiemon	Male	72	Acupuncture Moxibustion	Clinician
Toko	Female	40	Acupuncture Moxibustion	Clinician
Yae	Female	Middle aged	Acupuncture Moxibustion	Clinician
Benio	Male	Middle aged	Acupuncture Moxibustion Judo therapy	Clinician Teacher
Sayo	Female	Middle aged	Acupuncture Moxibustion	Teacher
Rin	Female	41	Acupuncture Moxibustion	Researcher
Zenpachi	Male	Middle aged	Acupuncture Moxibustion	Teacher
Miyo	Female	Middle aged	Acupuncture Moxibustion	Teacher
Nobuhide	Male	Young adult	Acupuncture Moxibustion	Researcher
Chusuke	Male	38	Acupuncture Moxibustion	Teacher
Sasuke	Male	52	Acupuncture Moxibustion	Teacher
Heijiro	Male	40	Acupuncture Moxibustion Chiropractic	Teacher
Kinu	Female	40	Acupuncture Moxibustion	Teacher Researcher
Otoemon	Male	28	Acupuncture Moxibustion	Researcher
Sukegoro	Male	48	Acupuncture Moxibustion	Teacher
Hikoemon	Male	31	Acupuncture Moxibustion	Researcher

Table 4 (Continued)

Practitioner pseudonym	Gender	Age	Qualifications	Occupation
Heisuke	Male	57	Acupuncture Moxibustion	Clinician
Mitsu	Female	Young adult	Acupuncture Moxibustion	Clinician
Kiyo	Female	Middle aged	Acupuncture Moxibustion	Clinician
Iwa	Female	Middle aged	Acupuncture Moxibustion	Clinician
Atsu	Female	Middle aged	Acupuncture Moxibustion	Clinician
Hana	Female	Middle aged	Acupuncture Moxibustion	Clinician

Observation with Kinu (acupuncture and moxibustion practitioner/senior lecturer)

Kinu gently manipulated the needle with the sparrow pecking technique by pressing and releasing the needle tip against the tissue under the treatment location with her right hand, the needling hand. Her pressing hand rested lightly on the patient's skin and pinched the needle shaft at the insertion point with the index finger and thumb. As she manipulated the needle, she felt for any changes in resistance or tension with the pressing hand and through the needle with the needling hand.

Micro level confirmation methods sometimes included solicitation of a Ki obtaining response and other painful or uncomfortable sensations. Once this was achieved, treatment was often ceased at the location (e.g. by withdrawing the needle). Confirmation was achieved through expression by the patient either vocally, and through movement or palpation of tissue through the needle (when using a needle). The purposeful employment of methods which may have caused patient discomfort were considered positive markers for treatment efficacy.

Confirmation at the meso level was found to be performed after a series of successive interventions within or around significant or functional areas, and was a central indicator of whether the patient's main complaint had improved. Main complaints often existed in a functional group of malfunctioning tissues, or as a result of various interacting pathogenic influences rather than at a single treatment location or in relation to general health and wellbeing. After a series of interventions were applied locally or distally, confirmation of any changes in condition at the symptomatic area was diagnosed. Meso level confirmation also depended on the condition of the patient: illnesses in which changes were difficult to judge (such as insomnia or cancer), were not suitable for meso level confirmation. In such cases, confirmation tended to occur mostly at the micro and meso levels.

Observation with Ginnosuke (acupuncture and moxibustion practitioner)

Ginnosuke asked the patient exactly where his pain was. The patient pointed at an area from behind the back of their right shoulder to the base of their neck. "Around here" he said. Ginnosuke considered that where the patient had indicated lay along the Small Intestine channel and decided to treat the point SI 3 on their left side. He stood in front of the patient, holding the small gold teishin [non-inserted needle like tool] in his right hand with it touched it against the point SI 3 on the patient's left. As he held the teishin against the point with his right hand, Ginnosuke palpated the patient's right radial pulse with his other hand. After a few moments, Ginnosuke removed the teishin and asked the patient to move in a way that would aggravate the pain to see if it had changed at all. The patient did, and indicated that there was no change. Ginnosuke then treated

SI 3 on the right side with the teishin as he had just done so on the left. Once again, the patient indicated that there was no change.

Confirmation at the macro level was performed at significant areas of anatomy which were believed integral to, or representative of, the proper functioning of the body. Palpation and observation of significant anatomical areas including the pulse, abdomen, back, tongue, skin and body structure (bone and muscle alignment), were used to confirm treatment effects at the macro level.

I try not to put any strength in the needle. Just stay still and wait for the body to change. (What do you do once you feel the change?) I check the pulse and do the next point. . . If when I check the pulse and it's flat or okay, if it's in good condition, I will finish the treatment. (Takizou: acupuncture and moxibustion practitioner)

Not all practitioners used macro level confirmation; its application seemed to represent a division in allegiance to treatment philosophy. Those who did not perform macro level confirmation seemed to prescribe to a more mechanistic or symptom-based treatment philosophy, whereas practitioners who did, appeared to include elements of holism into their treatments.

3.5. Markers of confirmation

I use the reductor tool with the patient sitting on the examination table or chair. . . In my opinion, it reduces internal pressure and returns the body structure back to its normal state. (How do you know if there is a change in condition?) Firstly, by palpation. Also by movement and I can see where the body shape has changed. . . Then, if I feel like I have achieved today's goal for the patient, I finish the treatment. (Shinokichi: acupuncture and moxibustion/massage/judo therapy practitioner/lecturer)

Methods for confirming the effects of treatment included inquiry, observation, palpation, listening/smelling and esoteric methods. Esoteric methods are those that were not based on standard Traditional East Asian Medicine, biomedical or orthopaedic diagnostic methods. They were classified as esoteric because they are difficult to comprehend through a conventional understanding of phenomena and were not practiced according to well established or widely accepted diagnostic protocols. Esoteric diagnostic methods were not found to be taught or assessed at educational institutions. They were found to have been developed and promoted by individual practitioners or organizations which were founded on spiritual practices or the acute sensitivity or awareness of Ki.

The presence and quality of certain diagnostic markers were used to confirm condition changes. These diagnostic markers tended to be sought at different levels of timing or areas at either micro, meso or macro levels. Table 5 lists markers of confirmation and the timing or area level at which they were generally

Table 5
Markers of Confirmation, Timing and Area

Marker of confirmation	Level of timing and area
Abdominal tympanic qualities	Meso, macro
Alignment and shape of body structures/tissues	Meso, macro
Indurations of body structures/tissues	Micro, meso
Colour	Micro, meso, macro
Muscle tension	Micro, meso
Needling sensations perceived by patient	Micro
Needling sensations perceived by practitioner	Micro
Patient comfort	Micro, meso
Practitioner intuition	Micro, meso, macro
Pulsations	Micro, meso
Pulse	Micro, meso, macro
Range of movement	Micro, meso
Skin texture	Meso, macro
Strength of movement	Meso
Swelling	Meso
Temperature	Meso, macro
Tongue condition	Macro

sought. Confirming treatment effects partly depended on practitioners' ability to perceive differences in the patient after or during an intervention relative to their pre-treatment condition. Positive differences in the condition of a range of body tissues compared prior to treatment were indicative of a therapeutic result.

Palpation and observation were the most important methods for confirming treatment effects. Palpation of the pulse, palpation of the body tissues through the needle or with the hand, and the observation of body tissues and range of movement were the most significant methods for confirming treatment effects.

We can find out the difference before treatment and after treatment from pulse. You must train how to feel the pulse and if at first you can learn how to judge the difference of the pulse condition both before and after treatment, it's a great start. (Kojiro: acupuncture and moxibustion/massage practitioner)

4. Discussion

There is limited discussion outlining the realization of a therapeutic end point in TJM acupuncture,^{39,40} although the idea of immediate effects of treatment and confirmation is implicitly implied by some authors.^{41–48} Attending to a patient's needs, such as frequent confirmation of treatment effects, may be thought of as a healthcare professional's duty. However, that this actually occurs, and how and why it occurs in clinical practice should not simply be assumed. For the first time in English, the findings from this study suggest that confirming treatment effects is a significant aspect of TJM acupuncture. This study also describes how, and proposes why, treatment effects are confirmed in TJM acupuncture. It is belief in the instantaneous effects of treatment and the value of effect through technique which exemplify the philosophical foundations of confirming treatment effects in TJM acupuncture.⁴⁹ Continually monitoring the results of treatment at a range of time and body location increments seems to be an important and unique element of TJM acupuncture practice.

Constantly evaluating how patients respond to therapeutic interventions may be important in advancing practitioner skills. Skill improvement and expertise development rely on deliberate practice and the frequency, quality and immediacy of feedback.^{50,51} Increasing the proficiency and professional skills related to perceiving and affecting changes in the patient's condition requires frequent experience and awareness of instantaneous responses of unambiguous indicators of change. The constant feedback gained

by repeated intervention and confirmation may be conducive to rapid gains in expertise.

Acupuncture practitioners outside Japan may expect treatments to have results sometime after the clinical encounter, perhaps days later. This expectation could be derived from performing acupuncture according to methods commonly employed in herbal medicine, a criticism described by some as the herbalization of TCM acupuncture.^{52–55} For instance, a herbal prescription is provided during the consultation, and after a few days consumption, the patient may feel some effects. Acupuncture practitioners who do not attempt to confirm the immediate effects of treatment may seek to obtain feedback over the course of several treatments. Lower frequency of this feedback, spaced sequentially possibly over weeks, reduces the quality of feedback and is not as useful in gaining clinical experience. The acquisition of expertise and skill are challenging in such clinical situations because of the long delay between the application of interventions and any perceivable outcomes.

Practitioners in this study appeared to have defined expectations of health. These expectations enabled them to recognize abnormalities in relation to a predicated healthy norm and attempt to normalize them through the application of specific techniques. Whether the techniques were effective or not was the process of immediately checking the presence of changes in condition. Treatment effects were confirmed by establishing a comparative improvement in the patient's condition. The health condition was found to be a constantly changing reference point throughout the clinical encounter, and interventions were believed to potentially result in an immediate regression of symptoms during the clinical encounter. This value reflects the possibility of changes in a relative health condition to a state which is not perfect, but is an achievable or acceptable benchmark for an individual. Practitioners believed this regression could occur moment by moment during the clinical encounter, and was a result of their skills and experience.

The concept that treatment effects can, and should be confirmed immediately through palpation or observation, influences a number of clinical factors: point selection methods, treatment tool manipulation techniques and needle retention time. The confirmation of treatment effects is somewhat correlated to how practitioners apply technical skills to achieve modifications in the patient's condition, practitioner sensitivity, and competence in perceiving changes in condition. If a practitioner was unable to achieve a change, she/he may have attempted different avenues of treatment through a process of trial and error by using alternate techniques or treatment locations. Trial and error emphasize the practitioner's role in the healing process and devalue the belief in the body's natural ability to heal itself. This may be a unique feature of TJM acupuncture.

Limitations of the study is that it relied only on willing and available practitioners recruited, which warrants limited generalization. Many factors influenced who was able to be recruited and how practitioners could contribute. The consequence of Osaka as the primary research site, the length of time spent in the field, resources available to perform fieldwork and visit off-site locations, as well as who the patients were and with what conditions they presented are factors to consider when contextualizing this project in relation to TJM acupuncture at large, and the future of research into TJM acupuncture in Japan.

In conclusion, TJM acupuncture includes a practice model of effect confirmation that promotes a system of constant feedback gained by repeated intervention and confirmation. This may be a unique feature of acupuncture in Japan. One of the outcomes of this study highlights the importance of future research focused on how the immediate confirmation of treatment effects may affect clinical efficiency and increase the rate of practitioner experience.

Conflict of interest

The authors declare that they have no conflicts of interest or financial interests related to the material in this manuscript to declare.

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