

RESEARCH ARTICLE



Contact Tools in Japanese Acupuncture: An Ethnography of Acupuncture Practitioners in Japan

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Abstract

This study aimed to identify procedural elements of Japanese acupuncture, describe these elements in detail, and explain them in terms of the key thematic category of treatment principles. Between August 2012 and December 2016, ethnographic fieldwork was conducted in Japan. In total, 38 participants were recruited by chain referral and emergent sampling. Data was collected through participant observation, interviews, and by analyzing documents. A total of 22 participants agreed to clinical observation; 221 treatments were observed with 172 patients. Seventeen consented to formal interviews and 28 to informal interviews. Thematic analysis was used to critically evaluate data. One especially interesting theme was interpreted from the data: a variety of contact tools were applied in treatment and these were manipulated by adjusting elements of form, speed, repetition, and pressure. Tapping, holding, pressing/pushing, and stroking were the most important ways contact tools were used on patients. Contact tools are noninvasive, painless, can be applied in almost any environment, and may be easily accepted by patients worldwide. Contact tool theory and practice may be successfully integrated into acupuncture curricula outside of Japan, used to inform clinical trials, and contribute to an expanded repertoire of methods for practitioners to benefit individual patients in international contexts.

1. Introduction

One of the most well-known treatment methods of Traditional Chinese Medicine (TCM) is acupuncture. Acupuncture

can be studied at universities internationally and is practiced professionally worldwide [1,2]. Alongside TCM acupuncture, acupuncture from Traditional Japanese Medicine (TJM) is gaining popularity as an alternative

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practice style [3–5]. However, TJM acupuncture is underdeveloped in published English language literature, with little research investigating the practice within the socio-cultural context of Japan [6–11].

Three classifications have long been used to describe medical systems: health, illness, and healthcare [12–14]. Healthcare describes technical aspects of care provision, usually to someone who is unable to do so themselves or to oneself [15]. The actions and beliefs that underpin healthcare are deeply connected to cultural rules, social conventions, and personal experiences [16]. Consequently, to establish culturally meaningful explanations of healthcare (including acupuncture), it is necessary to examine healthcare practices from the environment in which they occur [17]. A thorough description of Japanese acupuncture must incorporate elements of history, society and culture, which is why this study explored professional acupuncture practice and treatment principles directly in Japan.

Treatment rules, methods, techniques, and tools are some of the most important aspects of acupuncture practice and directly connect to philosophical concepts and diagnostic methods in acupuncture education and practice [18,19]. There is evidence suggesting that different acupuncture styles are composed of variations of treatment rules, methods, techniques, and tools, and other research has used treatment principles as a thematic category to compare, contrast, and describe styles of acupuncture [20]. Therefore, investigation with a specific focus on treatment principles was determined as a necessary step in describing TJM acupuncture in Japan. The *International Standard Terminologies on Traditional Medicine in the Western Pacific Region* defines treatment principles as “aspects of the clinical encounter which relate to the general rules that should be followed in treating a patient’s condition with acupuncture” [21]. In this study, the definition was expanded 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 condition.

The objective of this research was to develop the understanding of TJM acupuncture by identifying treatment principles in TJM acupuncture. Specifically, to identify, describe, and explain treatment rules, methods, techniques, and contact tools used in TJM acupuncture.

2. Materials and methods

2.1. Setting, recruitment, and participants

Ethnography was selected as the methodology to address the descriptive and explorative study aims. Consequently, long-term ethnographic fieldwork was conducted in Japan between August 2012 and December 2016.

The research project was approved by the University of New England Research Ethics Committee (HE-12-142). 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 sampling [24] which is common in ethnographic research when targeting members of a specialized population [14,25,26].

2.2. Data collection

A single researcher conducted all data collection according to the principles of ethnographic fieldwork [27–29] and involved participant observation, semi-structured formal interviews, informal (fieldwork situation) interviews, and analysis of documents. Participant observation involved shadowing the practitioner, watching them, asking questions where appropriate, and recording what was seen and heard. Recordings in participant observation were informed by observation guidelines developed for this study, which were revised iteratively. 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 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 documents were acquired for analyses.

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. Data was analyzed using theoretic and inductive analysis [30,33]. All transcription and coding was performed by a single researcher. In order to create a contextual understanding of treatment principles in relation to philosophical concepts and diagnostic methods, a coding template was developed based on the World Health Organization definition of philosophical concepts, diagnostic methods, and treatment principles in the *International Standard Terminologies on Traditional Medicine in the Western Pacific Region* [21] (Table 1).

Data allocation and 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. Setting and practitioners

The study was based in Osaka, and fieldwork was conducted at a variety of prefectures ($n = 7$) across Japan. In total, 38

Table 1 Coding template for thematic analysis.

Code label	Description	Examples
Philosophical concepts	Elements which relate to the branch of Traditional East Asian Medicine acupuncture concerned with the basic concepts, theories, rules, and principles.	Yin/Yang, five phases, channels & collaterals
Diagnostic methods	Elements which inform the procedure and practice of collecting data to determine the condition of the patient.	Pulse palpation, clinical interview, tongue inspection
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

practitioners were recruited, which included 24 male and 14 female practitioners, with an age range of young adults (≤ 35 years) to elderly (≤ 60 years). 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 to informal interviews ($n = 28$), 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 4 years and 6 months of ethnographic fieldwork. All practitioners were given pseudonyms to maintain confidentiality and protect their identity.

3.2. Important themes

In relation to treatment principles, five major themes were identified: treatment tools, pre-intervention preparation, needling, moxibustion, and confirmation of treatment effects. This aim of our research is to report on the results related to contact tools. The rubric of themes analyzed in relation to treatment principles and contact tools is shown in Fig. 1.

Five major themes related to treatment principles were identified. Treatment tools were divided into four sub-themes: contact tools, needles, moxibustion, and miscellaneous. Contact tools were divided into teishin and friction tools. The themes reported in this article are highlighted in bold typeface.

Contact tools are used on the skin surface and are not designed for insertion into the body. Two varieties of contact tools were found to be used by practitioners. One resembles filiform needles but is thicker with blunt ends: *teishin* in Japanese. The other variety included diversity of

shapes, tended to have a larger surface area than teishin, and not shaped like a needle. These are described as "friction needles". Both teishin and friction needles were reportedly commonly used for children. However, they were also used on adult patients. In regards to data obtained through clinic observation, this study only reports on observations with adult patients.

Four important sub-themes were identified in the use of contact tools: form, speed, repetition, and pressure. Overall, contact tools had the quality of being applied at many treatment locations with minimal stimulation.

3.3. Form

Form is the technique applied to the contact tool. Only four forms were observed in actual treatments: tapping, holding, pressing/pushing, and stroking. Each form was believed to be specific in effect, and when applied, an appropriate amount of other manipulations including speed, repetition, and pressure was required. In general, tapping, pressing/pushing, using stronger pressure or greater volume was reducing or moving. Holding, stroking, or using light pressure and decreased volume were tonifying. However, adjustments to manipulations also served to provide alternate stimulation that assisted in encouraging the desired treatment outcome when one method was unsuccessful. Trial and error was an accepted aspect of manipulation for all and any manipulations using contact tools.

3.3.1. Tapping

Tapping involved holding the tip of the tool against the skin with the pressing hand and tapping the top of the tool with the needling hand (or other object). Additionally, contact tools were found to be held in the needling hand and tapped directly against treatment sites (Figs. 2 and 3). This method was sometimes described as *san shin* (scatter needling) in Japanese. It was said to scatter Ki (Qi in Chinese) and was used to relieve tension or dissipate Ki. Tapping repetition involved continual tapping on a single location or over an area in rapid succession. The treatment site or tool was tapped and moved to the next location. In

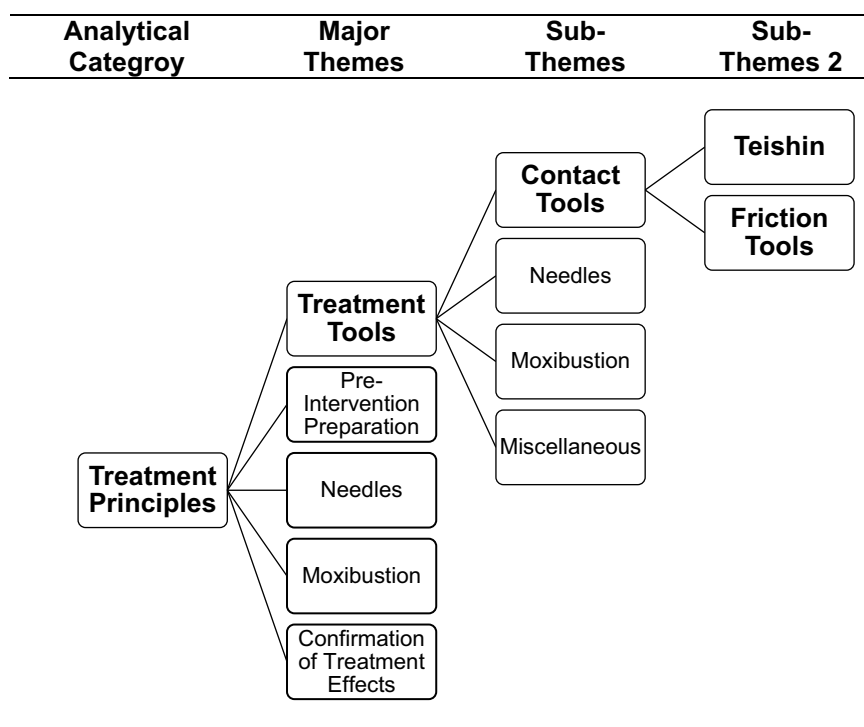


Figure 1 Thematic categories related to contact tools.

this way, large areas could be treated to address body tissue abnormalities or move Ki over a wide area. Over 100 taps were performed on some areas.

Tapping effects were altered by regulating repetition and pressure. Speed was performed at a consistently rapid rate among practitioners regardless of the effect that was desired. Pressure is the amount of applied force exerted onto body tissues via the tool and pressing/needling hand.

Pressure changes were believed to alter the effects and strength of treatment. Some contact tools had sharp points which when pressed into the skin caused pain. If strong pressure was applied, the skin could have been damaged causing discomfort to the patient. An important aspect of tapping included carefully regulating how much the tool pressed into the patient's skin by adjusting how a tool was held.

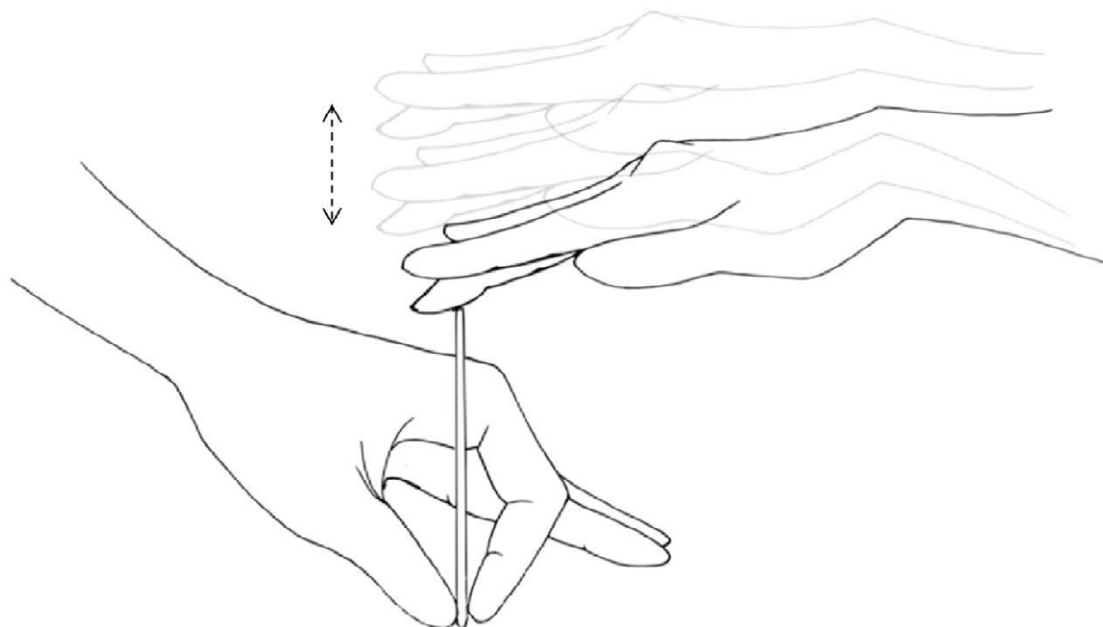


Figure 2 Tapping the contact tool. *Note.* Arrow indicates tapping movement of hand.

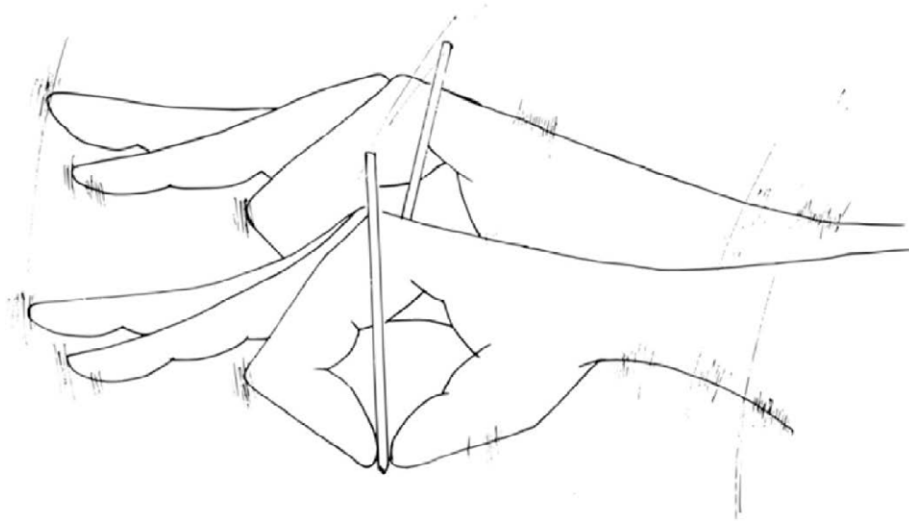


Figure 3 Tapping the tool against the skin.

3.3.2. Holding

When holding (Fig. 4), pressure was found to be applied by the pressing hand rather than the needling hand. The pressing hand served a dual purpose in regulating how much the tip of the tool protruded into the patient's skin while controlling the force exerted onto the treatment location. Reportedly, tonification could be achieved with around 3 g of applied force exerted onto a treatment location, while reduction involved around 6 g of applied force.

While holding, duration rather than speed and repetition was altered. Duration of form was generally dependent upon the palpation of a treatment effect or practitioner judgment/intuition.

3.3.3. Pressing/Pushing

Pressing/pushing was performed as shown in Figs. 4 and 5. The effects of pressing/pushing were altered by adjusting elements of stimulation pressure, speed, and repetition. More stimulation was believed to lead to Ki reduction, stronger treatment, and softened body tissue, whereas less stimulation was thought to tonify Ki and provide a more gentle treatment (Table 2).

3.3.4. Stroking

Stroking affected skin texture and tension, and moved or stimulated Ki. Stroking occurred over an area rather than a single treatment site. The method involved stroking the

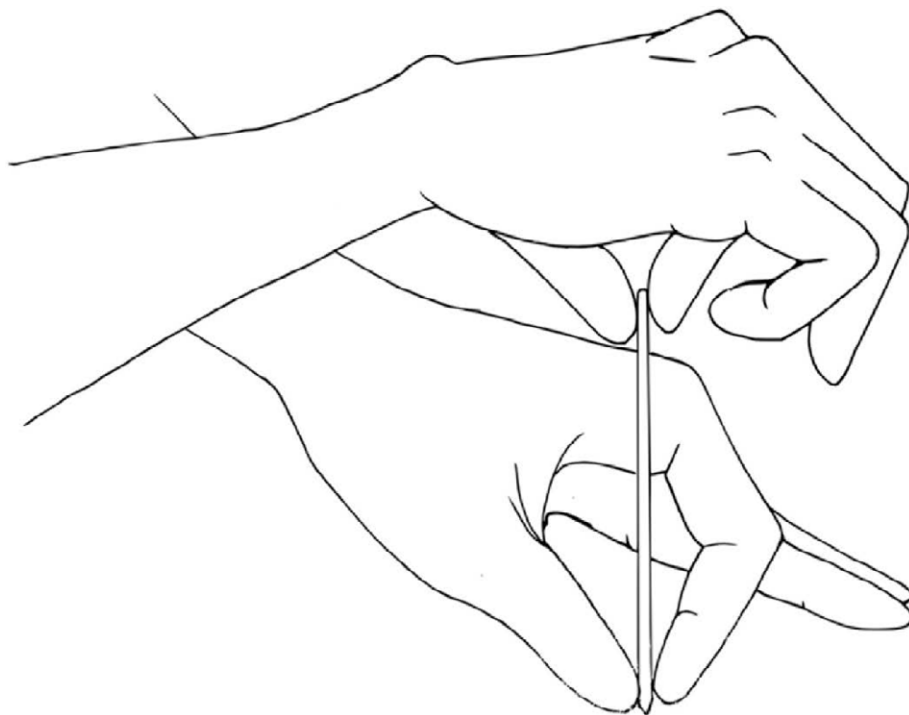


Figure 4 Holding the contact tool.

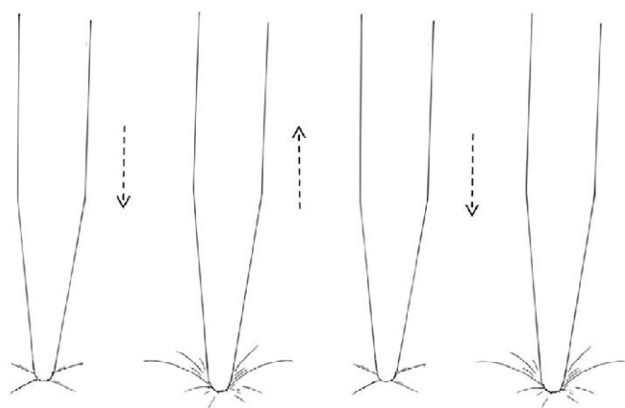


Figure 5 Pushing/pressing. Note. Arrow indicates direction of force against/away from the skin.

Table 2 The differential effects of degree of stimulation.

More stimulation	Less stimulation
Reduce Ki	Tonify Ki
Stronger treatment	Gentle treatment
Soften body tissues	Neutral effect on body tissue

Note. Stimulation includes pressure, speed, and repetition.

skin with the oblique edge of the tool while brushing the patient's skin with fingers of the needling hand (Fig. 6).

Stroke direction was considered important in moving Ki certain directions. Speed, repetition, pressure, and stroke length generally depended on the patient's skin condition, which often informed treatment objectives. Poorer skin condition required more subtle methods; a better condition could tolerate stronger treatment. Stroking and tapping was performed over areas rather than just at specific treatment locations.

4. Discussion

Some contact tools and techniques have been described in textbooks for the treatment of children [39,40]. However, the use of contact tools for adult patients is rarely discussed in published English language literature [41–47]. For the first time in research related to TJM acupuncture, this study explored and described the details of exactly how and why contact needles are used on adult patients in TJM acupuncture. This study proposes that the use of contact tools in TJM acupuncture is founded on the unique socially and culturally constructed systems of knowledge and values demonstrated in the Japanese clinical acupuncture environment. Of most significance to the belief that therapeutic effects can be achieved without needle insertion, is the value placed on palpation, the immediate effects of treatment, confirmation of treatment effects and patient comfort, which are demonstrated in the design and use of contact tools in TJM acupuncture.

The use of contact tools emphasizes the importance of practitioner technical abilities, areas of anatomical significance, and addressing body tissue abnormalities. Conversely, many aspects of contact tool use deemphasize some of the

core concepts of classical acupuncture practice: the actions and indications of acupuncture points [48–50], that effectiveness of acupuncture treatment is somewhat related to duration of needle retention [51], and the sustained elicitation of a needle stimulation or *de-Qi* response [52–55]. The disregard of these ideas challenges the conventional understanding of acupuncture outside of Japan.

Controversy surrounds placebo controls in acupuncture clinical trials which include needle insertion at non-acupuncture points or superficial stimulation of the skin at known acupuncture points and non-acupuncture points by using standard filiform needles or varieties of retractable needles [56,57]. Many clinical trials have resulted in sham acupuncture showing similar results to conventional acupuncture in efficacy and effects [58–61]. Other authors have debated that some forms of sham acupuncture are not an appropriate placebo control for acupuncture [62–64]. This study confirms that placebo tools commonly used in clinical trials bear resemblance and provide similar stimulation to minimal stimulation and non-insertion Japanese contact tool methods [65]. The idea that skin penetration and solicitation of a needling stimulation is necessary has long informed clinical trials and thus hindered the advancement of research in acupuncture.

Contributing to the unsatisfactory development of appropriate acupuncture controls is that most international acupuncture practice is based on TCM acupuncture where needle insertion and stimulation of a needling sensation are often equated with therapeutic benefit [21,66–68]. A greater awareness of cross-cultural acupuncture methods is essential to promote the most effective care for patients and to ensure that ignorance of cross-cultural acupuncture methods does not inhibit the growth of acupuncture research.

4.1. Limitations

This study relied only on available practitioners who could be recruited, warranting limited generalization. Many factors influenced who was recruited and how practitioners contributed. The consequence of Osaka as the primary research site as well as the length of time in the field, resources available, 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.

5. Conclusions

Contact tools are a widely misunderstood aspect of TJM acupuncture. One of the outcomes of this study highlights the importance of how using contact tools may be a viable alternative to conventional inserted needling practice and could provide many benefits to patients and practitioners. Treatments may be cheaper because materials are reusable, and treatment times may be shorter as contact tools are not retained on the body. Contact tools are also safer, and they may be more acceptable to patients due to the noninvasive and painless procedures. Non-inserted acupuncture can be applied outside of the clinical setting and can also be taught to care givers at homes.

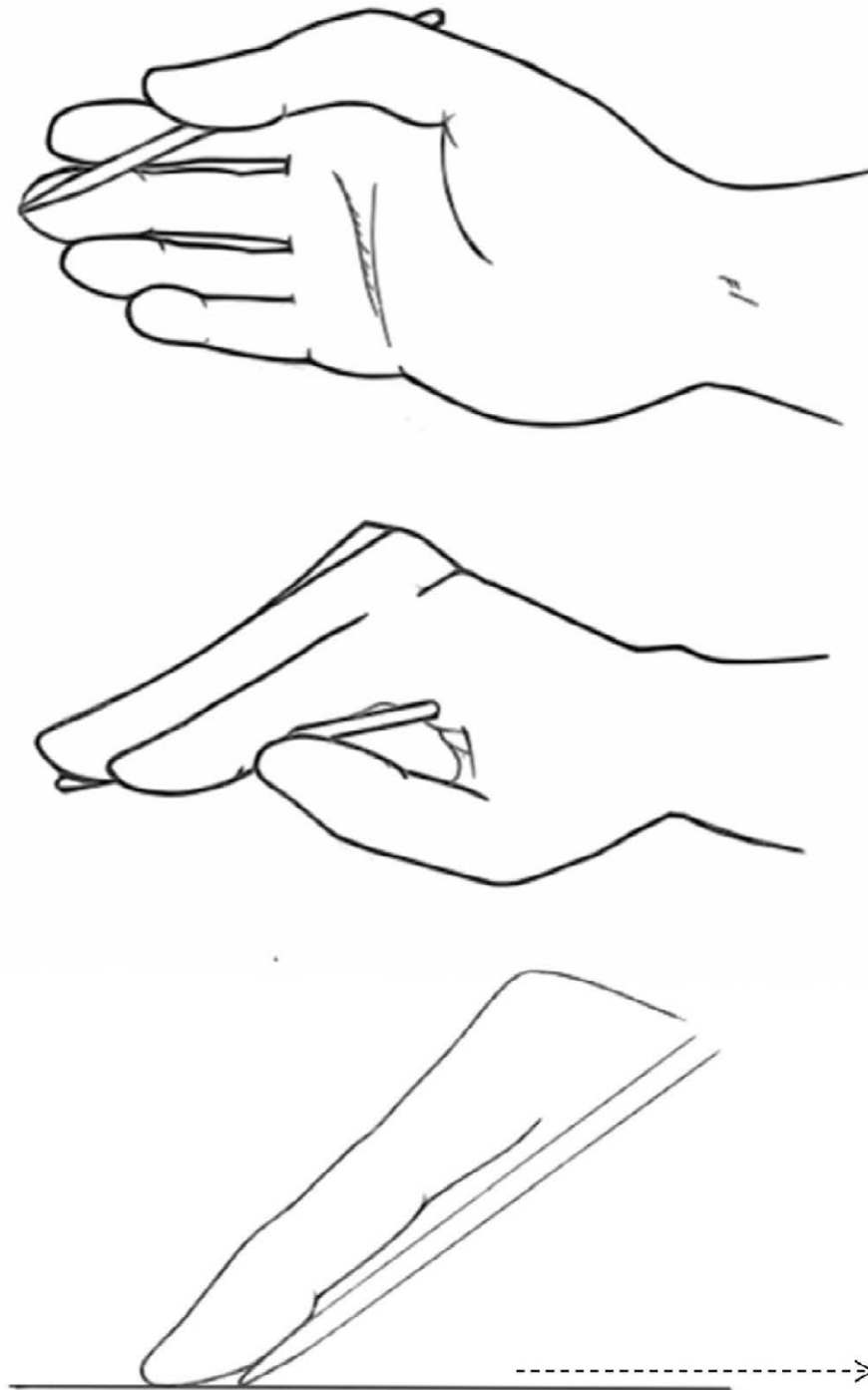


Figure 6 Stroking. *Note.* Arrow indicates stroke direction along the skin.

Disclosure statement

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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