



# The Knowledge and Practice of a Traditional Healer in Using Acupuncture for Disease Treatment among Ethnic Minority Communities: A Case Study from Pong District in Thailand

Pongnared Jaengpromma<sup>1</sup>, Phatcharee Pimalram<sup>1</sup>, Karnchanok Sukhabot<sup>1</sup>, Suebsak Khamsean<sup>1</sup>, Patchareeporn Phiset<sup>1</sup>, Prapaporn Tulwattanakul<sup>1</sup>, Paul Ratanasiripong<sup>2</sup>

<sup>1</sup>Department of Traditional Chinese Medicine, School of Public health, University of Phayao, Thailand

<sup>2</sup>California State University, Long Beach, USA.

Correspondence: Pongnared Jaengpromma, 19 Moo 2 Department of Traditional Chinese Medicine, School of Public health, University of Phayao, Thailand 56000. E-mail: pongnared.ja@up.ac.th

Received: June 25 2024; Revised: October 1 2024; Accepted: November 26 2024

## Abstract

This case study explored the acupuncture utilization among ethnic minorities and examined knowledge and folk wisdom of a traditional healer. The data was collected through a brief questionnaire with 370 ethnic minority villagers and an in-depth interview and observation with one traditional healer who utilized acupuncture techniques for disease treatment in Pong district, Phayao province, Thailand. Of the 370 villagers, 53.5% were aware of traditional healer practicing acupuncture and 20.3% had received the treatment. Most (91.6%) were satisfied with the treatment. The case study subject, a 69-year-old traditional healer with formal training in Chinese medicine, demonstrated a modified acupuncture technique characterized by fewer points and shallower needle insertion compared to traditional methods. This study reveals the acceptance of and satisfaction with acupuncture in the rural Thai ethnic minority communities. This study also highlights the integration of traditional knowledge with formal training and underscores the potential role of traditional healers in community healthcare. Further research is recommended to explore the integration of traditional practices into mainstream healthcare systems.

**Keywords:** Traditional healer, Acupuncture, Ethnic minority community, Chinese medicine

### What was Known

- Prevalence of Traditional Chinese Medicine (TCM) practices among ethnic minority communities.
- Limited integration of TCM with modern healthcare systems, particularly in rural areas.
- Evolving regulatory frameworks for TCM practitioners in Thailand.

### What's New and Next

- High acceptance of acupuncture among villagers in the studied Thai subdistrict.
- Adaptation of acupuncture techniques to local contexts, blending traditional and formal knowledge.
- Need for research on integrating localized TCM practices into mainstream healthcare systems.

## Introduction

Traditional Chinese Medicine (TCM) has gained global recognition, including in Thailand, as an alternative therapeutic approach<sup>1</sup>. Thailand's medical landscape has evolved significantly, incorporating diverse treatment modalities to address a broad spectrum of health conditions. TCM, with its millennia-old heritage, has become an integral component of the healthcare system, offering patients complementary and alternative treatment options. The TCM paradigm encompasses various therapeutic modalities, including herbal medicine, acupuncture, cupping, Guasha, and Tui Na massage. These practices are underpinned by distinctive theoretical frameworks and diagnostic methodologies that diverge from conventional Western medical approaches. Originating over 5,000 years ago among Yellow River basin communities in China, TCM has undergone continuous refinement, yielding numerous eminent practitioners, academic institutions, and seminal medical texts<sup>2</sup>.

The proliferation of medical institutions and authoritative texts in China has significantly contributed to TCM's prominence. However, various socioeconomic factors prompted Chinese emigration to Thailand over recent generations, resulting in substantial cultural convergence between the two nations<sup>3,4</sup>. These emigrants transmitted ancestral medical knowledge, facilitating TCM's assimilation into Thai society, particularly in the western, northeastern, and northern regions<sup>5</sup>. Phayao Province in northern Thailand has nine districts, includes Pong District, which hosts significant ethnic minority populations, including Hmong (Miao) and Yao

(Mien) communities. Phachangnoi Sub-district in Pong presents a unique demographic composition, rendering it particularly suitable for investigating TCM and acupuncture practices<sup>6,7</sup>.

This case study explored the acupuncture utilization among ethnic minority villagers and examined knowledge and folk wisdom of one traditional healer. The research team aims to analyze the knowledge and compare treatment principles of folk acupuncture practice and Chinese acupuncture practice, recognizing the significance of traditional healers in health maintenance, disease prevention, and treatment. By systematically recording this information, the study seeks to preserve acupuncture methodologies for future generations, facilitating their adaptation to contemporary healthcare contexts. This effort is expected to contribute to the development of Thailand's public health system and serve as a valuable resource for academic and research pursuits in the field.

## Materials and Methods

### *Study design, population and sample size.*

This case study from one district was divided into two phases:

**Phase 1:** The survey was conducted among the villagers from ethnic minority communities who have received treatment from traditional acupuncture healers. The questions included personal information, health information, and satisfaction with acupuncture healers. The inclusion criteria included the followings:

1. Resident of Phachangnoi Sub-district, Pong District, Phayao Province, who have received acupuncture treatment from traditional healers in Pong District, Phayao Province.
2. At least 20 years old.
3. Willing to volunteer to participate in the research process.
4. Able to communicate in Thai.

**Phase 2:** Selection of traditional acupuncture healer by the Snowball Sampling Technique from Phase 1. An in-depth interview and observation were conducted to explore the roles of the traditional acupuncture healers in the community, as well as their knowledge in disease treatment.

## Results

### *Phase 1: Survey of Volunteer Villagers*

Out of 370 volunteer villagers, 62.4% were females, with a mean age of 61.99 years. The majority (83.8%) were married. Most (68.9%) were Buddhist. Educational attainment is low, with 74.9% having no formal education. In addition, 88.6% were farmers. See Table 1.

The average weight of the volunteer villagers was 56.73 kg ( $SD = 10.86$ ). The average height was 153.21 cm ( $SD = 13.10$ ). For the BMI, 57.0% of the villagers was in the normal range (18.00-24.99). Regarding health conditions, 62.2% reported no known illnesses and 10.3% reported having diabetes. Majority of participants (62.2%) reported that they did not exercise. This demographic and health data offers important insights for researchers studying rural health and lifestyle patterns in ethnic minority communities. See Table 2.

**Table 1** Demographic information ( $n = 370$ ).

Demographic Information	Frequency	%
<b>Gender</b>		
Females	231	62.4
Males	139	37.6
<b>Age (<math>M = 61.99</math>, <math>SD = 11.50</math>)</b>		
< 40	17	4.6
40 - 69	266	71.8
$\geq 70$	87	23.6
<b>Marital Status</b>		
Married	310	83.8
Non-married	60	16.2
<b>Religion</b>		
Buddhism	255	68.9
Christianity	46	12.4
Others (animism, sacred entities, or ancestor worship)	69	18.6
<b>Educational Level</b>		
No formal education	277	74.9
Primary school	66	17.8
Secondary school	24	6.5
Bachelor's degree or higher	3	0.8
<b>Occupation</b>		
Farmers	328	88.6
Business	10	2.7
Government	2	0.5
Others	30	8.1

**Table 2** Health information ( $n = 370$ ).

Health Information	Frequency	%
<b>Weight (kg) (<math>M = 56.73</math>, <math>SD = 10.86</math>)</b>		
30.00 – 49.99	82	22.5
50.00 – 69.99	250	67.7
70.00 – 89.99	35	9.5
$\geq 90$ kg	3	0.8
<b>Height (<math>M = 153.21</math>, <math>SD = 13.10</math>)</b>		
120 – 139 cm	6	1.6
140 – 159 cm	254	68.6
160 – 179 cm	107	28.9
180 – 199 cm	3	0.8
<b>Body Mass Index: BMI (<math>M = 24.89</math>, <math>SD = 5.29</math>)</b>		
18.00–24.99 (normal)	211	57.0
25.00–29.99 (overweight)	122	33.0
30.00–34.99 (obese)	24	6.5
35.00–39.99 (extremely obese)	13	3.5
<b>Diabetes</b>		
Yes	38	10.3
No	227	61.4
Unknown	105	28.4
<b>Family History of Diabetes</b>		
Father	27	14.6
Mother	22	6.0
Sibling	17	4.3
<b>Existing Illness</b>		
Yes	107	28.9
No	230	62.2
Unknown	33	8.9
<b>Physical Exercise</b>		
None	230	62.2
< 3 times/week	33	8.9
3 times/week	94	25.4
> 3 times/week	13	3.5

Approximately half (53.5%) of participants were aware of acupuncture practitioners, with a smaller proportion (17.8%) having received recommendations to seek acupuncture treatment. The primary sources of recommendations were public health officials (40.1%). Among the participants, 20.3% had received acupuncture treatment in the past. The primary source of information about acupuncture was self-obtained knowledge (92.2%). The main reasons for choosing acupuncture as a treatment option were perceived doctor's credibility (63.5%) and experience of the acupuncturist (48.4%). The most common conditions treated through acupuncture were back pain (89.6%), insomnia (80.5%), and headaches (73.0%). The predominant treatment method from traditional healer was acupuncture (91.6%), with a smaller proportion (8.1%) receiving for herbal medicine. The majority (72.5%) received only 1-2 treatment sessions. Overall, 91.6% indicating a high level of satisfaction. Notably, all participants (100%) expressed their willingness to seek further acupuncture treatment in the future. This villagers' experience data provides valuable insights into the acceptance, experiences, and perceptions of traditional Chinese medicine, specifically acupuncture. These findings can inform further research, interventions, or policy decisions related to the integration of traditional and complementary medicine practices within the healthcare system. See Table 3.

**Table 3** Acupuncture Experience ( $n = 370$ ).

Acupuncture Experience	Frequency	%
<b>Awareness of Acupuncture Practitioners</b>		
Yes	198	53.5
No	172	46.5
<b>Having been Recommended for Acupuncture</b>		
Yes	66	17.8
No	306	82.2
<b>Sources of Recommendations</b>		
Family	5	7.6
Friend	15	22.7
Doctor	19	28.8
Public Health Official	27	40.1
<b>Received Acupuncture Treatment</b>		
Yes	75	20.3
Never	295	79.7

**Table 3:** Acupuncture Experience ( $n = 370$ ). (Cont.)

Acupuncture Experience	Frequency	%
<b>Sources of Information on Acupuncture</b>		
Self	341	92.2
Neighbor	18	4.8
Village general announcement	10	2.8
<b>Reasons for Choosing Acupuncture as an option</b>		
Credibility	48	63.5
Doctor Experience	36	48.4
Convenience	33	44.4
Affordable Cost	21	27.9
<b>Diseases treated for</b>		
Back Pain	68	89.6
Insomnia	60	80.5
Headache	55	73.0
Neck and Shoulder Pain	30	40.0
Others	5	7.0
<b>Treatment Methods</b>		
Acupuncture	68	91.6
Herbal Medicine	7	8.1
<b>Frequency of Treatment Sessions</b>		
1-2 Times	54	72.5
3-4 Times	12	15.4
$\geq 5$ Times	9	12.1
<b>Satisfaction with Treatment</b>		
High	69	91.6
Moderate	4	5.1
Low	2	3.2
<b>Future Acupuncture Treatment Intentions</b>		
Will seek further treatment	75	100.0
Will not seek further treatment	0	0

***Phase 2: In-depth Interviews with Traditional Healer***

The 6-hour interview and observation with the traditional healer, Mr. P, showed the findings as follows:

### *Background and History*

Mr. P is a married 69-year-old male with Thai nationality and Buddhist religion. He has five siblings and completed secondary education (grade 12). Currently, he works as a farmer and an acupuncturist in Phachangnoi Subdistrict, Pong District, Phayao Province. His family migrated from Yunnan Province, China, and settled in Phachangnoi Subdistrict over 200 years ago.

### *Acupuncture knowledge*

Mr. P traveled to China via Laos when he was 15 years old. He received education and training through a student exchange program from a traditional Chinese medicine school in Kunming, Yunnan Province, China. He spent a total of five years studying there. Upon graduation, the school issued him a degree certificate. But Mr. P did not receive the license to practice Chinese medicine since he did not complete the additional year of practical training in the hospital prior to returning to Thailand. When he returned to Thailand, he had to treat patients discreetly. He noted *"in the past, the Thai government did not have a good relationship with China government, so we had to operate discreetly. If the police saw the Acupuncture needles, they would arrest you. During the revolutionary period back then, this was not allowed...if they saw the needles, you would be arrested."*

Subsequently, the Thai Ministry of Public Health organized training programs for traditional Chinese medicine assistants. As stated by the practitioner *"the Public Health Ministry organized programs for Chinese medicine, Thai traditional medicine, and western medicine practitioners. Since I had studied this field, I underwent training to revive acupuncture skills, and they granted me license."*

This was in accordance with Article 6 of the Ministry of Public Health Regulations regarding individuals assigned by government agencies or the National Legislative Assembly to practice the art of healing in the field of traditional Chinese medicine under the supervision of licensed medical practitioners or professional medical personnel, B.E. 2555 (2012). Additionally, Article 6 of the Public Health Regulations concerning individuals working in medical facilities under the law governing medical facilities, who perform the art of healing in the field of traditional Chinese medicine under the supervision of licensed medical practitioners, B.E. 2555 (2012). In 2013, Mr. P received certification from the Ministry of Public Health and completed training as a Chinese medicine assistant at Boromarajonani College of Nursing, Phayao Province. This certification allows him to legally practice Chinese medicine in Thailand. *"The certification from*



*the Thai Ministry enables me to practice acupuncture legally, I have treated patients in numerous provinces across the country, mainly in Chiang Rai, Nan, Phrae, and Tak."*

### ***Diagnostic Procedures***

Mr. P stated that he specialized in managing and rehabilitating health conditions, including hypertension, hypotension, back pain, lumbar pain, leg pain, and intervertebral disc herniation. These conditions are frequently encountered in clinical practice. He elaborated *"the diagnostic process involves observing the tongue and mouth, and palpating the pulse to assess its strength and rhythm. Occasionally, olfactory assessment is also performed."*

### ***Treatment Steps***

Mr. P's patients usually initiated the treatment by contacting the clinic and scheduling an appointment. On the day of the appointment, patients were advised to eat beforehand and to complete the requisite medical documentation upon arrival. Mr. P began with taking an initial medical history, focusing on the presenting symptoms and measuring blood pressure. He noted *"continuous blood pressure monitoring is essential and a standard part of the examination."* Following this, a detailed history and diagnostic evaluation were conducted, including tongue examination, pulse palpation, and assessment of facial expressions and body posture, with occasional olfactory assessment. Based on the confirmed diagnosis, Mr. P mentioned that he then applied appropriate treatment modality.

### ***Acupuncture and Electroacupuncture Techniques***

The treatment modalities that Mr. P used included acupuncture and electroacupuncture. Based on his actual demonstration, regardless of the condition being treated, Mr. P ensured proper hygiene by washing his hands and cleansing the acupuncture sites with alcohol-soaked cotton. The needle size was selected based on the specific points to be treated. He indicated, *"for high blood pressure, we insert needles at Baihui (DU20) and Shenmen (ST7), using a 1 cun needle for the head, left in place for five days, secured with adhesive tape, to be removed by the patient."*

In cases of hypotension, the patient was also positioned supine, with needles inserted in a forward direction, contrasting with the backward direction for hypertension. Mr. P explained, *"the needle orientation differs for high and low blood pressure. For low blood pressure, the needle points backward. For high blood pressure, the needle points forward. The needles are left in place for approximately 15-30 minutes."*

For lumbar disc herniation, Mr. P first diagnosed the condition, noting symptoms such as radiating pain from the back to the legs. He assessed the patient's liver and spleen for deficiency, observing a yellow tongue coating and dental impressions on the tongue. Acupuncture was administered with the patient prone, targeting the intervertebral spaces, Huantiao (GB30), and acupoint on Bladder Meridian of Foot-Taiyang. Mr. P explained further, “*electroacupuncture stimulation is broadly applicable for various conditions, including Lumbar herniated disc disease.*”

### *Guasha*

For Guasha treatment Mr. P discussed that it was typically employed for patients manifesting symptoms of fever and general malaise. Prior to the commencement of this therapy, a comprehensive physical examination of the patient must be conducted to ascertain their overall health status and to facilitate the determination of an appropriate therapeutic posture. He would ensure stringent hygiene practices by thoroughly sanitizing his hands, followed by the application of an alcohol-based solution. Subsequently, a lubricant, such as oil or cream with a viscous consistency, would be applied to the designated treatment area. Mr. P then demonstrated the selection of a Guasha instrument that was most suited to the specific treatment area. The therapy involved repeating strokes (scraping) in the designated area, typically ranging from 20 to 30 strokes per area, or extending over a duration of 10 to 20 minutes.

### *Cupping and Bloodletting*

Prior to performing cupping, Mr. P demonstrated proper hand hygiene. He positioned the patient appropriately, and cleansed the target area for cupping properly. Mr. P then used forceps to hold cotton soaked in 75% alcohol, ignited it, and selected a glass cup of suitable size (large, medium, or small) for the specific area. Flash cupping (quick, non-retentive cupping) was performed initially. Subsequently, oil was applied to the cupped area to facilitate the movement of the cup. For moving cupping, once the cup was suctioned to the skin, Mr. P used both hands or the dominant hand to gently lift and move the cup back and forth. Following this, stationary cupping was applied, wherein the cup remains in place for a designated period. For bloodletting, he integrated cupping with needle pricking. Mr. P explained that the sequence may vary: in some instances, the area is cupped first and then pricked, while in others, it is pricked first and then cupped, based on the treatment protocol. This technique is employed to address conditions such as fever or general malaise. The target skin area was cleansed with alcohol-soaked cotton before pricking and cupping. The cup was left in place for 10–15 minutes.

Mr. P explained that for acupuncture treatments, the standard appointment frequency is once every three days. However, if the patient has severe symptoms and was unable to walk, appointments might be scheduled every other day or daily. For patients with mild symptoms, such as those who recovered after a single acupuncture session and rest, appointments are typically scheduled once a week. For treatments involving Guasha, Cupping, and bloodletting, appointments were generally scheduled once a week. These procedures could only be repeated once the marks from Guasha, scraping, and cupping have healed.

**Table 4** Comparative Analysis of Acupuncture Treatment Approaches: Traditional Healer versus Traditional Chinese Medicine Practitioner

Pathological Condition	Traditional Healer	Traditional Chinese Medicine Practitioner
<b>Hypotension</b>	Shuaigu (GB8)	Baihui (DU20)
	Houding (DU19) a point situated 1 cun distal to Houding (DU19) on both sides Posteriorly 10-15 degrees to the skin surface	Neihuan (PC6) Zusanli (ST36) Baihui 45 degrees to the skin surface; Neihuan, Zusanli 90 degrees to the skin
<b>Hypertension</b>	Baihui (DU20) Shenmen (HT7) a point located 2 cun posterior to Baihui (DU20). Baihui, Shenmen 90 degrees to the skin; a point located 2 cun posterior to Baihui Posteriorly 10-15 degrees to the skin surface	baihui (DU20) Fengci (GB20) Quchi (LI11) hegu (LI4) sanyinjiao (SP6) Baihui 45 degrees to the skin surface; Fengci, Quch, hegu, sanyinjiao 90 degrees to the skin
<b>Lumbar herniated disc</b>	Jiaji (EX-B2) Huantiao (GB30)       90 degrees to the skin	Baliao (BL31-34) Shenshu (BL23) Dachangshu (BL25) Guanyuanshu (BL26) Huantiao (GB30) Yaoyangguan (DU3) Mingmen (DU4) 90 degrees to the skin

## Discussion

This case study provided a thorough analysis of traditional healing practices, specifically acupuncture, among ethnic minority groups in Thailand. Participants' characteristics highlight the community's rural and agrarian nature, low educational levels, and diverse religious practices, providing essential insights for researchers focused on rural demographics and development in Thailand.

A key component of this case study is Mr. P, a 69-year-old traditional healing practitioner with formal Chinese medicine training, who illustrates the intricate interplay between traditional knowledge and formal medical education. His modified acupuncture technique, characterized by fewer points and shallower needle insertion compared to traditional methods, exemplifies the adaptation of Traditional Chinese Medicine (TCM) practices to local contexts. This adaptation may contribute to the high acceptance rate observed in the community. The range of conditions treated by Mr. P, including hypertension, hypotension, and musculoskeletal disorders, indicates that acupuncture is being utilized to address common health concerns in the community.

The treatment methods include a variety of techniques such as acupuncture combined with electrostimulation, cupping, bloodletting and Guasha. For electroacupuncture, Mr. P explained that an electroacupuncture device can be used, where electrodes are attached to the needles. Used rarefaction wave and intensity over a 15–20 minute. This method is particularly effective for conditions like lumbar disc herniation. The electrical currents stimulate nerve function and promote neural regeneration. The therapy helps relax tense muscles and relieve muscle spasms. This is particularly beneficial for conditions like muscle strain, tension headaches, and conditions involving muscle tightness and has anti-inflammatory effects, which can help in the treatment of inflammatory conditions like arthritis. The therapy reduces swelling and alleviates pain associated with inflammation. Additionally, electroacupuncture is employed in the treatment of various neurological disorders, including neuropathy, stroke rehabilitation, and certain types of paralysis.

For Guasha, technique can be broadly classified into two categories: the Light Scraping Method and the Heavy Scraping Method. The Light Scraping Method is generally recommended for elderly patients, individuals with physical frailties, and children. It is also the preferred method for facial treatments. On the other hand, the Heavy Scraping Method is more suitable for robust areas such as the back, waist, and legs, and is typically administered to adolescents and

individuals with a strong physique. Guasha is highly effective in addressing musculoskeletal pain, particularly tension headaches, neck pain, and back pain. It is frequently employed to reduce fever and inflammation, as well as to treat colds and flu. Furthermore, Guasha can enhance skin health by stimulating blood flow and reducing puffiness and inflammation.

Cupping therapy enhances blood flow to the treated areas, which helps in delivering essential nutrients and oxygen to tissues. This improved circulation can accelerate healing and recovery processes. Cupping therapy is employed to alleviate muscle pain in various regions, including the back, shoulders, and knees. Bloodletting is frequently used for patients suffering from Qi stagnation or internal blood stasis, which results in pain. This method has demonstrated significant efficacy in relieving these conditions. Often, athletes use cupping to enhance their performance and speed up recovery from injuries. Cupping therapy helps reduce muscle soreness and improves flexibility. Cupping therapy is extensively utilized for the treatment of muscle pain, joint pain, and stiffness, demonstrating particular efficacy in conditions such as back pain, shoulder pain, and neck pain. It is also beneficial for managing respiratory issues, including bronchitis, asthma, and congestion. Additionally, cupping promotes detoxification by enhancing blood and lymphatic circulation.

This study investigates the treatment methods employed by Mr. P, a traditional healer who specializes in acupuncture. Disease management aligns with the findings of Liu Xiaoli<sup>8,9</sup> which demonstrated the efficacy and safety of acupuncture in treating hypotension. The primary acupuncture points used in this treatment include Baihui, Neiguan and Zusanli (ST36), Yaoyangguan, Mingmen. This study showed positive clinical outcomes and high safety standards, making this method suitable for clinical application.

Moreover, Yan Li<sup>10</sup> addresses hypertension within the framework of Traditional Chinese Medicine (TCM), categorizing it under dizziness and headache. The etiology and pathogenesis are attributed to liver yang hyperactivity, insufficiency of liver and kidney yin deficiency, and the accumulation of phlegm and turbidity, compounded by congenital weakness. TCM treatment involves unblocking the meridians, balancing yin and yang, and nourishing the liver and kidneys.

Additionally, Bedin Korkwin<sup>11</sup> explores the prevalence of intervertebral disc herniation, which results from the degeneration and compression of discs, leading to sciatic pain and numbness along the affected nerve pathways. In TCM, this condition is classified as lumbar pain resulting from bodily weakness and impaired liver and kidney function. Cold and dampness

exacerbate the condition, obstructing the flow of qi and blood, thus causing pain. TCM treatment for this condition includes acupuncture on non-symptomatic sides, along meridians, and at specific tender points in the lumbar region, along with Tui na massage, herbal medicine, and other therapeutic modalities. Additionally, the selection of acupuncture points for treating hypertension, hypotension, and herniated intervertebral discs aligns with contemporary textbooks on acupuncture and moxibustion.

These findings underscore the importance of integrating traditional acupuncture methods into clinical practice, highlighting the congruence between traditional knowledge and contemporary research in effectively and safely treating various conditions.

## Conclusion

This study reveals the acceptance and efficacy of acupuncture in the rural Thai ethnic minority communities and its alignment with traditional Chinese medicine theory. By integrating empirical data with theoretical frameworks, it enhances our understanding of how traditional practices can complement and enrich to contribute to community healthcare, particularly in areas where access to conventional medical services may be limited. The positive outcomes and good acceptance rates validate the potential of TCM as complementary and alternative therapeutic approach, emphasizing the need for continued research and documentation in this field.

## Ethical Approval Statement

This study was reviewed and approved by the Institutional Review Board at University of Phayao, Thailand (UP-HEC 1.3/014/66).

## Author Contributions

PJ, SK, and PPh designed the study, formulated the intervention tools and knowledge questionnaire, and conducted the initial statistical analysis of the data. PJ, PPI, and KS collected the questionnaires. PJ, PR, SK, PPh, PPI, KS, and PT contributed to the drafting of the manuscript. PJ and PR contributed to the critical revisions of the manuscript. All authors read and approved the manuscript prior to the submission for publication.

## Acknowledgements

None

## Source of Funding

None.

## Conflicts of Interest

None.

## References

1. Pachana (Hengboriboonpong) J, Jaidee. Chinese Medicine and Thai Public Health. Burapha University Public Health Journal. 2013 Jul-Dec; 8(2): 118. (In Thai)
2. Bureau of Alternative Medicine. Chinese Medicine. J. Altern Med Res 2013 Jan-Apr;6(1). Available from:  
[https://tcm.dtam.moph.go.th/index.php?option=com\\_content&view=article&id=111:2022-07-25-00-47-21&catid=12&Itemid=154](https://tcm.dtam.moph.go.th/index.php?option=com_content&view=article&id=111:2022-07-25-00-47-21&catid=12&Itemid=154).
3. Ma T. New Generation of Overseas Chinese: A Case Study of Chinese Immigrants in Thailand. Sci Res J;159. Available from: <https://so04.tci-thaijo.org/index.php/ksk/article/view/125923/95305>.
4. Thai Public Health. A Decade of Being a Chinese Medicine Practitioner in Thailand. Report on Thai Traditional Medicine, Folk Medicine, and Alternative Medicine 2011-2013. 2013 Oct;10(6). Available from:  
[https://tpd.dtam.moph.go.th/images/ak/HealthProfile/Thai\\_HP\\_2554-2556/3-Chapter-8.pdf](https://tpd.dtam.moph.go.th/images/ak/HealthProfile/Thai_HP_2554-2556/3-Chapter-8.pdf).
5. National Research Council of Thailand (NRCT). Ethnic Groups in Thailand. 2021 Apr 256. Available from: <https://www.tsri.or.th/>, accessed 24 September, 2023.
6. Health Promotion and Environmental Health Support Information System. Ethnic Population Data in 20 Provinces, Population Density of Ethnic Groups in Pong District. Ethnic Health, Marginalized, and Migrant Health Center. 2016. Available from:  
<https://hhdclampang.anamai.moph.go.th:8080/hhdcdashboard/ethnics>.
7. Registration Administration Bureau, Department of Provincial Administration, Ministry of Interior. Population by District and Sub-district, Phayao Province as of December 2010. National Statistical Office. 2010. Available from:  
<https://stat.bora.dopa.go.th/stat/statnew/statMONTH/statmonth/#/displayData>.
8. Liu XL, Chen YD, Shu QF, Cai M. Clinical observation on the efficacy of acupuncture in treating orthostatic hypotension. In: Proceedings of the 2018 Zhejiang Province Geriatric Medicine Academic Conference; 2018. p. 91. (In Chinese)

9. Bodin Kokawin. Study on the Treatment Methods for Herniated Disc with Chinese Medicine. *Journal of Chinese Medicine in Thailand* 2022 Jul-Dec; 2(1): 275. Available from: <https://he01.tci-thaijo.org/index.php/TJTCM/article/view/260853>. (In Thai)
10. Yanli. *Clinical Use of Acupuncture Points*. Translated by Somchai Chirapinijwong and others. Bangkok: Publisher; 2017. p. 36-37.
11. Bodin Kokawin. Study on the Treatment Methods for Herniated Disc with Chinese Medicine. *Journal of Chinese Medicine in Thailand* 2022 Jul-Dec; 2(1): 275. Available from: <https://he01.tci-thaijo.org/index.php/TJTCM/article/view/260853/17605>.