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SURVEY ON THE NEED FOR APPLICATION OF AURICULAR ACUPUNCTURE IN TREATMENT AT VINH LONG PROVINCIAL TRADITIONAL MEDICINE HOSPITAL

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ABSTRACT

Objective: To assess the demand for auricular acupuncture among patients and the perceived need for applying this technique in treatment among traditional medicine physicians at Vinh Long Provincial Traditional Medicine Hospital

Methods: A descriptive cross-sectional study was conducted on 385 patients and 21 traditional medicine physicians at Vinh Long Provincial Traditional Medicine Hospital from November 2023 to May 2024. Data were collected using a structured questionnaire based on the Health Belief Model (HBM) on a five-point Likert scale and analyzed using Stata 14.2.

Results: A total of 78.2% of patients expressed a desire to receive auricular acupuncture, while 81% of physicians indicated willingness to apply the technique in clinical practice. The main barriers reported by patients included: the method not yet implemented in the hospital (60%), concerns about cost, and mild discomfort. Most physicians (61.9%) believed that the hospital lacked sufficient equipment for implementation; however, two-thirds stated that they would be confident in performing auricular acupuncture if provided with adequate training and professional support.

Conclusion: Both patients and healthcare staff at Vinh Long Provincial Traditional Medicine Hospital demonstrated a high demand for the use and implementation of auricular acupuncture. Strengthening training activities, technical workshops, and infrastructure investment is essential to establishing auricular acupuncture as a routine therapeutic technique in the hospital.

Keywords: Auricular acupuncture, demand, traditional medicine, Health Belief Model.

1. INTRODUCTION

In recent years, the demand for healthcare services using Traditional Medicine (TM) in Vietnam has markedly increased, particularly at provincial and district-level medical facilities. Non-pharmacological interventions—including acupuncture, acupressure, catgut embedding, and electroacupuncture—have become increasingly preferred by the public owing to their advantages of safety, minimal adverse effects, and affordability [1],[2].

Vinh Long Provincial Traditional Medicine Hospital is a grade-II specialized institution under the provincial Department of Health, responsible for providing medical care that integrates Traditional and Modern Medicine. According to the 2022 annual report, the hospital received 26,220 outpatient visits, representing a 1.06% increase compared with 2021, indicating the growing public interest in TM-based treatment [2].

Among various TM techniques, auricular acupuncture (auricular therapy) stands out as a simple, easy-to-apply, and effective method widely implemented in China, Europe, and several Asian countries. Based on neurophysiological mechanisms, this technique is founded on the principle that the auricle reflects the entire body through its neural connections with the vagus and trigeminal nerves [3]. Contemporary studies have demonstrated that auricular acupuncture can modulate autonomic nervous system activity, alleviate pain, improve sleep quality, and support the management of chronic conditions such as obesity, headache, insomnia, and hypertension [4],[5].

In Vietnam, several central and municipal TM hospitals—such as the National Hospital of Traditional Medicine and Hanoi Traditional Medicine Hospital—have introduced auricular acupuncture in the management of chronic pain and sleep disorders, reporting favorable outcomes [6],[7]. However, at the provincial level, including Vinh Long Provincial Traditional Medicine Hospital, this

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technique has not yet been officially integrated into routine clinical practice, thereby limiting patient access to its potential benefits.

Within the national orientation for strengthening Traditional Medicine, articulated in Resolution No. 20-NQ/TW dated October 25, 2017, by the 12th Central Committee of the Communist Party of Vietnam on "Enhancing the protection, care, and improvement of the people's health in the new situation" [8], evaluating the demand for introducing new non-drug interventions such as auricular acupuncture holds significant relevance.

Therefore, this study aimed to assess the demand for auricular acupuncture among patients and the perceived need for its clinical application among traditional medicine physicians at Vinh Long Provincial Traditional Medicine Hospital. The results are expected to provide scientific and practical evidence to support the implementation of auricular acupuncture at the provincial level, thereby enhancing therapeutic effectiveness and improving community health care quality.

2. MATERIALS AND METHODS

2.1. Study design

This was a descriptive cross-sectional study using a structured questionnaire survey, conducted to assess the demand for auricular acupuncture among patients and traditional medicine (TM) physicians at Vinh Long Provincial Traditional Medicine Hospital.

2.2. Study population

Group 1: Patients receiving examination and treatment at Vinh Long Provincial Traditional Medicine Hospital during the study period.

Group 2: TM physicians and practitioners currently working at the hospital.

- Inclusion criteria:

+ Patients aged ≥18 years, able to understand and respond to the questionnaire, and who voluntarily agreed to participate.

+ TM physicians working full-time at the hospital and consenting to participate in the survey.

- Exclusion criteria:

+ Patients in emergency condition or with cognitive impairment preventing questionnaire participation.

+ Medical staff not specialized in TM or absent during the data collection period.

2.3. Study period and setting

The study was conducted from November 2023 to May 2024 at Vinh Long Provincial Traditional Medicine Hospital.

2.4. Sample size and sampling method

- Patients: The sample size was calculated using the formula for estimating a single proportion, with p = 0.5 (due to lack of prior data), allowable error d = 0.05, and a 95% confidence level, resulting in n = 385.

- Physicians: All 21 TM physicians currently working at the hospital were invited to participate.

- Sampling method: Convenience sampling was applied at the time of the survey.

2.5. Research instrument and variables

A structured questionnaire was designed with four sections:

- (A) Demographic and personal characteristics

- (B) Current practice and experience with auricular acupuncture

- (C) Health beliefs regarding auricular acupuncture demand, based on the Health Belief Model (HBM) with four components: perceived susceptibility, perceived benefits, perceived barriers, and cues to action

- (D) Demand for auricular acupuncture application HBM-related items were rated using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

- Primary variable: Demand for auricular acupuncture.

- Secondary variables: Gender, age, occupation, previous use of auricular acupuncture, and perceptions of benefits and barriers.

2.6. Data processing and analysis

Data were coded and entered using EpiData 4.6, and analyzed with Stata 14.2. Qualitative variables were presented as frequencies and percentages; quantitative variables were summarized as means ± standard deviations (SDs). The statistical significance level was set at $p < 0.05$ (for comparative tests).

2.7. Ethical considerations

The study protocol was reviewed and approved by the Ethics Committee in Biomedical Research, University of Medicine and Pharmacy at Ho Chi Minh City (Approval No. 1115/HĐĐĐ-ĐHYD, dated November 13, 2023). All participants were informed of the study objectives and provided voluntary consent. Data were kept confidential and used solely for scientific purposes.

3. RESULTS

3.1. General characteristics of study participants

Table 1. General characteristics of study participants

Study population			
Characteristic Category		**Frequency (n)**	**Percentage (%)**
Patients (n= 385)			
Gender	Male	134	34,8
	Female	251	65,2
Age group	< 60 years	228	59,2
	≥ 60 years	157	40,8

Study population			
Characteristic Category		Frequency (n)	Percentage (%)
Occupation	Self-employed/trader	206	53,5
	Others	134	34,8
	Laborer	28	7,3
	Office employee	10	2,6
	Government staff	7	1,8
Education level	Illiterate	11	2,9
	Primary school	82	21,3
	Secondary school	146	37,9
	High school	113	29,4
	Vocational college/ university/ postgraduate	33	8,6
Health insurance	Yes	376	97,7
	No	9	2,3
Place of residence	Vinh Long Province	371	96,4
	Other Provinces	14	3,6
Traditional Medicine physicians (n=21)			
Gender	Male	9	42,9
	Female	12	57,1
Professional qualification	Physician assistant	0	0
	Physician	17	81
	Specialist Physician level 1	4	19
	Specialist Physician level II	0	0
	Master degree	0	0
Years of service	< 1,5 years	1	4,8
	1,5 – 5 years	9	42,9
	> 5 years	11	52,3

Among 385 patients, females accounted for 65.2%, with a mean age of 61.8 ± 11.2 years. Most were self-employed or informal laborers (53.5%) and had educational levels ranging from primary to high school (88.6%). Among 21 Traditional Medicine physicians, 57.1% were female, most held a general physician degree (81%), and 52.3% had over 5 years of professional experience.

3.2. Current practice of auricular acupuncture

Table 2. Current practice of auricular acupuncture

Study population	Response	Frequency (n)	Percentage (%)
Patients (n=385)	Yes	33	8,6
	No	352	91,4
TM physicians (n=21)	Yes	6	28,6
	No	15	71,4

Only 8.6% of patients had previously received auricular acupuncture treatment. Among Traditional Medicine physicians, 71.4% reported no prior clinical experience using this technique.

3.3. Health Beliefs and Demand for Acupuncture

Table 3. Health Beliefs Regarding the Demand for Auricular Acupuncture among Patients

Health belief dimension	Percentage (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Perceived susceptibility					
Cannot recover from illness	3,9	15,8	66,0	12,2	2,1
Unable to improve health	4,2	15,3	69,1	9,9	1,6
Unable to prevent disease	4,4	16,1	68,1	9,6	1,8
Perceived benefits					
Auricular acupuncture enhances treatment effectiveness	0,5	1,6	45,2	36,9	15,8
Auricular acupuncture shortens treatment duration	0,5	1,6	46,2	31,7	20,0
Perceived barriers					
Auricular acupuncture is costly	2,3	19,0	67,3	10,1	1,3
Auricular acupuncture causes pain	2,1	18,2	64,7	13,5	1,6
Auricular acupuncture is ineffective	2,1	17,4	69,1	9,1	2,3

Health belief dimension	Percentage (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Auricular acupuncture is not available at the hospital	0,5	6,0	24,9	33,5	35,1
Perceived self-efficacy					
Confident in using auricular acupuncture	0,2	7,8	15,6	46,2	30,1
Cues to action					
Physician recommendation	0,3	5,4	12,2	34,5	47,5
Family recommendation	0,5	5,4	12,2	37,4	44,4
Health insurance coverage	0,3	5,2	11,9	33,8	48,8

Table 4. Health Beliefs Regarding the Demand for Auricular Acupuncture among Traditional Medicine Physicians

Health belief dimension	Percentage (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Perceived susceptibility					
No improvement in professional skills	0	14,3	42,9	38,1	4,7
Unable to provide effective treatment	0	33,3	47,6	19,1	0
Perceived benefits					
Improves treatment effectiveness	0	0	23,8	61,9	14,3
Shortens treatment duration	0	0	33,3	52,4	14,3
Perceived barriers					
Doubt about effectiveness	4,8	47.6	33,3	14,3	0
Doubt about safety	14,3	47,6	33,3	4,7	0
Lack of training	0	4,8	33,3	57,1	4,7
Concern about training cost	0	23,8	47,6	28,6	0
Lack of hospital equipment	0	14,3	28,6	52,4	4,7
Self-efficacy					
Confident in performing auricular acupuncture	0	14,3	23,8	61,9	0
Cues to action					
Participation in training programs	0	14,3	52,4	33,3	0
Adequate hospital facilities	0	19,1	47,6	33,3	0

The findings revealed that more than half of the patients (52.7%) believed auricular acupuncture could enhance treatment outcomes. In comparison, approximately 60% identified the unavailability of this technique within the hospital as the primary barrier to access. A considerable proportion (82%) expressed willingness to receive auricular acupuncture if it were recommended by physicians and covered by health insurance, highlighting the importance of professional guidance and financial support in promoting treatment acceptance.

Among Traditional Medicine physicians, 61.9% reported confidence in performing auricular acupuncture after appropriate training, indicating a high level of readiness for clinical implementation. However, the most frequently cited barriers included the lack of necessary medical equipment (61.9%) and insufficient professional training (57.1%), underscoring the need for institutional investment and capacity-building programs to facilitate broader adoption of this non-pharmacological therapy.

3.4. Overall demand for auricular acupuncture

Table 5. Overall Demand for Auricular Acupuncture

Study population	Response	Frequency (n)	Percentage (%)
Patients (n=385)	Yes	301	78,2
	No	84	21,8
TM Physicians (n=21)	Yes	17	81
	No	4	19

A total of 78.2% of patients expressed a demand for auricular acupuncture, while 81% of physicians indicated a willingness to implement the technique.

4. DISCUSSION

The findings of this study demonstrate a high demand for auricular acupuncture at Vinh Long Provincial Traditional Medicine Hospital, with 78.2% of patients expressing a desire to receive treatment with this technique. This proportion is notably higher than the 65% reported by Nguyen Thi Thuy Hang (2019) at Hanoi Traditional Medicine Hospital [6]. The difference reflects an increasing public interest in non-pharmacological Traditional Medicine (TM) therapies in recent years, particularly in the Mekong Delta region.

The proportion of patients expressing demand for auricular acupuncture in this study is consistent with the results of Ying et al. (2015), who reported that over 75% of insomnia patients in China were willing to undergo auricular acupuncture due to its safety, convenience, and high efficacy [4]. Similarly, a study by Park et al. (2021) in Korea indicated a high level of acceptance of auricular therapy—especially among patients with chronic pain and sleep disorders attributed to the availability of structured training and insurance coverage for this technique [9].

Among healthcare providers, 81% of TM physicians in this study expressed readiness to implement auricular acupuncture, demonstrating strong professional interest and potential for clinical integration. This aligns with the findings of Tran Thi Thu Ha (2022) at Ho Chi Minh City Traditional Medicine Hospital, where 83% of TM practitioners agreed that formal training in auricular acupuncture would enhance the quality of non-drug therapeutic services [10].

According to the Health Belief Model (HBM), treatment acceptance behaviors are influenced by perceived susceptibility, perceived benefits, perceived barriers, and cues to action. The present study found that patients generally held positive beliefs regarding the benefits of auricular acupuncture—over 50% agreed that it could improve treatment outcomes and shorten recovery time. The main perceived barriers were the lack of availability of the technique at the hospital (60%) and concerns about cost or mild pain during application. These findings are consistent with the conclusions of Rosenstock (1974) and Glanz (2008), which emphasize that "belief in efficacy and physician support are the strongest predictors of health behavior adoption" [11],[12].

For healthcare staff, the primary barriers identified were the shortage of technical equipment and formal training, while key facilitating factors included institutional support and opportunities for continuing education. This aligns with Zhao et al. (2020) in China, who reported that implementing standardized training and technical guidance significantly increased the adoption of auricular therapy at grassroots TM hospitals to over 70% [13].

Overall, this study has substantial practical implications, highlighting both patient and clinician readiness to integrate auricular acupuncture into clinical practice. The findings provide scientific and empirical evidence supporting the introduction of this technique at the provincial level, consistent with the Ministry of Health's policy orientation to "diversify non-pharmacological therapeutic methods" within the Vietnamese healthcare system [1]. The adoption of auricular acupuncture could improve the management of chronic pain, insomnia, and other long-term conditions, while reducing dependence on pharmacotherapy—thereby enhancing public health and lowering healthcare costs.

Nevertheless, the study's cross-sectional design limits its ability to establish causal relationships between demographic factors and demand for auricular acupuncture. Moreover, the HBM-based questionnaire has not yet undergone reliability validation (Cronbach's alpha), which may affect measurement precision. As the study was confined to a single provincial hospital, the findings cannot be generalized to the entire Mekong Delta region. However, the research provides a valuable baseline for future interventional and implementation studies on auricular acupuncture within Vietnam's TM healthcare system.

5. CONCLUSION AND RECOMMENDATIONS

The study revealed a high demand for auricular acupuncture at Vinh Long Provincial Traditional Medicine Hospital, with 78.2% of patients expressing interest in the technique and 81% of TM physicians willing to implement it. These findings reflect a growing trend toward adopting safe, non-pharmacological treatment methods within the local healthcare system.

Most patients reported positive perceptions of auricular acupuncture's effectiveness, while the main barriers identified were a lack of equipment and technical training. Therefore, it is recommended that the hospital organize professional training programs, invest in specialized instruments, and propose the inclusion of auricular acupuncture in the provincial technical procedure list covered by the national health insurance scheme to enhance patient access.

This study provides both scientific and practical evidence supporting the implementation of auricular acupuncture at the provincial level, contributing to improved treatment quality, reduced healthcare costs, and enhanced community health outcomes—consistent with the strategic direction of the Ministry of Health of Vietnam.

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