

# PRELIMINARY SURVEY ON THE DEMAND FOR FACIAL REJUVENATION THREAD-EMBEDDING THERAPY IN TRADITIONAL MEDICINE

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Received: 12/11/2025

Revised: 12/12/2025; Accepted: 20/12/2025

## ABSTRACT

**Objective:** To conduct a preliminary survey on the demand for the application of facial rejuvenation thread-embedding therapy in Traditional Medicine among patients and Traditional Medicine physicians at Can Tho Traditional Medicine Hospital.

**Methods:** A cross-sectional descriptive study was performed on 385 patients and 30 Traditional Medicine physicians at Can Tho Traditional Medicine Hospital from November 2023 to May 2024. Data were collected using a structured questionnaire based on the Health Belief Model (HBM) and analyzed with SPSS version 20.0.

**Results:** A total of 65.7% of patients and 86.7% of Traditional Medicine physicians expressed demand for facial rejuvenation thread-embedding therapy. Patients mainly valued the method's safety (54.5%) and rejuvenation effectiveness (73.8%), while the primary barrier was the high treatment cost (29.7%). For physicians, the primary barrier was the lack of specialized training (100%), although most were confident and willing to implement the method if provided with adequate professional support.

**Conclusion:** Both patients and Traditional Medicine physicians perceive facial rejuvenation thread-embedding therapy as a feasible and valuable technique for health enhancement and aesthetic care in Traditional Medicine. Further efforts should focus on technical training, procedural standardization, and interventional clinical studies to promote broader community implementation.

**Keywords:** Thread-embedding therapy, facial rejuvenation, Traditional Medicine, application demand.

## 1. INTRODUCTION

The demand for beauty enhancement and skin rejuvenation is rapidly increasing in modern society, particularly among middle-aged women. According to the International Society of Aesthetic Plastic Surgery (ISAPS, 2017), the total number of cosmetic procedures worldwide increased by 9% compared to the previous year, reflecting a growing preference for safe and effective methods to improve physical appearance [1].

In Traditional Medicine, beauty care is regarded as part of the holistic approach to harmonizing qi and blood, balancing yin and yang, and nourishing both mind and body. Among various techniques, thread-embedding acupuncture (TEA) integrates traditional acupuncture with modern absorbable suture materials. This technique provides prolonged biological stimulation at acupoints, thereby enhancing blood circulation, promoting collagen

regeneration, and improving skin firmness [2][3].

Numerous studies, conducted both domestically and internationally, have demonstrated the rejuvenating and facial-lifting effects of TEA. The method is considered safe, minimally invasive, and associated with a short recovery time [4][5]. In Vietnam, TEA has been mainly used to treat chronic diseases. At the same time, its use for aesthetic and rejuvenation purposes remains limited, with little data available on actual demand among patients and Traditional Medicine physicians.

Therefore, this study titled "Preliminary Survey on the Demand for Facial Rejuvenation Thread-Embedding Therapy in Traditional Medicine" was conducted to provide foundational information for developing Traditional Medicine-based aesthetic and healthcare services at clinical facilities.

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## 2. METHODS

### 2.1. Study design

A cross-sectional descriptive study was conducted to assess the demand for facial rejuvenation thread-embedding therapy in Traditional Medicine.

### 2.2. Study site and period

The study was carried out at Can Tho Traditional Medicine Hospital from November 2023 to May 2024.

### 2.3. Study subjects

Participants included patients receiving medical consultation or treatment and Traditional Medicine physicians working at the hospital during the study period.

- Inclusion criteria: Participants who consented to join the study and completed the questionnaire.

- Exclusion criteria: Participants who declined participation or provided incomplete information.

### 2.4. Sample size and sampling method

- Patients: The sample size was calculated using the single-proportion formula with  $p = 0.5$ , margin of error  $d = 0.05$ , and a 95% confidence level, resulting in  $n = 385$ .

- Physicians: All 30 Traditional Medicine physicians present during the study period were included.

- Sampling method: convenience sampling.

### 2.5. Data collection tools and procedure

Data were collected using a structured questionnaire consisting of four sections: personal information, current practice, health beliefs (based on the Health Belief Model – HBM), and perceived demand for TEA application. Responses were measured using a 5-point Likert scale to assess participants' level of agreement.

### 2.6. Data processing and analysis

Data were coded and analyzed using SPSS version 20.0, with descriptive statistics (frequencies and percentages).

### 2.7. Ethical considerations

The study protocol was approved by the Ethics Committee in Biomedical Research – University of Medicine and Pharmacy at Ho Chi Minh City (Approval No. 1117/HĐĐĐ-ĐHYD, dated November 13, 2023).

## 3. RESULTS

### 3.1. General characteristics of the study population

Table 1. General characteristics of the study population

Study population			
Characteristic		Frequency (n)	Percentage (%)
Patients (n= 385)			
Gender	Male	168	43,6
	Female	217	56,4

Study population			
Characteristic		Frequency (n)	Percentage (%)
Age group	25 – 34 years	13	3,4
	35 – 75 years	372	96,6
Ethnicity	Kinh	380	98,7
	Hoa	1	0,3
	Khơ-me	4	1
	Other	0	0
Occupation	Farmers	63	16,4
	Government employees/ Office workers	86	22,3
	Factory workers	32	8,3
	Housewives	105	27,3
	Small business owners	45	11,7
	Other	54	14,0
Education level	No schooling/ illiterate	0	0
	Primary school	95	24,7
	Secondary school	134	34,8
	High school	55	14,3
	Graduate/ Postgraduate	101	26,2
Traditional Medicine physicians (n=30)			
Gender	Male	11	36,7
	Female	19	63,3
Ethnicity	Kinh	30	100
	Hoa	0	0
	Khơ-me	0	0
	Other	0	0
Professional qualification	Medical doctor	17	56,7
	Specialist level I	12	40,0
	Specialist level II	1	3,3
	Master's degree	0	0

Study population			
Characteristic		Frequency (n)	Percentage (%)
Years of experience	< 1,5 years	3	10,0
	1,5 – 5 years	12	40,0
	> 5 years	15	50,0

The study was conducted on 385 patients and 30 Traditional Medicine physicians at Can Tho Traditional Medicine Hospital.

Among the patient group, females accounted for 56.4%, with the majority aged 35–75 years (96.6%), and most belonging to the Kinh ethnic group (98.7%). The most common occupations were housewives (27.3%) and civil servants or office workers (22.3%). Regarding education level, most participants had completed secondary school (34.8%), followed by university or postgraduate education (26.2%).

For the group of Traditional Medicine physicians, 63.3% were female, and all participants belonged to the Kinh ethnic group. In terms of qualifications, general

practitioners accounted for 56.7%, and Specialist Level I physicians for 40.0%. Notably, 50% of the physicians had more than 5 years of professional experience.

### 3.2. Current practice of facial rejuvenation thread-embedding therapy

Table 2. Current practice of facial rejuvenation thread-embedding therapy

Study population	Characteristic	Frequency (n) (M/F)	Percentage (%) (M/F)
Patients (n=385)	Yes	0	0
	No	168/217	100/100
Traditional Medicine physicians (n=30)	Yes	0	0
	No	11/19	100/100

Neither the patients nor the Traditional Medicine physicians (100%) had ever used or implemented facial rejuvenation thread-embedding therapy at the time of the study. This finding indicates that the technique had not yet been introduced into clinical practice at the hospital.

### 3.3. Health beliefs of patients regarding thread-embedding therapy

Table 3. Health beliefs associated with the demand for facial rejuvenation thread-embedding therapy among patients (n = 385)

Health beliefs	Percentage (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Perceived susceptibility</b>					
Sun exposure causes skin aging	0	0	23,6	57,4	19,0
Aging (age) causes skin aging	0	0	1,3	70,9	27,8
Staying up late contributes to skin aging	0	8,6	47,0	37,7	6,8
<b>Perceived severity</b>					
Skin aging reduces aesthetic appearance	0	0	2,9	62,6	34,5
Skin aging reduces self-confidence	0	2,9	19,5	67,5	10,1
Skin aging affects work performance	0	6,5	21,0	54,3	18,2
<b>Perceived benefits</b>					
Thread-embedding is a safe and minimally invasive method	0	2,1	43,4	52,7	1,8
Thread-embedding improves skin aging and reduces wrinkles	0	0,3	26,0	68,6	5,2
<b>Perceived barriers</b>					
Thread-embedding is costly	1,0	24,4	44,9	29,4	0,3
Thread-embedding is painful	2,1	39,2	45,5	13,2	0
Doubt about treatment effectiveness	3,4	72,2	23,9	0,5	0
<b>Acceptance of facial thread-embedding therapy</b>					
Confidence in using facial rejuvenation thread-embedding therapy	0	7,3	29,6	59,5	3,6

Health beliefs	Percentage (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>Motivators for using facial thread-embedding therapy</b>					
Recommendation from family or acquaintances	3,6	57,7	28,8	9,9	0
Physician recommendation	0	3,6	27,0	45,2	24,2
Covered by health insurance	0	3,4	28,3	28,3	40,0

The majority of patients agreed that aging (98.7%) and sun exposure (76.4%) are the primary causes of skin aging. A total of 97.1% believed that aged skin reduces aesthetic appearance and negatively affects self-confidence.

Approximately 73.8% of patients perceived thread-embedding therapy as an effective method for skin rejuvenation, and 54.5% considered it a safe and minimally invasive technique. However, 29.7% identified treatment cost as the main barrier, whereas 60% reported being willing to use the method if advised by a physician.

### 3.4. Health beliefs and attitudes of Traditional Medicine physicians

**Table 4. Health beliefs associated with the demand for facial rejuvenation thread-embedding therapy among Traditional Medicine physicians (n = 30)**

Health beliefs	Percentage ( %)				
	Strongly disagree	Disagress	Neutral	Agree	Strongly agree
<b>Perceived severity</b>					
Lack of awareness of an additional treatment method	10,0	23,3	23,3	36,7	6,7
Inability to attract patients seeking facial rejuvenation	3,3	20,0	43,3	23,3	10,0
<b>Perceived benefits</b>					
Gaining knowledge of an additional treatment method	0	0	10,0	73,3	16,7
Enhancing the effectiveness of facial rejuvenation treatment	0	0	20,0	66,7	13,3
<b>Perceived barriers</b>					
Doubt about treatment effectiveness	6,7	56,7	23,3	13,3	0
Lack of professional training	0	0	0	80,0	20,0
Hospital lacks available equipment	6,7	16,7	23,3	50,0	3,3
<b>Acceptance of facial thread-embedding therapy</b>					
Confidence in performing facial rejuvenation thread-embedding	0	10,0	33,3	40,0	16,7
<b>Motivating factors for using facial thread-embedding therapy</b>					
Patients have demand for the technique	0	0	10	63,3	26,7
The hospital has adequate conditions for implementation	0	0	3,3	60,0	36,7

Among Traditional Medicine physicians, 86.7% agreed that thread-embedding therapy enhances the effectiveness of facial rejuvenation treatment, and 90% believed that patients have a high demand for this method. However, 100% of the physicians identified the lack of training or specialized education in aesthetic thread-embedding techniques as the most significant barrier. Despite this, more than 50% reported that they felt confident and willing to implement the method if provided with appropriate professional support and equipment.

### 3.5. Demand for the application of facial rejuvenation thread-embedding therapy

**Table 5. Demand for facial rejuvenation thread-embedding therapy**

Study population	Characteristic	Frequency (n)	Percentage (%)
Patients (n=385)	Yes	253	65,7
	No	132	34,3
Traditional Medicine physicians (n=30)	Yes	26	86,7
	No	4	13,7

The survey results indicated that 65.7% of patients expressed a demand for facial rejuvenation thread-embedding therapy, while 86.7% of Traditional Medicine physicians reported a desire to implement and practice this technique. These findings demonstrate a high level of interest and demand from both groups regarding the application of thread-embedding therapy in facial skin care and rejuvenation.

## 4. DISCUSSION

The present study aimed to assess the demand for facial rejuvenation thread-embedding therapy in Traditional Medicine among patients and physicians, thereby providing a foundation for the development of Traditional Medicine-based health and aesthetic care services in the community.

Results revealed that 65.7% of patients and 86.7% of Traditional Medicine physicians expressed interest in this therapy. The high proportion reflects a broader societal trend toward aesthetic and rejuvenation procedures. According to the International Society of Aesthetic Plastic Surgery (ISAPS, 2017), the number of cosmetic interventions worldwide increased by 9% compared with the previous year, highlighting the growing demand for safe and minimally invasive aesthetic techniques [1].

In Traditional Medicine, thread embedding acupuncture (TEA) is a technique that integrates classical acupuncture with modern absorbable suture materials. The procedure provides sustained biological stimulation at acupoints, promotes circulation of qi and blood, stimulates collagen regeneration, and enhances skin firmness [2]. Numerous domestic and international studies have demonstrated the efficacy of this method for facial rejuvenation and lifting. Yun and Choi (2017) reported that polydioxanone (PDO) thread embedding significantly improved skin elasticity and sagging with minimal adverse effects [3]. In Vietnam, Pham Thi Binh Minh and Trinh Thi Dieu Thuong (2023) also confirmed the wrinkle-reducing effects of PDO thread embedding on the nasolabial folds,

emphasizing its safety and short recovery time [4].

Our findings indicate that patients have a positive awareness of skin aging. The majority recognized age (98.7%) and sun exposure (76.4%) as the main contributing factors. Over 70% believed that TEA is effective for rejuvenation, and more than half regarded it as a safe and minimally invasive technique. However, 29.7% expressed concerns about treatment costs—consistent with observations in previous studies [4].

Among Traditional Medicine physicians, most considered TEA to have strong clinical potential; yet, the primary barrier was the lack of specialized training and technical facilities (100%). This finding aligns with Unal et al. (2021), who emphasized that optimal outcomes in thread-embedding therapy depend on professional training and strict aseptic technique [5].

From a practical standpoint, the results suggest that implementing TEA for facial rejuvenation is feasible at provincial-level Traditional Medicine hospitals, provided that training and technical guidance are available. This direction corresponds with the modernization goals of Traditional Medicine—advancing toward comprehensive healthcare that not only treats diseases but also promotes health maintenance and quality of life through integrative wellness and aesthetic medicine approaches [2].

Overall, this preliminary study provides baseline data to inform the development of aesthetic thread-embedding models within Traditional Medicine. Future studies should include controlled clinical interventions to evaluate efficacy and safety, thereby contributing to the standardization and broader clinical application of this method in community healthcare systems.

## 5. CONCLUSION AND RECOMMENDATIONS

The study demonstrated that the majority of patients (65.7%) and Traditional Medicine physicians (86.7%) expressed strong demand for facial rejuvenation thread-embedding therapy. The technique was evaluated as safe, effective, and well-aligned with current trends toward minimally invasive beauty treatments in Traditional Medicine. The main barriers identified were high treatment costs among patients and insufficient specialized training among physicians.

To meet the growing clinical and societal demand, it is essential to: Strengthen specialized training programs in aesthetic thread-embedding for Traditional Medicine physicians. Standardize clinical procedures and establish technical guidelines to ensure safety and efficacy. Conduct additional controlled interventional studies to validate therapeutic outcomes and safety profiles further.

The integration of this technique into Traditional Medicine practice may contribute to the expansion of a holistic health-care model that unites treatment, prevention, and aesthetic rejuvenation, embodying the modern evolution of Traditional Medicine.

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