




## Evaluation of Physicians' Knowledge and Attitudes about Neural Therapy

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12

### ABSTRACT

**Aim:** In this study, we aimed to evaluate the knowledge and attitudes of physicians about Neural Therapy (NT).

**Methods:** This single-center, descriptive study included 265 physicians. A questionnaire consisting of questions on the knowledge and attitudes of physicians about NT as well as demographic data was applied face-to-face. SPSS 15.0 program was used. Values with  $p < 0.05$  were considered statistically significant.

**Results:** From the results of the study, 196 physicians (74.00%) knew about NT. The mean age of doctors who knew about NT was  $36.07 \pm 10.72$  (minimum: 24, maximum: 62). When asked about the clinical conditions for which they think NT application is effective, they gave the answers: low back pain, neck-shoulder pain, fibromyalgia and headache.

**Conclusions:** Three-quarters of the physicians stated that they knew about NT. The fact that the majority of those who didn't know about NT wanted to receive education on NT shows that physicians are open to learning about this subject.

**Keywords:** Attitude, complementary medicine, knowledge, neural therapy, traditional medicine

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## Introduction

The term "Complementary and Alternative Medicine" (CAM) encompasses a variety of therapeutic methods and techniques based on traditional, philosophical and empirical systems of medicine that address health and disease in the context of the human body, mind and spirit (1). Neural therapy (NT) is a holistic treatment method based on normalization of body functions as a result of re-regulation of the organism by stimulating the neurovegetative system through local anesthetic injection (2).

Neural Therapy indications include functional disorders, inflammatory diseases, and acute and chronic pain (3,4). Developed in the first half of the 1900s (5–7), NT is an injection therapy designed to repair dysfunction of the autonomic nervous system, exerting its effects by restoring the electrical state of cells and nerves (8,9). Identification of injection sites depends on the findings of a conventional medical assessment in the context of referred pain, dermatomes, regional influence of autonomic ganglia and defined intervention sites (6–8).

The lack of knowledge caused by the lack of medical education curriculum may cause physicians to be prejudiced about CAM. Individuals who want to have CAM do not consult physicians on this issue and this causes them to apply CAM with hearsay information, which may increase the risk of complications that may occur. This situation is valid for NT, and this study was conducted to evaluate the knowledge and attitudes of physicians about NT.

## Methods

### *Participants*

Physicians who worked actively at SBU Şişli Hamidiye Etfal Training and Research Hospital between

09/09/2019-09/10/2019 and applied to the Employee Health Polyclinic for any reason were included in the study. Our study was single-centered and descriptive. The sample size was 265 out of 857 physicians with 95% confidence. This research was approved by the ethics committee of Şişli Hamidiye Etfal Training and Research Hospital, dated 03/09/2019 and numbered 1329.

### **Data collection tools**

A data collection form consisting of 14 questions developed by the researchers in light of the literature was used. The form included demographic data such as age, gender, title and years of work in the profession, as well as questions on knowledge and attitudes about NT. The questionnaire was administered face-to-face after consent was obtained.

### **Statistical analysis**

The SPSS 15.0 program was used in the study. Descriptive statistics, numbers and percentages are given for categorical variables, and mean, standard deviation, minimum and maximum are given for numerical variables. Comparisons between two independent groups were done when the numerical variables met the normal distribution condition, and with the Mann Whitney U test when they did not meet the normal distribution condition. Rates in independent groups were compared with Chi-Square analysis. Values with  $p < 0.05$  were considered statistically significant.

## Results

The mean age of the physicians participating in the study was  $36.83 \pm 10.656$  years (minimum: 24-maximum: 62). The proportion of female physicians was 63.00% ( $n=102$ ). 118 (44.5%) physicians were in their first 5 years in their profession. For the question,

"What treatments do you know about in complementary medicine?", NT (n=196; 74.00%) was the second most common answer given by the physicians, after acupuncture (n=197; 74.30%) (Figure 1). The mean age of 196 physicians who knew about NT was 36.07±10.72 (minimum: 24, maximum: 62). Of the physicians who declared that they knew about NT, 36.20% (n=71) were specialist physicians. Female physicians were in the majority (n=128;

65.30%) and the vast majority of physicians (n=95; 48.50%) were in their first 5 years in their profession. The answers to the question "How do you know about NT?" are given in Figure 2.

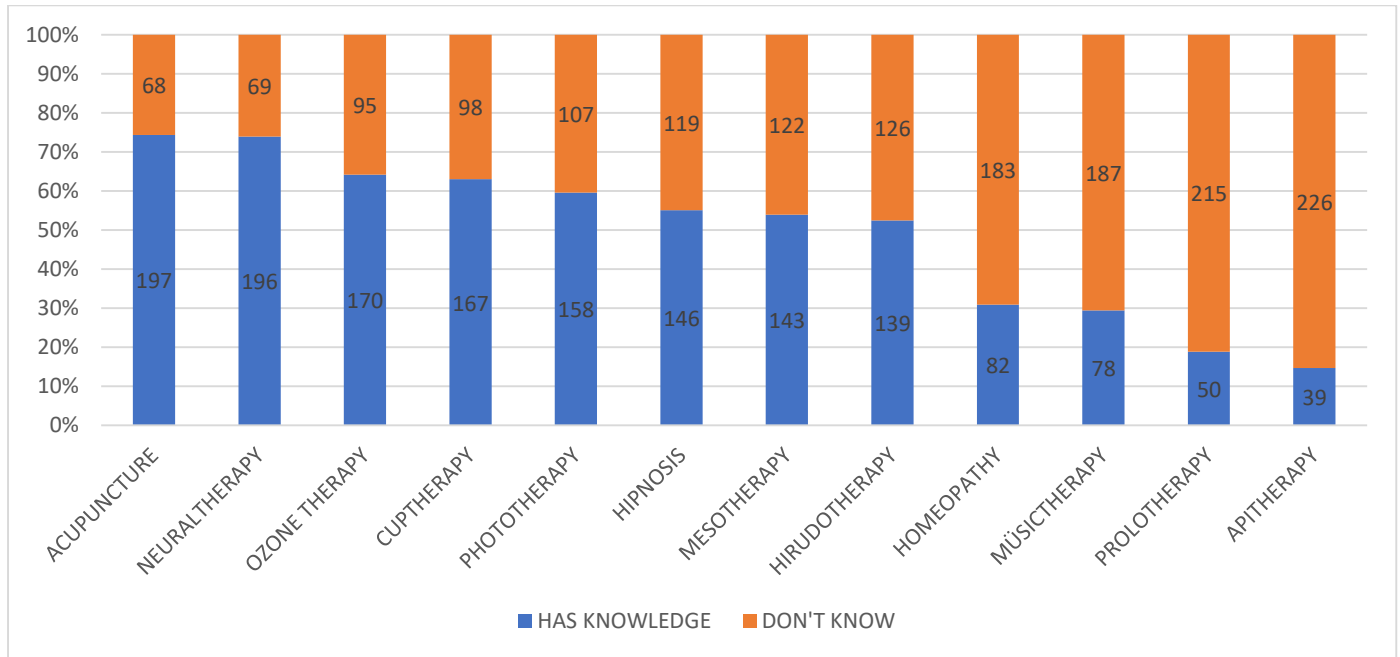


Figure 1: Participants' knowledge of complementary and alternative medicine practices

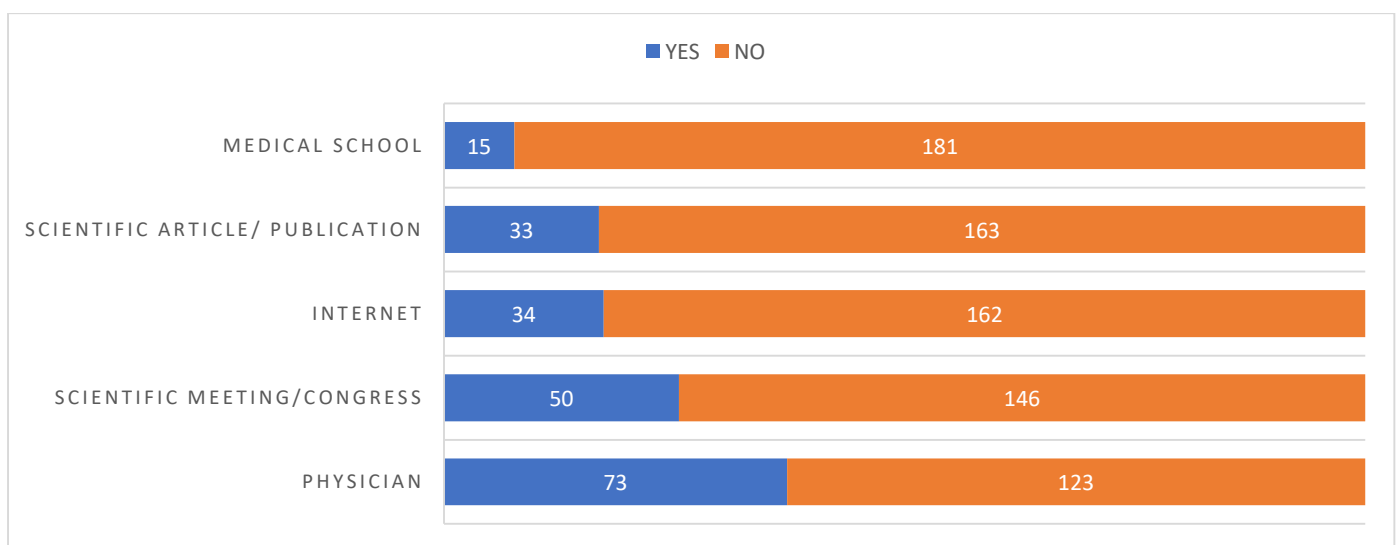


Figure 2: Information sources on neural therapy

The rate of physicians who answered "Yes" to the question "Would you like to apply NT to your patients if you had the opportunity to receive training?" was 83.00% (n=220). The rate of physicians who answered "Yes" to the question "Would you allow NT to be applied to yourself?" was 80.80% (n=214). Being in the first 5 years of their profession and knowing about NT were statistically significant (p=0.028). For those who did not know about NT, it was statistically significant that there was a high rate of answering "Yes" to the question "Would you like to apply NT to your patients if you had the opportunity to receive training?" (p=0.033). No significant

relationship was found between NT, gender and title. The relationship between physicians' knowledge of NT and sociodemographic data is given in Table 1. 44.90% (n=88) knew that NT was injection therapy; 44.40% (n=87) used local anesthetics; 59.20% (n=116) of physicians knew that NT regulated the vegetative nervous system. When physicians (196 physicians with knowledge about NT) were asked about the clinical conditions in which they thought NT application was effective they responded with low back pain, neck-shoulder pain, fibromyalgia and headache (Figure 3).

Table1: Neural therapy knowledge and sociodemographic data relationship

Neural Therapy (n=265)		Don't Know		Know		P value
		n	%	n	%	
<b>Gender</b>	<b>Male</b>	30	30.6	68	69.4	0.194
	<b>Female</b>	39	23.4	128	76.6	
<b>Professional Title</b>	<b>Specialist physician</b>	31	30.4	71	69.6	0.201
	<b>General practitioner</b>	38	23.3	125	76.7	
<b>Time working in the occupation</b>	<b>0-5 years</b>	23	19.5	95	80.5	<b>0.028</b>
	<b>5-10 years</b>	6	18.8	26	81.2	
	<b>10-20 years</b>	19	39.6	29	60.4	
	<b>Over 20 Years</b>	21	31.3	46	68.7	

<b>If you had the opportunity to receive training, would you like to apply neural therapy to your patients?</b>	<b>Yes</b>	63	28.6	157	71.4	<b>0.033</b>
	<b>No</b>	6	13.3	39	86.7	
<b>Would you allow NT to be applied to yourself</b>	<b>Yes</b>	58	27.1	156	72.9	0.418
	<b>No</b>	11	21.6	40	78.4	

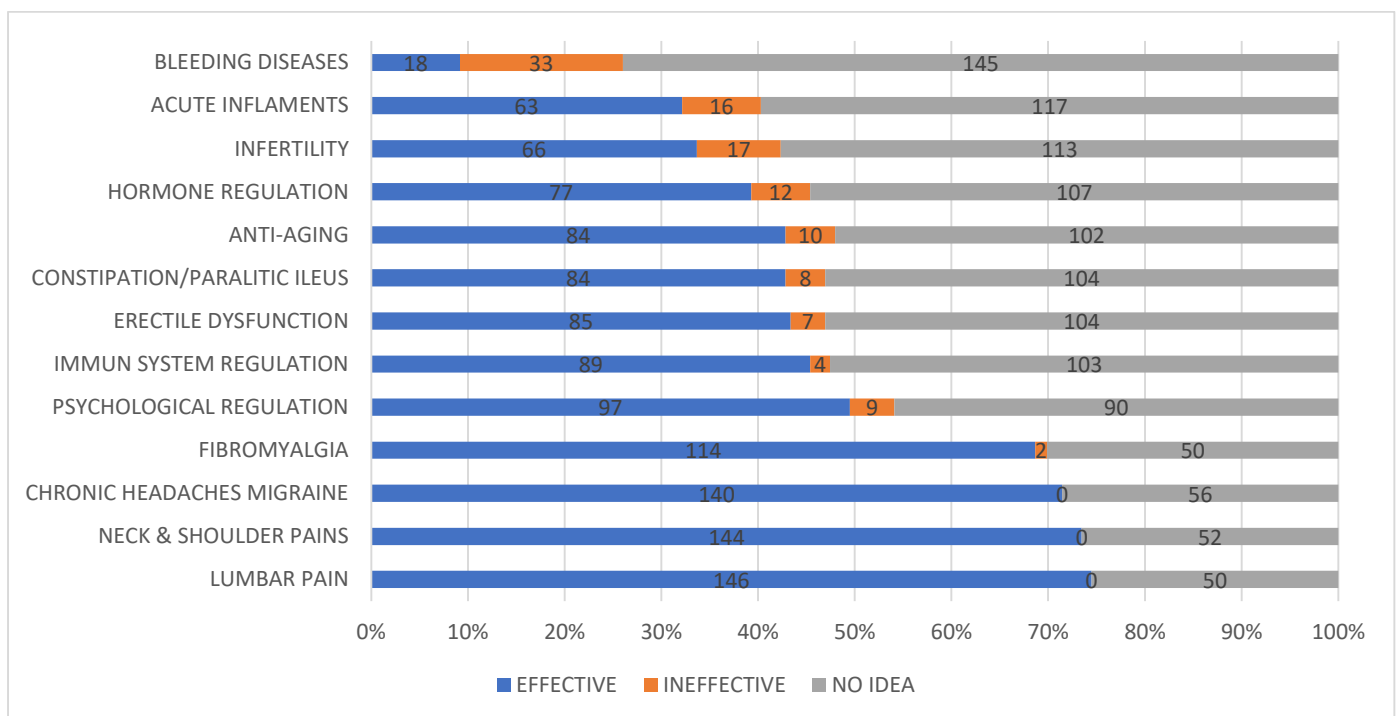


Figure 3: Clinical conditions in which participants consider neural therapy to be effective

## Discussion

There are many studies on the knowledge level concerning CAM applications. Other known CAM methods have also been questioned. Although the order of the studies changes, it is seen that acupuncture, cupping application and phytotherapy application are in the top five, in parallel with this study (10–12). In our study, acupuncture took the first place, followed by NT, ozone application, cupping application and phytotherapy, which were the top five. NT practice has not been questioned in the majority of

CAM studies, and our study is one of the few studies evaluating the status of NT knowledge. In a study conducted with anesthesiologists and surgeons in Hungary, it was concluded that 83.20% of surgeons and 82.30% of anesthetists did not know about NT. The same study revealed that NT is the least known application of CAM (13). In our study, the reason why NT is more widely known may be the increase in CAM awareness after the establishment of GETAT centers in hospitals affiliated with the ministry in our country (14).

The least frequent answer to the question "How do you know about NT?" directed to physicians was "medical faculty". The reason why CAM applications in medical faculties are not included in the education curriculum can be shown as a reason. When we look at the literature, students who are still studying at the faculty of medicine gave the answer as the media being the most common source of information on CAM (11,15). In the studies conducted with medical school students, it was concluded that they thought that CAM application education should be included in the medical school education program and that CAM applications should be integrated with modern medicine (10,12). In the study of Orhan et al. with family physicians and pediatricians, the majority of physicians were of the same opinion (16). Innovations that include CAM practice training in the education curriculum of medical faculties would enable physicians who have a primary role in health service delivery to be fully equipped in traditional and complementary medicine before graduation. Therefore, it could pave the way for postgraduate CAM applications to be presented by competent physicians. The rate of physicians who stated that they want to receive NT education was 83.00%, showing that those who do not know about NT want to receive higher education, which is an indication that physicians are open to learning about NT among CAM applications.

Long-term treatment of functional disorders and pain is aimed for in NT application (17). Acute and chronic pain syndromes are one of the 5 indication groups for NT (17). In accordance with the literature, physicians who knew about NT were asked about the most common conditions where NT was considered to be effective, and the answers were given as low back pain, neck-shoulder pain, fibromyalgia and headache. In other studies, it is seen that acupuncture and NT are the most frequently applied CAM applications for musculoskeletal pain conditions (18,19).

In conclusion, three-quarters of the physicians stated that they knew about NT. The fact that most of those who did not know about it wanted to receive NT education showed that physicians are open to learning. We think that the inclusion of CAM trainings in medical education will increase the knowledge level of physicians.

#### **Disclosure of conflict of interest**

None of the author has any conflict of interest to disclose.

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