

ORIGINAL RESEARCH

Attitudes and Behaviors of Adults on Interventional (Invasive) Traditional Medicine Methods: A Descriptive Study

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Received: 05.04.2021

Accepted: 04.06.2021

Abstract

Objective: Invasive traditional and complementary medicine (TCM) methods, which are performed with minimal damage to the patient's body integrity, are becoming widespread in order to live healthy and to be treated when necessary. With this study, we aimed to evaluate the attitudes and behaviors of adults towards interventional TCM methods.

Material-Method: The descriptive research was conducted between 30/03/2020 and 06/04/2020. The questionnaire form consists of 20 questions. Percentage, mean \pm standard deviation were used in descriptive statistics. Chi-square test was used to evaluate qualitative data; $p < 0.05$ was considered statistically significant.

Results: 542 people participated in the research. 74.9% of the participants are women, 42.8% of them were under the age of 30, 79.3% were university graduates. Interventional TCM methods were applied to 51.7% of the participants. A statistically significant difference was found between age ($p < 0.001$), educational status ($p = 0.006$) and profession ($p < 0.001$) and the application of interventional TCM methods. 56.8% of those who had interventional TCM methods performed the application in a non-clinical environment; It was observed that 39.7% had it done by a physician

Conclusion: It has been observed that TCM applications are increasingly preferred by the society, even if they are invasive, the complication rates are low, and most of them consider to have the same application again, but when evaluated in terms of the person performing the application and the place where it is performed, it is seen that studies on this subject should be planned. It is very important that invasive method applications, which always have complication risks, should be performed under clinical conditions and by the physician.

Keywords: Invasive, Traditional Medicine, Wet Cupping, Acupuncture

INTRODUCTION

Nowadays, interest in TCM methods is increasing. In 2000 report of The World Health Organization (WHO), it was announced that approximately 50% of the people living in Europe, Australia and North America use one of the TCM methods and herbal products are the mostly used one of them¹⁻³.

In our country; Department of Traditional, Complementary and Alternative Medicine Practices was established in 2012 under the roof of the Ministry of Health and the "Traditional and Complementary Medicine Practices Regulation" was published in the Official Gazette and put into effect dated October 27, 2014⁴. According to this regulation, physicians are authorized by the ministry, as well as dentists to apply only in their own field. The place of application must have a permit issued by the ministry, and the physician who will perform the application must have a certificate

signed and approved by the relevant ministry^{5,6}.

All interventions performed with minimal damage to the patient's body integrity are called "minimally invasive interventions"⁷. Acupuncture, leech therapy (hirudotherapy), wet cupping, larval therapy, mesotherapy, prolotherapy, osteopathy and ozone treatments, which are under the title of Traditional and Complementary Medicine, are applications with infection risk because they are invasive procedures. There are many publications in the literature about infections that develop as a result of such applications^{8,9}. Pyogenic infections such as skin and soft tissue infections, cellulitis, abscess, septic arthritis, cartilage tissue inflammations, osteomyelitis, caused by bacteria in the skin flora or colonizing the skin due to the deterioration of skin integrity during treatments can often be seen. There is also a risk of developing bacteremia and

endocarditis. In addition, by not paying attention to the sterilization of the materials used during the interventions or by using the same materials to more than one person, hepatitis B, hepatitis C and HIV infection can be transmitted from blood-borne diseases¹⁰.

According to the literature review, there are various studies specific to TCM applications¹¹⁻³⁴. It is seen that these studies are related to general TCM methods or to a specific method¹¹⁻¹⁵. There has been no study evaluating the general approach to interventional TCM methods, which are methods that need particular attention for their complications and application methods. Evaluating the experience and attitudes of adult individuals on this issue may give an idea about the measures and controls that should be taken against these new methods in our country. For these reasons, we aimed to evaluate the attitudes and behaviors of adult individuals against interventional TCM methods with this research.

MATERIALS AND METHODS

The descriptive research was conducted in the organization of Hacettepe University Faculty of Medicine, Department of Family Medicine between 30/03/2020 and 30/04/2020. The population of the study consists of individuals who applied to the outpatient clinics of Hacettepe University Faculty of Medicine, Department of Family Medicine. The people included in the study are those over the age of 18 who have applied to our polyclinics for any reason and who do not have a psychiatric disease. Epi Info 7 StatCalc was used to calculate the minimum sample size and the sample size was estimated as 384 adults, assuming 95% confidence interval and 5% sampling error.

A questionnaire form consisting of 20 questions, prepared by the researchers and piloted on 20 adults, was applied to adults over the age of 18 who applied to our Hacettepe University Family Medicine Polyclinics and accepted to participate in our study. The questionnaire consist of four questions (gender, age, occupation, education level) for sociodemographic characteristics answered by all participants; nine questions about interventional traditional medicine methods; seven questions prepared for people who use only interventional traditional medicine methods.

The questionnaires were administered by giving the

questionnaire form to the participants and collecting it again by the researcher after obtaining written consent. During the data collection process, the socio-demographic information of the individuals, social attitudes and behaviors towards traditional and complementary medicine methods, and the opinions of the individuals affected by the application were collected with the questionnaire form prepared by the researchers. The questionnaires were filled by the participants in an average of 5-10 minutes. The study was conducted in accordance with principles of the Declaration of Helsinki.

In the evaluation of the data, mean \pm standard deviation was used for continuous variables and the frequency table was used for qualitative data. Chi-square test was used to investigate the relationship between qualitative data. A value of $\alpha = 0.05$ was accepted as the level of error. Data were analyzed with IBM SPSS V23.

Permissions

Ethics committee approval of the research was obtained from Hacettepe University Non-Interventional Clinical Research Ethics Committee with the number GO20 / 745.

RESULTS

542 people participated in the research. Of the participants 74.9% (n = 406) were women; 42.8% (n = 232) were under 30 years old; 17.7% (n = 96) were 51 years old and above and 79.3% (n = 429) were university graduates. The profession of 69.5% (n = 376) is not related to the field of health. 51.7% (n = 281) of the participants applied invasive traditional medicine methods at some stage of their lives. The distribution of the participants according to their general characteristics and the application of interventional traditional medicine methods are given in Table 1. A statistically significant difference was found between age (p <0.001), educational status (p=0.006) and profession (p<0.001) and the application of interventional traditional medicine methods. Interventional traditional medicine methods are used more frequently in those who are over the age of 41 and who do not have a health-related profession; It was observed that the frequency of applying interventional traditional medicine methods decreased with the increasing education level.

Table 1. Distribution of the general characteristics of the participants according to their interventional TCM methods use

	Application of interventional traditional medicine methods						p
	Total (N = 542)		Yes (n=281)		No (n=261)		
	n	%	n	%	n	%	
Age							
30>	232	42.8	84	36.2	148	63.8	0.000
31-40	118	21.8	62	52.5	56	47.5	
41-50	96	17.7	71	74.0	25	26.0	
51<	96	17.7	64	66.7	32	33.3	
Gender							
Woman	406	74.9	212	52.2	194	47.8	0.765
Man	136	25.1	69	50.7	67	49.3	
Education status							
Primary education	41	7.6	30	73.2	11	26.8	0.006
High school	71	13.1	43	60.6	28	39.4	
University	310	57.3	153	49.4	157	50.6	
Master / doctorate	119	22.0	54	45.4	65	54.6	
Profession							
Health Related	165	30.5	63	38.2	102	61.8	0.000
Non-Health Related	376	69.5	217	57.7	159	42.3	

Chi-square test, p <0.05 statistically significant

It was observed that 45.5% (n = 128) of the participants had wet cupping application, 20.1% (n = 56) had leech application and 10.1% (n = 284) had

acupuncture application among the interventional TCM methods. The distributions of the interventional traditional medicine methods applied are given in Figure 1.

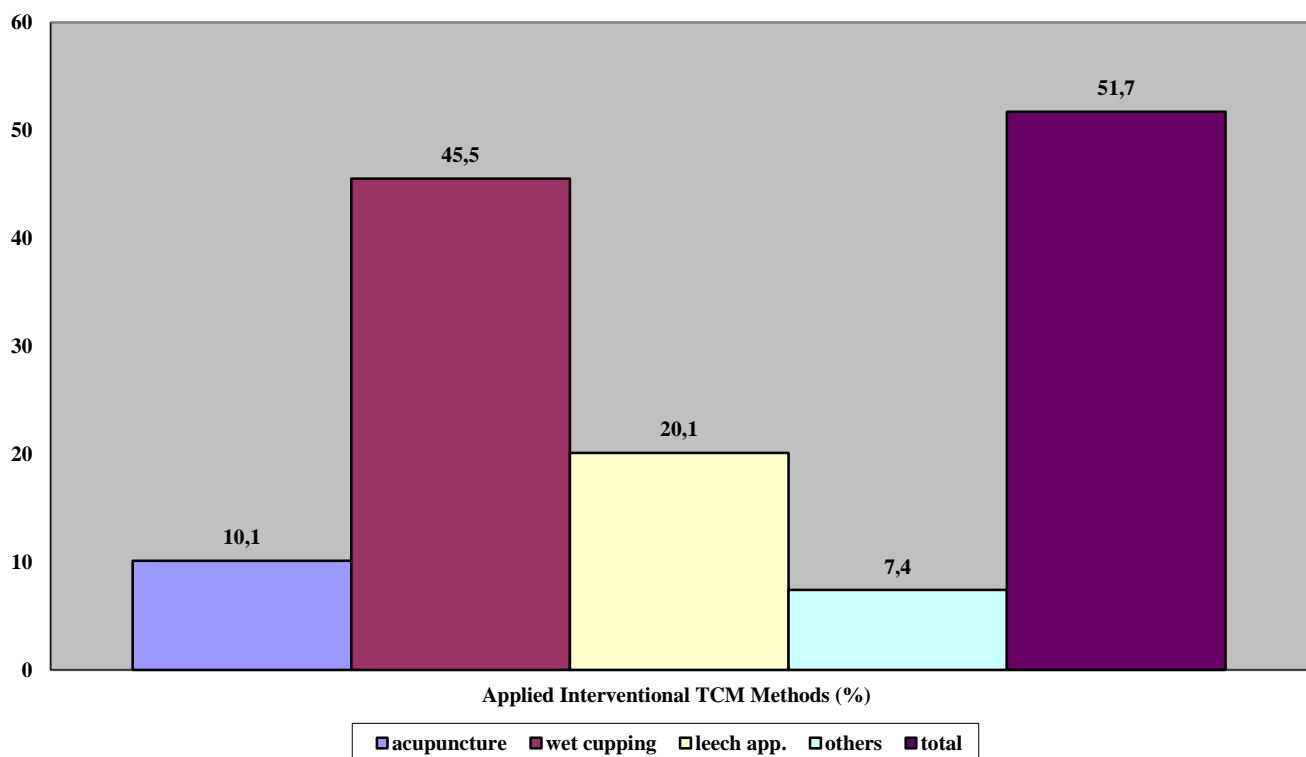


Figure 1. Distribution of interventional TCM methods applied

The most common reasons for those who do not have the interventional TCM application are given in Table 2. Lack of health problem and not having sufficient knowledge about the subject were reported as the most common reasons.

Table 2. Reasons for not applying interventional TCM methods.

	Number (n)	Percentage (%)
Not having a health problem to require	138	25.4
Not knowing enough about the subject	59	10.9
Not finding it safe, hygienic	24	4.4
Thinking it is not useful or not effective	23	4.2
Negative opinions of people who have previously applied	3	0.6

While 86.2% of the participants (n = 468) had acquaintances who used TCM methods in their close environment; 76.8% (n = 417) of them had positive opinions about the application. 73.7% of the participants (n = 400) thought that TCM methods were effective in the treatment of health problems.

The distribution of interventional TCM methods that participants will prefer when there is a need for implementation is given in Figure 2.

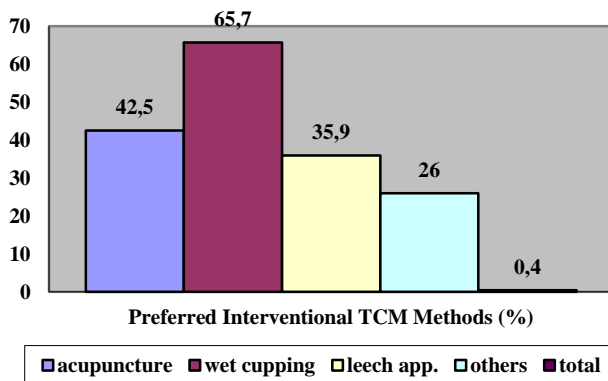


Figure 2. Distribution of interventional TCM methods to be preferred in case of need for implementation

It was found that 56.8% (n = 158) of those who applied interventional traditional medicine methods had the application done in a non-clinical environment, 34.9% (n = 96) in a private clinic, 8.2% (n = 22) in a hospital; It was observed that 39.7% (n = 77) had it done by a physician, 38.8% (n = 97) by a healthcare worker, and 20.7% (n = 44) to other people. 89.7% (n = 251) of the participants who had the interventional TCM application stated that they did not experience complications, 82.2%

(n = 232) of them were observed the infection control measures / hygiene rules during the application, 4.1% did not, 13.7% of them stated that they were partially paid attention, 75% (n = 202) of them knew that the practitioner had a certificate. Of those who had the application, 78.9% (n = 210) stated that their complaints decreased after the application, 14.1% (n = 35) had no effect, 7% (n = 25) stated that their complaints completely disappeared and 83,7% of them reported that they might consider getting the same practice done again.

DISCUSSION

In the study aiming to evaluate the attitudes and behaviors of adults against interventional TCM methods, approximately half of the participants had the interventional TCM method applied, the most frequent application of wet cupping, followed by leech application and acupuncture application; It was observed that interventional TCM methods were used more in people aged 41 and over, those who did not have a health-related profession, and as the level of education decreased. About half of those who have these methods done in a non-clinical environment; It was observed that approximately one third of them had it done by physicians and one fifth by non-medical people.

When examined the researches done in Turkey and the world, seems to be on the research of all TCM methods or specific methods. In the literature, there is no study focusing on interventional TCM methods. Using TCM method frequencies in studies in Turkey be differentiated between 30-65%¹⁶⁻²¹, this frequency varies between 24-90% in international studies²²⁻²⁵. In our study, 51.7% (n = 281) of the participants had interventional TCM methods applied at some stage of their lives. We saw that the people participating in our study preferred wet cupping among the interventional TCM methods, followed by leech application and acupuncture application. When looking at the studies questioning the use of all TCM methods in our country; in a study conducted with family health center applicants, 39.7% of the most common was wet cupping; 17.7% used leech, 16.1% acupuncture, 13.7% phytotherapy; in a study conducted in Kayseri, 37.2% of them used phytotherapy, 19.5% of them used bottle drawing, 6.8% of them used wet cupping²⁶; in a study conducted with medical faculty students, 33.3% of them used phytotherapy, 11.5% of them used wet



cupping, 6% of them used acupuncture²⁷; in another study conducted in Nevşehir, it was observed that 70.1% of them frequently preferred herbal treatment methods²⁸. Phytotherapy is one of the most frequently used methods in international studies, followed by practices such as massage, yoga, and acupuncture^{23,24,30}. In studies conducted in our country, all TCM methods were questioned and it was seen that interventional TCM methods were among the most common methods. Therefore, although our study evaluates the frequency of use of a particular group of methods; The fact that interventional TCM methods are among the most commonly used methods among general methods may explain the high frequency of interventional TCM use in our study. In international studies, interventional TCM methods are not among the most frequently used methods, it is thought that this is related to the application conditions, permits and the regulations applied in the countries.

In our study, when the factors related to the use of interventional TCM methods of the participants were examined, it was found that more interventional traditional medicine methods were used in those aged 41 and over and those who did not have a health-related profession; It was observed that the frequency of application of interventional traditional medicine methods decreased with the increasing education level. When the factors affecting the use of TCM methods in the literature are investigated; In a study conducted in Kayseri, those who are over 50 years old, married, and have not completed any school use TCM methods more²⁶; In a study conducted in Nevşehir, TCM methods were preferred more frequently in the 70-79 age group and in the illiterate²⁸; According to a study conducted in Isparta, it was determined that those who were married and graduated from primary school and below preferred TCM methods more²⁹. In international studies, the effect of factors such as gender, educational status and social level on the tendency to TCM methods has been shown³⁰, and it is stated that the use of TCM increases with the decreasing education level in general. In line with the results of our study, it was emphasized in other studies that the use of TCM increased with increasing age. The relationship between educational status and use of TCM has resulted differently in various studies; Although it is seen in some studies that as the education level increases, the use of TCM decreases in accordance with our study^{26,28,29}; In some, contrary to our study, it was

stated that TCM methods are used more as the education level increases^{23,31-33}.

In our study, the reasons for not having the interventional TCM application were evaluated. The most common reasons for not having it done are; They were reported as not having a necessary health condition and not having sufficient information about the subject. Similar to our study, it has been observed in national studies that those who do not prefer TCM applications do not prefer these applications because they do not need it or because they do not believe it is useful^{17,18}. In international studies, it is seen that the rate of those who do not use it because they find scientific evidence insufficient is high³⁴.

In our study, most of our participants (86.2%) had acquaintances in their close environment who used the interventional TCM method; Most of them (73.7%) had positive opinions about the implementation. As the interventional TCM methods to be preferred in a situation where application is required, we saw that wet cupping is the most preferred method, followed by acupuncture and leech applications.

In our study, approximately half of the participants applied interventional TCM methods; However, it was observed that most of them had the application done in a non-clinical environment, the number of people who had this done by a physician was quite low (39.7%) and 75% knew that the person who performed the application had a certificate. As stated in the regulation, it is reported that all TCM methods can only be applied by certified physicians and dentists to apply only in their own field, and the place of application must have a permit issued by the ministry⁴. This result shows that the applicants do not have complete information about the conditions of these applications. Lack of knowledge about the person performing the application and the place, especially in interventional applications with risk of complications and making applications in wrong people and environments are very risky situations in terms of public health. In this respect, inspections should be carried out more frequently and the public should be informed about these frequently used methods by the right people.

In our study on interventional TCM applications with a risk of complications, the number of people who had complications among those who had the application were found to be quite low. In many studies, similar to our study, it was stated that there were few complications. While the complications

faced by our participants were bleeding, skin and soft tissue infection-abscess, palpitations-fainting and other complications; When we look at the literature, we see that the most common side effects and complications with leech application are local skin lesions, bleeding, anemia, allergies, and infection⁸, and there are case reports such as lymphangitis after leech application⁹. Complications caused by acupuncture are reported to be associated with not paying attention to sterility at the intervention site or systemic infections during the application⁸.

Limitations

The most important limitation of our study is that it is a descriptive study and it was conducted only with people who applied to the outpatient clinic. Due to the fact that the study was conducted during the COVID 19 pandemic, which affected the whole world, the variety of patients according to the age groups of the people who applied to our clinic decreased. For these reasons, the results of the study cannot be generalized to the entire adult population.

Superior aspects

Studies conducted in Turkey and in the world, is on the general TCM methods or specific methods. There is no study focusing on interventional TCM methods. We think that this study, which evaluates the usage frequency, satisfaction, complication status and application conditions of these applications, which always carry the risk of complications, will shed light on the literature.

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CONCLUSION

Based on these results; In the sample of our study, it was observed that TCM applications were increasingly preferred by the society, even if they were invasive, the complication rates were low and most of them thought to have the same application again, but the results were not very pleasant when evaluated in terms of the person who performed the application and the place where it was performed. In particular, it is very important that invasive methods, which always have a risk of complications, are performed under clinical conditions and by the physician. Public trainings, public service announcements and information brochures on this subject are of great importance.

ACKNOWLEDGEMENTS

During this study, any pharmaceutical company that has a direct connection with the subject of the research, a company that provides and / or produces medical tools, equipment and materials, or any commercial company, during the evaluation process of the study, financial and / or no moral support was received.

Conflict of Interest

Regarding this study, the authors and / or their family members do not have a scientific and medical committee membership or relationship with their members, consultancy, expertise, working status in any company, shareholding or similar situations that may have a potential conflict of interest.

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