

ORIGINAL RESEARCH

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Evaluation of the applications of traditional and complementary medicine in the perspective of family medicine in a tertiary referral center

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Abstract

To evaluate the clinical and demographic characteristics of the patients who apply to Traditional and Complementary Medicine (TCM) center. The medical charts of patients, who were admitted to AIBU İzzet Baysal Physical Therapy and Rehabilitation Training and Research Hospital, TCM centre, from September 2018 to August 2019, were retrospectively reviewed. Only patients over the age of 18 were included in the study. 879 (84.4%) of the patients were female, 163 of them were (15.6%) male. 44 (4.2%) patients in the 18 - 24 age group, 137 (13.1%) patients in the 25 - 34 age group, 223 (21.4%) people in the 35 - 44 age group, 287 (27.5%) patients in the 45 - 54 age group, 205 (19.7%) patients were in the 55-64 age group, and 146 (14.0%) patients were in the age group 65 and over. Mean age of the patients was 48.64 ± 13.86 (19-87). 365 (35.0%) of TCM applications were made in spring, 266 (25.5%) in winter, 223 (21.5%) in summer and 188 (18.0%) in autumn. In this study, the most preferred TCM applications are acupuncture (48.1%), ozone therapy (34.3%) and mug treatment (13%), respectively. Determining by whom, in which age group and in which period of the year are more preferred TCM applications, which have been increasingly used in recent years, may prevent problems that may develop during the service delivery process.

Keywords: Acupuncture, alternative medicine, hirudotherapy, traditional medicine

Introduction

According to the World Health Organization (WHO), traditional medicine has a long history, which has been practiced for centuries. Traditional medicine is a whole of knowledge, skills and practices based on theory, beliefs and experiences specific to different cultures, which are used for protection from physical and mental illnesses, treatment of many diseases and maintaining health [1,2]. On the other hand, alternative medicine is a term that includes conventional medical practices and methods of treatment whose effect has not been scientifically proven, and is used synonymously with the term complementary medicine or traditional medicine in some countries [3, 4].

The terms “complementary medicine” or “alternative medicine” are used synonymously with traditional medicine in some countries.

These definitions refer to different health practices, which are not a part of the country's own tradition and are not integrated into the existing health system [5]. Some societies refer to modern medicine supportive therapies as “complementary medicine” and non-medical practices as “alternative medicine”. Others define any scientifically unproven treatment intervention as “alternative medicine”. Today, the common usage of all medicine supportive therapies in Turkey is “traditional and complementary medicine (TCM)”. This concept gained a new meaning in the “Regulation on Traditional and Complementary Medicine Practices” published by the Ministry of Health in October 2014. In this regulation, purpose, scope and legal basis were clearly demonstrated. In this regulation, the characteristics and education levels of healthcare practitioners, the characteristics of health institutions and which methods can be applied in which disease were explained in detail. Furthermore, TCM applications other than acupuncture such as apitherapy, phytotherapy, hypnosis, leech practice, homeopathy, chiropractic, cup practice, larva practice, mesotherapy, prolotherapy, osteopathy, ozone practice, reflexology and music therapy were also defined in this regulation for the first time.

Today, patients' desire to take more control and responsibility

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in their own treatment, efforts to achieve therapies that reduce symptoms, the high cost of current treatments have increased the interest in complementary and alternative therapies [6–9]. The national complementary and center of alternative medicine (NCCAM) defined TCM as products, applications and health care systems, which are not considered as part of traditional medicine [10].

Complementary and Alternative Medicine practices are widely used worldwide, especially in the elder people and the children with chronic disease. The frequency of its use is increasing in chronic diseases such as cancer, HIV infection, multiple sclerosis, rheumatological diseases and asthma [11-13].

According to NCCAM, TCM applications for health management can be offered in at least two basic functions: 1) Treating the current disease, 2) Preventing a certain disease. The number of studies on the effectiveness and safety of TCM applications, which are preferred for the treatment, have been increasing [14-16].

It is important to know how often and for what purpose traditional and alternative practices are used in society. Herein, we aimed to evaluate the demographic and clinical characteristics of the patients referred to TCM center.

Material and Methods

The medical charts of patients, who were admitted to AIBU Izzet Baysal Physical Therapy and Rehabilitation Training and Research Hospital, TCM center, from September 2018 to August 2019, were retrospectively reviewed. Only patients over the age of 18 were included in the study. Demographic and clinical characteristics including age, gender, treatment, the time of the initial appointment were recorded.

Collected data were analyzed by SPSS version 15.0 program. We used percentage (%) and number (n) for descriptive data. We also performed Chi-square test to evaluate categorical variables. Descriptive statistics of variables are expressed as number and percentage. Since one participant in our study can receive treatment more than once, the ratio of the number of treatments to the total number of participants can yield over 100%. A p value less than 0.05 was considered as statistically significant. Bonferroni post hoc test was applied to avoid type 1 error. The statistical significance limit for post hoc analysis was determined as 0.33% ($p < 0.0033$). Abant Izzet Baysal University, Local ethic committee approved the present study.

Results

A total of 1042 patients, 879 (84.4%) of the them were female, 163 of them were (15.6%) male. 44 (4.2%) patients in the 18 - 24 age group, 137 (13.1%) patients in the 25 - 34 age group, 223 (21.4%) people in the 35 - 44 age group, 287 (27.5%) patients in the 45 - 54 age group, 205 (19.7%) patients were in the 55-64 age group, and 146 (14.0%) patients were in the age group 65 and over. Mean age of the patients was 48.64 ± 13.86 (19-87). 365 (35.0%) of TCM applications were made in spring, 266 (25.5%) in winter, 223 (21.5%) in summer and 188 (18.0%) in autumn (Table 1).

The most common treatment was acupuncture applied to 524

patients (50.3%), followed by mug (hacamat) treatment to 380 patients (36.5%). Ozone therapy was applied to 332 patients (31.9%) and hirudotherapy (leech) to 144 patients (13.8%) (Table 2).

Table 1. Clinical and demographic characteristics of the patients

		Number (n)	Percentage (%)
Gender	Female	879	84.4
	Male	163	15.6
Age groups (years)	18 - 24	44	4.2
	25 - 34	137	13.1
	35 - 44	223	21.4
	45 - 54	287	27.5
	55 - 64	205	19.7
	65 and above	146	14.0
	Spring	365	35.0
Season	Winter	266	25.5
	Summer	223	21.5
	Autumn	188	18.0

Table 2. Distribution of the treatment methods

	Number (n)	Percentage (%)
Acupuncture	524	50.3
Mug treatment	380	36.5
Ozone therapy	332	31.9
Hirudotherapy	144	13.8

760 (72.9%) patients received single therapy, 228 (21.9%) received double therapy, 52 (5.0%) triple therapy, and two (0.2%) quadruple therapy.

In the analysis to evaluate the effect of gender, age groups and seasonal characteristics of the patients on the choice of treatment method, a statistically significant relationship was found between the gender and the application of acupuncture treatment ($p < 0.001$). Acupuncture treatment was applied to 469 (53.4%) of women and 55 (33.7%) of men. Furthermore, there was a statistically significant relationship between gender and ozone therapy ($p < 0.05$). 292 (33.2%) of women and 40 of men (24.5%) were treated with ozone therapy. No statistically significant relationship was detected between the gender and cup treatment or hirudotherapy ($p > 0.05$) (Table 3).

Table 3. The treatments the participants received according to their gender

ACUPUNCTURE				
GENDER	Applied		Non-applied	
	number(n)	percentage (%)	number(n)	percentage (%)
Female	469	53.4	410	46.6
Male	55	33.7	108	66.3
p	0.004			
MUG TREATMENT				
Female	312	35.5	567	64.5
Male	68	41.7	95	58.3
p	0.130			
OZONE THERAPY				
Female	292	33.2	587	66.8
Male	40	24.5	123	75.5
p	0.029			
HIRUDOTHERAPY				
Female	117	13.3	762	86.7
Male	27	16.6	136	83.4
p	0.269			

When the treatments in different age groups were evaluated, we determined a statistically significant relationship between acupuncture and hirudotherapy application ($p < 0.05$). Acupuncture treatment was applied to 36 (81.8%) patients in the 18 - 24 age group and 29 patients (19.9%) in the 65 and older group. There was no statistically significant difference in terms of cup treatment or major treatment in the different age groups ($p > 0.05$) (Table 4).

A statistically significant difference was found between the ages of 18 - 24 and 35 - 44, 45 - 54, 55 - 64 and over 65 in terms of acupuncture application frequency ($p < 0.0033$). We also found a statistically significant difference in the frequency of acupuncture application between the 25 - 34 age group and the 65 and over age group ($p < 0.0033$). A statistically significant difference was found between 35 - 44 age group and 55 - 64 and 65 age group and above in terms of frequency of hirudotherapy application ($p < 0.0033$) (Table 5)

Table 4. The treatments the participants received according to their age-group

AGE GROUPS (years)	ACUPUNCTURE			
	Applied		Non-applied	
	number (n)	percentage (%)	number (n)	number (%)
18 - 24	36	81.8	8	18.2
25 - 34	84	61.3	53	38.7
35 - 44	109	48.9	114	51.1
45 - 54	140	48.8	147	51.2
55 - 64	98	47.8	107	52.2
65 and above	57	39.0	89	61.0
p	0.005			
MUG TREATMENT				
18 - 24	15	34.1	29	65.9
25 - 34	45	32.8	92	67.2
35 - 44	90	40.4	133	59.6
45 - 54	108	37.6	179	62.4
55 - 64	72	35.1	133	64.9
65 and above	50	34.2	96	65.8
p	0.703			
OZONE THERAPY				
18 - 24	8	18.2	36	81.8
25 - 34	34	24.8	103	75.2
35 - 44	70	31.4	153	68.6
45 - 54	94	32.8	193	67.2
55 - 64	71	34.6	134	65.4
65 and above	55	37.7	91	62.3
p	0.740			
HIRUDOTHERAPY				
18 - 24	4	9.1	40	90.9
25 - 34	19	13.9	118	86.1
35 - 44	15	6.7	208	93.3
45 - 54	42	14.6	245	85.4
55 - 64	35	17.1	170	82.9
65 and above	29	19.9	117	80.1
p	0.005			

Table 5. Post hoc analysis of the different age groups

ACUPUNCTURE		HIRUDOTHERAPY	
AGE GROUPS (years)	p	AGE GROUPS (years)	p
18 - 24 / 25 - 34	0.012304	18 - 24 / 25 - 34	0.407754
18 - 24 / 35 - 44	0.000061	18 - 24 / 35 - 44	0.507171
18 - 24 / 45 - 54	0.000043	18 - 24 / 45 - 54	0.322276
18 - 24 / 55 - 64	0.000040	18 - 24 / 55 - 64	0.186213
18 - 24 / 65 and above	0.000001	18 - 24 / 65 and above	0.098253
25 - 34 / 35 - 44	0.021616	25 - 34 / 35 - 44	0.024461
25 - 34 / 45 - 54	0.015616	25 - 34 / 45 - 54	0.804626
25 - 34 / 55 - 64	0.014149	25 - 34 / 55 - 64	0.426806
25 - 34 / 65 and above	0.000180	25 - 34 / 65 and above	0.179327
35 - 44 / 45 - 54	0.982400	35 - 44 / 45 - 54	0.004931
35 - 44 / 55 - 64	0.824218	35 - 44 / 55 - 64	0.000871
35 - 44 / 65 and above	0.063234	35 - 44 / and above	0.000140
45 - 54 / 55 - 64	0.830947	45 - 54 / 55 - 64	0.462896
45 - 54 / 65 and above	0.054355	45 - 54 / 65 and above	0.164752
55 - 64 / 65 and above	0.103167	55 - 64 / 65 and above	0.504645

Discussion

WHO states that more than three-quarters of the world's population rely on complementary and alternative health approaches and recommends traditional and complementary therapies, especially in chronic diseases [17,18]. The use of traditional and complementary medicine (TCM) applications; 42.1% in the United States, 48.2% in Australia, 49.3% in France, 70.4% in Canada, 71% in Chile, 70% in China, 40% in Colombia and around 80% in African countries [19,20]. In a study of 5,882 individuals from seven geographical regions in Turkey, TCM utilization rate was found to be 60.5% [21]. In a study from Eskişehir, it was reported that 60% of individuals use various complementary and alternative therapies. Yavuz et al reported that 87% of breast cancer patients used TCM applications. [22,23]. The rate of use of TCM in individuals applying to the family health center in Kayseri was 65.8% [24]. Since the present study is retrospective and only TCM center applications are evaluated, we have no data regarding the usage rates of TCM applications. In order to determine the knowledge, attitudes and behaviours of future physicians on this subject, 276 students studying at Düzce University Faculty of Medicine were surveyed online and the top 3 best known TCM methods were observed as follows: acupuncture (77.5%), mug application (73.5%) and phytotherapy (67.3%) [25]. In this study, the most preferred TCM application was acupuncture (48.1%), ozone therapy in the second frequency (34.3%) and cup therapy (13%) in the third frequency.

Featherstone et al. and Erci et al revealed that female patients often preferred TCM methods [26,27]. Similarly, we observed that the female patient often preferred TCM methods (84.4%), especially acupuncture and ozone therapy.

Oktar et al., in a study involving 446 patients and conducted in Eskişehir Osmangazi University Health Practice and Research Hospital, reported that the individuals aged 45-64 often preferred TCM methods [28], similar to the present study. Furthermore, we found that acupuncture application was preferred more frequently in the 18-24 age group and hirudotherapy in the group of patients over 65.

The present study found that TCM methods was generally applied in spring. However, no studies evaluated the effect of seasons on use of TCM methods up to today.

The prerequisite for providing adequate and effective service to the public is to have information about the educational status, expectations, social, economic and health status of the public. Therefore, it is important for the healthcare professionals to know such characteristics of the public they will serve in increasing the efficiency of the service provided. The fact that physicians question whether their patients are using TCM in a judgmental and non-accusatory environment, the increased knowledge of the benefits, harm, drug interactions, infection risks of TCM applications will contribute to increasing confidence in modern medicine and physician. For example, it has been reported that acupuncture is effective in the treatment of chemotherapy-induced vomiting and anxiety in smoking cessation, and group music therapy is useful in the treatment of chronic schizophrenia, Parkinson and Alzheimer's diseases [29,30].

Conclusion

In conclusion, the present study demonstrated that most of patients, who were aged from 45 to 54, admitted to TCM center for commonly acupuncture in mostly spring. The knowledge obtained from this study may raise the clinical familiarity for the specialists who work a family medicine center. In the present study, the retrospective and the single-centre design are important limiting factors. Further well-designed, prospective and multicentre studies should be conducted.

Competing interests

The authors declare that they have no competing interest.

Financial Disclosure

The authors received no financial support for this study.

Ethical approval

This study was approved by the Institutional Ethics Committee and conducted in compliance with the ethical principles according to the Declaration of Helsinki.

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