RESEARCH ARTICLE

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Traditional and Complementary Medicine Practices Used by Women with Premenstrual Syndrome

ABSTRACT

Objective: This research was carried out to determine the Traditional and Complementary Medicine (TCM) practices used by women experiencing Premenstrual Syndrome (PMS).

Methods: The sample of this descriptive study comprised 357 women who applied to the "Health Practice and Research Center Gynecology and Obstetrics" polyclinic of a university in Turkey. Study data were collected by using the Personal Information Form and the Premenstrual Syndrome Scale (PMSS) to determine the life situation of women with PMS.

Results: It was determined that 82.9% of women experienced PMS and that 83.8% of women living with PMS used TCM practices. The most commonly used TCM practices of the women were determined as follows: hot application on abdomen (90.7%), hot shower (85.1%), fennel tea (26.2%), walking (23.8%), massage (21.8%), yoga (11.7%), and music (10.5%). Almost all of the women undertook hot application to the abdomen, hot showers, massages, walking, and yoga (99.1%-99.5%-90.7%-96.6%-93.1%). Overall, 80% of the women who listened to music and 60% of the women who drank fennel tea experienced benefits as a result.

Conclusions: PMS is a commonly observed health issue among women, and many frequently use TCM practices to cope. Hot applications were found to be the most commonly practices used TCM.

Keywords: Premenstrual Syndrome, Traditional and Complementary Medicine, Women's Health.

Premenstrual Sendrom Yaşayan Kadınların Kullandıkları Geleneksel ve Tamamlayıcı Tıp Uygulamaları

ÖZET

Amaç: Araştırma, Premenstrual Sendrom (PMS) yaşayan kadınların kullandıkları Geleneksel ve Tamamlayıcı Tıp (GETAT) uygulamalarının belirlenmesi amacıyla yapılmıştır.

Gereç ve Yöntem: Tanımlayıcı olarak yapılan araştırmanın örneklemini Türkiye'de bir üniversitenin "Sağlık Uygulama ve Araştırma Merkezi Kadın Hastalıkları ve Doğum" polikliniğine başvuran 357 kadın oluşturmuştur. Veriler Kişisel Bilgi Formu ve PMS yaşama durumunu belirlemek amacıyla Premenstrual Sendrom Ölçeği (PMSÖ) kullanılarak toplanmıştır.

Bulgular: Kadınların %82,9'unun PMS yaşadığı, PMS yaşayan kadınların %83,8'inin GETAT uygulamalarını kullandığı belirlenmiştir. PMS yaşayan kadınların en çok kullandıkları GETAT uygulamaları sırasıyla karına sıcak uygulama (%90.7), sıcak duş (%85.1), rezene çayı (%26.2), yürüyüş (%23.8), masaj (%21.8), yoga (%11.7) ve müzik (%10.5) olarak belirlenmiştir. Karına sıcak uygulama yapan, sıcak duş alan, masaj, yürüyüş ve yoga yapan kadınların tamamına yakını (%99.1-%99.5-%90.7-%96.6-%93.1), müzik dinleyenlerin %80'i, rezene çayı içenlerin %60'ı yarar görmüştür.

Sonuç: PMS kadınlarda yaygın görülen bir sağlık sorunudur ve başa çıkmak için sıklıkla GETAT uygulamalarını kullanırlar. Kadınlar tarafından en yaygın kullanılan yöntem sıcak uygulamalardır.

Anahtar Kelimeler: Premenstrual Sendrom, Geleneksel ve Tamamlayıcı Tıp, Kadın Sağlığı.

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INTRODUCTION

Premenstrual Syndrome (PMS) is a combination of recurrent psychological and physical symptoms that occur in the luteal phase of the menstrual cycle, that decrease or end a few days after menstruation starts, and which repeat in most cycles (1). Over 40 million women worldwide experience these symptoms, which negatively affect their quality of life (2, 3). While 90% of women have only mild premenstrual symptoms, 20% have to cope with symptoms that severely disrupt their daily lives (4). Studies conducted in Turkey determine that PMS prevalence ranges between 20.1% and 65% (5-10).

Traditional and Complementary Medicine (TCM) practices are gaining worldwide importance, both as a research subject and as previously used methods. This situation is also valid for developed countries. TCM includes traditional medicine and various commonly unknown practices, products, and medical or healthcare systems (11). TCM practices play fundamental roles in the treatment and management of diseases in many Asian countries, such as China, Korea, Japan, and India (12). Globally, in countries such as the USA, Germany, Switzerland, Cuba, Japan, and Chile, more than 40% of the population uses TCM at least once a year (13). In Turkey, the usage rate of TCM ranges between 60% and 98.3% (14-17).

TCM practices included in the current regulations published by the Turkish Ministry of Health include phytotherapy, maggot therapy, mesotherapy, prolotherapy, music therapy, hypnosis, cup therapy, homeopathy, ozone therapy, leech therapy (hirudotherapy), osteopathy, acupuncture, reflexology, chiropractic, and apitherapy (18). According to *An International Journal of Obstetrics and Gynecology* (BJOG, 2016), TCM practices applied in PMS are; herbal medicines, body therapies (massage, acupuncture and acupressure, reflexology, phytotherapy), and mind and body techniques (yoga, physical exercise, hypnosis, hot application) (19).

Several researches determined that, as well as medication, women also prefer complementary treatment methods in PMS, such as massage (42–76.8%), hot application to the abdomen (67–75.1%) (20,21), exercise (15–69%) (21,22), herbal tea (20–63%) (21,22,23), vitamin supplement (27–34%) (21,22), reflexology (19.9%), chiropractic (15.5%), and yoga (11.0%) treatments (21).

PMS is a non-life-threatening but frequently observed health condition that can negatively affect the quality of life of women, as well as their mental health and daily life activities. In Turkey, it can be seen that most researches on this subject are conducted using students. Although there has been an increasing interest in TCM practices in recent years in Turkey, data obtained from clinical studies are limited and are not robust. There are therefore no sufficient data regarding TCM practices. This study will provide information on, and the benefits of those TCM practices used by women experiencing PMS in Turkey. Through this, it is considered that frequently used and beneficial TCM practices will generate a database for future researches to be conducted on evidence value.

The research was carried out to determine the TCM practices used by women experiencing PMS.

MATERIAL AND METHODS

Study Design: The research was carried out using a descriptive design.

Sampling: The study data were collected in the in the Health Practice and Research Center Gynecology and Obstetrics polyclinic of a university in Turkey. The study universe comprised 4973 women who applied to the polyclinic between the dates of January and December 2018. Considering those existing studies that examine PMS frequency among women in Turkey (5-10) the research sample was calculated as 357, using a 50% estimate ratio/incidence/frequency with a 5% error limit and 95% confidence. The formula $n = (N.t^2.p.q)/(d^2(N-1)+ t^2.p.q)$ was used for this calculation.

The inclusion criteria for the study participants were as follows: women who knew how to read and write, who accepted to participate in the study, who were not pregnant or puerperant, who were not being in the premenopausal period, who did not have any chronical disease, and did not have a psychiatric disorder.

Instruments: The research data were collected by researchers in accordance with the literature using the Personal Information Form, which comprises 37 questions on the sociodemographic and obstetric characteristics of responders, as well as the PMS and the Premenstrual Syndrome Scale (PMSS). Data were collected using the face-to-face interviewing technique and the researcher conducted all interviews. Prior to the collection of the study data, the aim of the study was explained to all women participants by the researcher, all of whom gave their written consent.

The PMSS was developed by Gencdogan (24) to determine the severity of premenstrual symptoms and comprises 44 items. Responses are given according to a 5-point Likert-type scale (“Never”, “Rarely”, “Sometimes”, “Often”, “Always”). To score the scale, the options are evaluated as follows: “Never” (1 point), “Rarely” (2 points), “Sometimes” (3 points), “Often” (4 points), and “Always” (5 points). A total PMSS score is then obtained from the sum of all nine subscales and the sum of the responses to the Scale. To apply the PMSS, it is necessary to evaluate the individual respondents by “taking into account this condition the week before menstruation”. The lowest possible PMSS score is 44 and the highest possible score is

220. Higher PMSS scores indicate greater symptom severity during PMS. More than 50% of the total PMSS score were classified as 'PMS positive'. The Cronbach's alpha coefficient for the Scale was calculated in the scale's reliability study, and was found to be 0.75. In our study, the Cronbach alpha coefficient was found to be 0.90.

Data Analysis: Data were evaluated in a computer environment and $p<0.05$ was accepted as statistically significant. To analyze the data, frequency distributions were used for categorical variables, descriptive statistics (mean+SD) were used for numeric variables, and Chi-Square Test was used for the relationship between two categorical variables.

Ethical Considerations: To conduct the study, written permissions were received from Duzce University Non-invasive Health Research Ethics Committee (Decision No: 201886**)**, Duzce University Health Practice and Research Center, and Başaran Gençdoğan, who developed the PMS.

RESULTS

In the research, it was found that the study participants received an average PMSS score of 129.67±19.17. It was determined that 82.9% of women experienced PMS (Table 1).

Table 1. PMS Experiences of Women

	n (n=357)	%
PMS		
Have PMS (≥110)	296	82.9
Do not have PMS (<110)	61	17.1

The mean age of the women who experienced PMS was found to be 27.94±3.982 years. Of these women, 84.1% were married, 63.5% were high school graduates, and 55.1% were not employed (Table 2).

Table 2. Distribution of Sociodemographic Characteristics of Women Experiencing PMS (n=296)

	Min.–Max.	Mean ± SD
Age	18–40	27.94±3.982
	n	%
Education Status		
Literate/Primary school	23	7.8
Secondary school	12	4.1
High school	188	63.5
College and higher education	73	24.7
Employment status in an income generating job		
Yes	133	44.9
No	163	55.1
Marital Status		
Married	249	84.1
Single	47	15.9

Min.=Minimum, Max.=Maximum, SD=Standard Deviation.

Overall, 68.9% of the women's mother or sister had also experienced PMS. In our study, it was determined that women who experienced PMS experienced anger (93.6%), stomach pain (56.1%), mild depression (46.3%), and headache (44.6%), breast tenderness (31.1%), and abdominal swelling (20.3%). A total of 62.8% of women experienced their symptoms 2–6 days before menstruation, and they experienced their symptoms for an average of 4.59±1.531 days. Of the women, 99.7% experienced pain during their menstrual period, 98.3% took painkillers to subdue their pain, and 90.2% did something other than taking medicine.

It was found that 83.5% of the women who participated in the current study used TCM practices (Table 3).

Table 3. Distribution of the Characteristics of Women Experiencing PMS regarding TCM* Use (n=296)

	n	%
Know TCM practices		
Yes	124	41.9
No	25	8.4
Some	147	49.7
Believe TCM practices		
Yes	121	40.9
No	35	11.8
Some	140	47.3
Use TCM practices		
Yes	248	83.8
No	48	16.2

*** TCM:** Traditional and Complementary Medicine

Furthermore it was found that, of these practices, fennel tea (26.2%) was used most among all the herbal medicines, with 60% of users experiencing benefits as a result. Women reported that, of those who used body therapies, most used apply massage (21.8%), with 90.7% of massage users reporting that they experienced benefits as a result. Among mind and body techniques, women used walking (23.8%) and yoga (11.7%) the most, with 93.1% of those who used yoga and 96.6% of those who used walking experiencing benefits as a result. Women who apply hypnosis reported that they did not experience any benefits as a result. It was determined that 85.1% of women took showers, 90.7% undertook hot application on their abdomens, and that 99.5% of the women who used hot application experienced benefits as a result (Table 4).

Table 4. Uses and Benefits of TCM for Women Experiencing PMS (n=248)

TCM PRACTICES	USAGE STATUS				BENEFIT STATUS			
	Yes, I use		No, I do not use		Yes, I experienced benefits		No, I experienced no benefits	
Herbal Medicines	n	%	n	%	n	%	n	%
Fennel tea	65	**26.2**	183	73.8	39	**60.0**	26	40.0
Rose tea	8	3.2	240	96.8	0	0.0	8	100.0
Applying olive oil on stomach	8	3.2	240	96.8	3	37.5	5	62.5
Taking vitamin supplement	0	0,0	248	100.0	-	-	-	-
Body Therapies								
Massage	54	**21.8**	194	78.2	49	**90.7**	5	9.3
Acupuncture	3	1.2	245	98.8	2	66.7	1	33.3
Acupressure	0	0.0	248	100.0	-	-	-	-
Applying reflexology	1	0.4	247	99.6	1	100.0	0	0.0
Applying phytotherapy	0	0.0	248	100.0	-	-	-	-
Mind and Body Techniques								
Yoga	29	**11.7**	219	88.3	27	**93.1**	2	6.9
Physical exercise	10	4.0	238	96.0	8	80.0	2	20.0
Walking	59	**23.8**	189	76.2	57	**96.6**	2	3.4
Sport	4	1.6	244	98.4	3	75.0	1	25.0
Praying	6	2.4	242	97.6	4	66.7	2	33.3
Relaxation exercises	12	4.8	236	95.2	9	75.0	3	25.0
Listening to music	26	**10.5**	222	89.5	21	**80.8**	5	19.2
Hypnosis application	4	1.6	244	98.4	0	0.0	4	100.0
Hot application								
Shower	211	**85.1**	37	14.9	210	**99.5**	1	0.5
Hot application on abdomen	225	**90.7**	23	9.3	223	**99.1**	2	0.9

In the current study, among those women experiencing PMS, a statistically significant relationship was found between age, education, employment status, the experience of similar symptoms among their mothers or sisters before menstruation, and the use of TCM practices (n=248) ($p<0.05$). Accordingly, the use of TCM among women aged 26–30 years (90%) was found to be significantly higher than the use of TCM among those aged 31 and older (73.1%) (Table 5). Concerning education status, the rate of TCM users among literate/primary school/secondary school graduates (45.7%) was found to be significantly lower than the rate of TCM users among high school graduates (85.6%) and those individuals who had graduated from college or higher levels of schooling (97.3%, Table 5). The use rate of TCM among employed women (91%) was found to be significantly higher than the use rate of TCM among non-working women (77.9%) (Table 5). The use rate of TCM among those women whose mothers or sisters had experienced PMS (96.7%) was found to be significantly higher than the use rate of TCM use among those women whose mother or sister had not experienced any PMS (80.5%) (Table 5).

Table 5. Examining the Relationship between the Age, Education Status, Employment Status, PMS History among Mothers or Sisters of and TCM Use (n=248)

			Use TCM	Do not use TCM	Total	x^2, p
Age Group	18–25	N	64	15	79	10.305, **0.006***
		%	81.0	19.0	100.0	
	26–30	N	**135**	15	150	
		%	**90.0**	10.0	100.0	
	31 and higher	N	**49**	18	67	
		%	**73.1**	26.9	100.0	
Education Status	Literate- Primary/ Secondary school	N	**16**	19	35	47.569, **0.000****
		%	**45.7**	54.3	100.0	
	High school	N	**161**	27	188	
		%	**85.6**	14.4	100.0	
	College and higher education	N	**71**	2	73	
		%	**97.3**	2.7	100.0	
Employment Status	Yes	N	121	12	133	9.199, **0.002****
		%	91.0	9.0	100.0	
	No	N	127	36	163	
		%	77.9	22.1	100.0	
Having complaints in the mother or sister prior to the menstruation	Yes	N	178	6	184	20.156, **0.000****
		%	96.7	3.3	100.0	
	No	N	70	17	87	
		%	80.5	19.5	100.0	

x^2=Chi-Square Test, p=Significance Level ***p<0.001

DISCUSSION

In this study, which was carried out to determine TCM practices used by women experiencing PMS, it was found that 82.9% of women experience PMS. Those studies conducted in Turkey determined that PMS prevalence ranges between 20.1% and 65% (5-10). The number of questionnaires and scales used to diagnose PMS and determine PMS severity is increasing. In Turkey, a growing number of scales, such as the PMSS, the Premenstrual Assessment Form, and the Menstrual Distress Complaint List (MDQ) are used (25). This is considered to be based on the use of different methods, the age of the studies, and differences and changes concerning the professional group, universe, and samples used.

In our study, it was determined that 83.8% of women who experience PMS use TCM practices. The TCM use rate in Turkey ranges between 60% and 98.3% (14-17). On examination of TCM practices globally, it was found that 42.1% use TCM practices in the USA, 48.2% use them Australia, 49.3% in France, 70.4% in Canada, 40% in Columbia, 71% in Chile, 70% in China, and that 80% use them in African countries (26). In Peltzer et al.'s study conducted across 32 countries, it was determined that 26.4% of the study participants use TCM practices (27). According to these results, it can be interpreted that the transnational and regional differences of the TCM use may differ based on the research method used, universe–sample differences, and sociocultural characteristics of the places in which the research was conducted. The TCM use rate of women in our study was found to be higher when compared with those in the literature. This finding might be because the prevalence of women visiting the doctor for treatment when experiencing PMS is low in Turkey, and also because TCM practices such as hot application to the abdomen, taking a shower, and drinking herbal tea are known and applied by a wide section of society.

The rate of TCM use among women in our study was found to be higher among those who believed TCM practices were effective (47.3%). Based on this finding, it can be considered that the belief in TCM practices have positive effect on TCM use.

The most commonly used TCM practices of the women who experience PMS were determined as follows: hot application on abdomen (90.7%), hot shower (85.1%), fennel tea (26.2%), walking (23.8%), massage (21.8%), yoga (11.7%), and music (10.5%). Almost all of the women who undertook hot application on the abdomen and who took hot showers (99.1–99.5%) experienced benefits as a result. Certain scientific papers have proved the efficacy of hot application (20,28). Among those studies conducted in Turkey, it was found that the prevalence of hot application among women ranges between 32.3% and 75.6% (20,21,29). Our study findings show similarities with those of the literature.

The current study determined that fennel tea was the most used herbal medicine among the TCMs. In their study, Wong et al. determined that 19.4% of the women use herbal/traditional practices (30). Comparatively, among Turkish studies Keskin et al. (21) remark that the use rate of herbal product was 63%, while Gün et al. (20)'s study, which was carried out to prevent dysmenorrhea as one of the PMS symptoms, found that 4.6% of the women consume fennel tea. Jahromi et al. (31) found that fennel tea prevents uterine contraction and reduces of the severity of feelings of dysmenorrhea among the most frequently observed PMS symptoms. In our study, 60% of the women who drank fennel tea reported that it provided benefits. Accordingly, the literature supports our study.

It was determined that, among TCM body therapies, the most commonly used by the women was massage, with a majority of these women reporting that they benefitted as a result (90.7%). Keskin et al. (21) determined that the student participants in their study mostly used massage (76.8%) to reduce their PMS complaints. Furthermore, in their study conducted with students experiencing PMS, Lotfipur-Rafsanjani et al. (28) found that PMS applying massage reduces physical, mental, and psychological symptoms of PMS. Shafeequa (2017) determined that foot massage decreases the symptoms of the women with PMS women with PMS (32). These findings form the literature support those of our current study.

Women stated that they mostly practice walking, yoga, and listening to music among the body and mind techniques of TCM. Of the women who practice yoga, (93.1%) reported that they benefitted as a result. In a study conducted in India, yoga was found to have positive effects in decreasing anxiety, heart rate, and blood pressure of women with PMS (33, 34). Divedi et al. (35) determined that there is a reduction in many PMS symptoms, such as anger, nervousness, worry, depressive mood, and being unable to concentrate, among women practicing yoga as a TCM. In our study, 27 out of the 29 women who practiced yoga reported that they benefitted as a result, a finding that is similar to those in the literature. Women who used the method of listening to music that may be interpreted as the mean age of the group who experiencing PMS is young (27.94±3.982) and they aim to distract their attention to another way.

In the current study, among those women who experience PMS, a statistically significant relationship was found among age, education, employment status, having mothers and sisters with a history of PMS, and the use of TCM practices ($n=248$) ($p<0.05$). Accordingly, the TCM usage rate of among those aged 26–30 (90%) was found to be higher than those aged 31 or older (73.1%). In the

study by Kutlu et al. (36), in the collection of Frass et al. (37), the use rate of TCM was found higher among those women in the middle age group and with a higher education status. In our study, it was found that TCM use increases with increased educational level (primary/secondary school, 45.7%; high school, 85.6%; college and higher education, 97.3%). Buda et al. (38) and Kutlu et al. (36) determined that individuals with higher education status have positive attitudes toward the use of TCM methods. These findings form the literature support those of our study.

The use of TCM practices were also found to be higher among employed women (91%) when compared with women not in employment (77.9%). Güngörmüş et al. (39) found that the use of TCM is significantly high among employed and self-employed women. This information in the literature supports our study. The use rate of TCM was found to be higher in those women whose mothers or sisters have a history of PMS (68.9%) when compared with those women with mothers or sisters do who experienced no negative symptoms in the premenstrual period (31.1%). Keskin et al. (21) found that students who use TCM practices to reduce their complaints during PMS mostly learned TCM practices from their mothers or sisters (52.4%). According to these results it can be stated that the immediate environment is effective in the use of TCM methods.

CONCLUSION

PMS is a health condition that affects women of every age and reduces their quality of life. It is recommended that affected women are informed about TCM methods used for PMS, as well the benefits of these methods. In addition to informing them about hot application, taking shower, massage, drinking fennel tea, and walking among TCM practices, awareness could also be raised among these women by providing education on other TCM methods such as acupuncture, reflexology, and phytotherapy to reduce PMS symptoms. Finally, nurses should be careful while providing consultancy on TCM practices and presenting effective methods to their patients.

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