Use of Integrative Medicine Practices by Pregnant Women with Restless Legs Syndrome

Huzursuz Bacak Sendromu Olan Gebelerin Bütünleşik Tıp Uygulamalarını Kullanma Durumları

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ABSTRACT

Objective: To determine the use of integrative medicine practices in pregnant women with restless legs syndrome.

Methods: This cross-sectional descriptive study was conducted in the perinatology service and outpatient clinic of a university hospital between 2 February-11 May 2022. The study included 148 pregnant women with restless legs syndrome who met the inclusion criteria. Data were collected using the Restless Legs Syndrome Diagnostic Criteria Questionnaire, the Restless Legs Syndrome Severity Rating Scale, a Personal Information Form, and an Integrative Medicine Use Form.

Results: The pregnant women of the 61.4% were in their last trimester, and 75.7% had no information about restless legs syndrome. Symptoms started at an average of 20.29 ± 8.65 weeks of gestation and 81.1% of the pregnant women did not consult a physician. Of those who did consult a physician, 57.7% consulted a gynecologist and 81.0% were recommended vitamins/minerals as a treatment. For syndrome symptoms, 50.7% of pregnant women used integrative medicine practices. The four most commonly used methods were taking vitamins (55.9%), prayer (51.9%), brisk walking (45.2%) and massage (33.3%). There was no statistically significant difference between the use of integrative medicine practices and the severity of restless legs syndrome (*P> .05*).

Conclusion: Restless legs syndrome is a condition that is not widely recognized by pregnant women. About half of pregnant women try to manage the condition by using integrative medical practices for syndrome. Nurses and other health professionals should provide information to pregnant women to raise awareness of the disease and provide effective treatment options.

Keywords: Integrative medicine practices, nursing, pregnant, restless legs syndrome, Willis-Ekbom disease.

ÖZ

Amaç: Huzursuz bacak sendromu olan gebelerin bütünleşik tıp uygulamalarını kullanma durumlarının belirlenmesi.

Yöntemler: Kesitsel tanımlayıcı tipte olan çalışma, bir üniversite hastanesinin perinatoloji servisi ve polikliniğinde 2 Şubat-11 Mayıs 2022 tarihleri arasında yürütülmüştür. Çalışma huzursuz bacak sendromu olan ve dahil edilme kriterlerini karşılayan 148 gebe ile yapılmıştır. Veriler Huzursuz Bacak Sendromu Tanı Kriterleri Anket Formu, Huzursuz Bacak Sendromu Şiddeti Derecelendirme Skalası, Kişisel Bilgi Formu ve Bütünleşik Tıp Uygulamaları Kullanım Formu ile toplanmıştır.

Bulgular: Gebelerin %61,4'ü son trimesterdadır, %75,7'sinin huzursuz bacak sendromu ile ilgi bilgisi bulunmamaktadır. Semptomlar ortalama olarak gebeliğin 20,29 ± 8,65 haftasında başlamakta olup gebelerin %81,1'i bunun için hekime başvurmamıştır. Hekime gidenlerin %57,7'si kadın hastalıkları ve doğum uzmanına başvurmuş ve %81.0'ine tedavi olarak vitamin/mineral önerilmiştir. Gebelerin %50,7'si sendrom semptomları nedeniyle bütünleşik tıp uygulamalarını kullanmaktadır. Gebelerin en sık kullandığı dört yöntem sırası ile vitamin kullanımı (%55,9), dua etme (%51,9), tempolu yürüyüş (%45,2) ve masajdır (%33,3). Gebelerin entegre tıp uygulamaları kullanım durumları ile huzursuz bacak sendromu şiddeti arasında istatistiksel olarak anlamlı bir farklılık bulunmamaktadır (*P > .05).*

Sonuç: Huzursuz bacak sendromu gebeler tarafından çok fazla tanınmayan bir hastalık olarak görülmektedir. Gebelerin yaklaşık olarak yarısı HBS için bütünleşik tıp uygulamalarını kullanarak hastalıkla baş etmeye çalışmaktadır. Hemşireler ve diğer sağlık çalışanları hastalığa ilişkin farkındalık artırmak ve etkili tedavi seçenekleri sunmak için gebeleri bilgilendirmelidir.

Anahtar Kelimeler: Bütünleşik tıp uygulamaları, gebe, hemşirelik, huzursuz bacak sendromu, Willis-Ekbom hastalığı.

INTRODUCTION

Restless legs syndrome (RLS) is a common sensory-motor neurological disorder that significantly affects the quality of life and causes an irresistible urge to move the legs with uncomfortable sensations such as tingling, numbness, and burning. The disease symptoms are anticipated to manifest themselves during periods of rest and while trying to fall asleep at night, while declining with movement during the day.[1] Restless leg syndrome can be encountered in two forms: primary and secondary. Primary RLS arises due to genetic transmission, or when there is an inheritance-related malfunction in dopamine metabolism. Secondarily, it can be seen in cases such as drug use such as selective serotonin-reuptake inhibitors, caffeine intake, Parkinson's, thyroidism, fibromyalgia, diabetes, multiple sclerosis, end-stage renal disease, iron deficiency anemia and pregnancy.[1-3] The prevalence of RLS in pregnant women is reported to be 21.4%.[4] While RLS can develop in any trimester, its severity increases with gestational week.[5] The pathophysiology of RLS related to pregnancy is not fully understood, though it is hypothesized that endocrine and dopamine system dysfunction, metabolic changes, deficiencies in iron, hemoglobin, magnesium, folate, B12, and high levels of thyroid-stimulating hormone during pregnancy may contribute to its development.[6-8] Deterioration in the overall quality of life for pregnant women is evident due to insomnia caused by RLS.[9] Steinweg et al.'s[10] meta-analysis indicates that pregnant women with RLS have a higher risk of gestational hypertension, preeclampsia, and peripartum depression. However, the study also notes that RLS may result in cesarean delivery, premature birth and low birth weight. Hence, managing symptoms and treating the disease are crucial.[10] Available pharmacological treatments consist of iron and folic acid supplementation, dopamine agonists, antiepileptics, and benzodiazepines. The mainstay of treatment is the use of dopaminergic agents. Other medications such as opioids, antiepileptics, and benzodiazepines may be used in cases where patients are unresponsive to these agents or experience severe side effects.[3] These medications may result in adverse reactions, notably when consumed for an extended period. For this reason, patients are turning to integrative medicine practices, which are becoming increasingly common.[11-12]

The belief that integrative medicine practices do not pose a threat to health has led to an increase in their usage. In this regard, moderate-intensity exercises which include brisk walking, water aerobics, dancing, yoga and massage therapy have been recommended for expectant mothers to mitigate RLS symptoms.[13] Several studies have demonstrated the effectiveness of techniques such as progressive relaxation exercises (PRE), acupuncture, acupressure, hot and cold water practice on the legs, in mitigating the severity of RLS symptoms.[14-17] Although integrative medicine practices are recommended for the management of RLS symptoms in pregnant women, no studies investigating the practices employed by pregnant women have been identified in the literature. Obstetrics and gynecology nurses play a crucial role in the management of RLS, which affects one in five pregnant women.[4,18] It is therefore important to identify the integrative health care practices used by pregnant women for RLS, to improve the quality of life of pregnant women, to identify high-risk situations early and to provide appropriate treatment. Therefore, the study aims to determine the integrative medicine options that pregnant women prefer for managing RLS symptoms, thus adding to the literature in the field. Identifying the practices used by this group could assist in developing effective treatment approaches and better service delivery. Consequently, this research may guide clinical practices and aid healthcare professionals.

AIM

To determine the use of integrative medicine practices in pregnant women with RLS.

RESEARCH QUESTIONS

Answers to the following research questions were sought:

1. Do pregnant women with RLS utilize integrative medicine practices?
2. What is the incidence of integrative medicine practices usage and satisfaction rates among pregnant women with RLS?
3. Is there a difference in the severity of RLS symptoms between pregnant women who do and don't employ integrative medicine practices?

METHODS

Study Design
The study is a cross-sectional descriptive research.

Place and Time of Research
The study was conducted at the Perinatology Polyclinic and Perinatology Service of the University Health Research and Practice Centre between 2 February and 11 May 2022.

Population and Sampling
The study population consisted of pregnant women who registered at the Obstetrics and Gynecology Polyclinic of

the Centre and were admitted to the Perinatology Service for delivery. In a study determining the prevalence of RLS during pregnancy in the province where the study was carried out, the presence of RLS was found in 10.5% of women.[19] Using the prevalence result from this study, the number of women included in the study was determined to be 145 using sample size calculation in Minitab at the 95% confidence interval and $p < .05$ level of significance. Pregnant women over 18 years old who had a live and singleton pregnancy, were diagnosed with RLS based on the RLS Diagnostic Criteria Questionnaire Form and physician examination, and had secondary RLS related to pregnancy were eligible for inclusion in the study. Those with any diagnosed psychiatric disease or communication barrier were excluded.[14,16,19] During the study period, 3325 pregnant women underwent screening, with 172 exhibiting symptoms of RLS. Subsequent to this, 17 women were deemed ineligible, whilst a further 4 declined participation in the study. Consequently, 151 pregnant women were identified as eligible, with 148 completing the study after three questionnaires were excluded due to incomplete responses. The mean score of the RLS Severity Rating Scale was used in the G*Power programme to calculate the power of the research, and the effect size was .80 as a result of the calculation. In this direction, the power was determined to be 99% as a result of the post power analysis performed by taking effect size: .80 n: 148 and alpha: .05.

Data Collection Tools
Study data were collected with the RLS Diagnostic Criteria Questionnaire, RLS Severity Rating Scale, Personal Information Form, and Integrative Medicine Practices Usage Form.

RLS Diagnostic Criteria Questionnaire Form: The form developed by the International Restless Legs Syndrome Study Group (IRLSSG) (1995) can be used to make a diagnosis of RLS based on the patient's history. There are five questions in the form and the questions are answered as 'yes' or 'no'. If all questions are answered 'yes', a diagnosis of RLS is made.[20] Although there is no validation or reliability data available for the Turkish version of the RLS Diagnostic Criteria Questionnaire Form, this tool has been widely used in various RLS studies conducted in Türkiye.[14,15,19]

Restless Legs Syndrome Rating Scale (IRLS): The scale was originally developed by the International Restless Legs Syndrome Working Group (IRLSSG) (2003) to assess the severity of RLS.[20,21] The Ay et al. Turkish scale validity and reliability study was conducted in 2019. It consists of 10 questions. Each question is worth between 0-4 points. The total score that can be obtained from the scale varies between 0-40. A score of 1-10 indicates mild RLS, 11-20 moderate RLS, 21-30 severe RLS, and 31-40 very severe RLS.[22] While the Cronbach's alpha coefficient of the scale is .82,[22] it was found to be .83 in this study.

Personal Information Form: In the form prepared by this study researcher, there are 18 questions including descriptive features, obstetric, and RLS characteristics of pregnant women with RLS.[14-16,**19**]

Integrative Medicine Practices Usage Form: The form is not a standardized measurement tool, but was developed by the researchers to assess pregnant women's use of integrative medicine practices using the US National Centre for Classification of Health (NCCAM).[23] There are five questions in the form to determine pregnant women's use of integrative medicine practices to reduce RLS symptoms, reasons for preferring them, practices used, frequency of use (week/month) and satisfaction. In integrative medicine practices; 25 practices were surveyed in five groups, including biologically based treatments (use of vitamins, herbs, beverages, etc.), mind-body treatments (music therapy, hypnotherapy, prayer, etc.), body-based treatments (massage, exercise, hydrotherapy, acupuncture, etc.), energy treatments (reiki, creative imagery), alternative medicine and medical system treatments (aromatherapy, ayurveda, homeopathy) (NCCIH, 2018). Pregnant women rated their satisfaction with the integrative medicine practices they used on a visual scale of 10 (min=1, max=10).[24] The form does not have an overall score. The use of the methods is scored separately.

Data Collection
Data were collected in the outpatient clinic before or after the examination time. As some pregnant women were admitted to the ward after the examination, their data were collected in the patient room on the ward. After the pregnant women were informed about the study, the presence of RLS symptoms was determined using the RLS Diagnostic Criteria Questionnaire in women who had given written consent to participate in the study. The RLS Diagnostic Criteria Questionnaire is not routinely used in the outpatient clinic. However, it has been used in research process to identify pregnant women with RLS symptoms. The presence of RLS was then confirmed by physician in the study. In the second stage, pregnant women with RLS who met the inclusion criteria were given the RLS Severity Rating Scale, the Personal Information Form and the Integrative Medical Practice Use Form and asked to fill out the forms once. The questionnaires took an average of ten minutes to answer.

Data Analysis

The research data analysis was conducted using the IBM SPSS Statistics 24.0 (IBM Corp., Armonk, New York, USA) statistical package program. Normality of the data distribution was assessed using the Kolmogorov-Smirnov test and the equality of variances with QQ graphs and the Levene test. Descriptive statistics are provided as the number of units (n), percentage (%), and mean and standard deviation. Categorical variables were analyzed using the chi-square test. A comparison of pregnant women's use of IRLS and integrative medicine practices between groups was evaluated with an independent sample t-test. In comparisons, $p < .05$ value was considered statistically significant.

Ethical Considerations

Ethics Committee approval (date: 2021, confirmation number: 484) was obtained from the Erciyes University Clinical Research Ethics Committee for the conduct of the study. The study adhered to the tenets of the Declaration of Helsinki, and verbal and written informed consent was obtained from subjects by explaining the purpose of the study.

RESULTS

During the study period, 3325 pregnant women were screened and 5.17% were found to have RLS symptoms. The mean age of the pregnant women was 28.40 ± 5.51 years, 61.4% were in their last trimester and 42.6% had completed primary school (Table 1).

Table 1. Distribution of Some Descriptive Characteristics of Pregnant Women (n = 148)

Features	x̄ ± sd
Age	28.40 ± 5.51
Current BMI	28.30 ± 4.85
Gestational week	27.59 ± 7.74
Gravida	2.49 ± 1.35
Gestational week	**n (%)**
Trimester (1-13 weeks)	10 (6.8)
Trimester (14-26 weeks)	47 (31.8)
Trimester (27-41 weeks)	91 (61.4)
Level of education	**n (%)**
Primary education	63 (42.6)
Secondary education	44 (29.7)
Undergraduate education and above	41 (27.7)
Working status	**n (%)**
Worker	23 (15.5)
Not working	125 (84.5)

Table 2 shows some characteristics of pregnant women in relation to RLS. While 75.7% stated that they had no information about RLS, most of those who did (83.4%) stated that they had obtained information from other sources such as family and the media.

Table 2. RLS-Related Characteristics of Pregnant Women (n = 148)

Information status about RLS	n (%)
Yes	36 (24.3)
None	112 (75.7)
Information resource on RLS	
Health employee	6 (16.6)
Other (Family, media, environment, etc.)	30 (83.4)
Presence of RLS in previous pregnancy	
Yes	53 (35.8)
None	95 (64.2)
RLS symptoms (x̄ ± sd)	20.29±8.65
Status of applying to a physician for RLS	
Applicant	28 (18.9)
Non-applicant	120 (81.1)
Department to which the physician is consulted	
Gynecology and obstetrics	16 (57.1)
Family health center	6 (21.4)
Other (neurology, physical therapy, emergency)	5 (17.9)
Cardiovascular surgeon	1 (3.6)
Treatment recommendation for RLS	
Yes	21 (75.0)
None	7 (25.0)
Physician recommended treatment*	
Vitamin-Mineral	17 (81.0)
Exercise	2 (9.5)
Compression stockings	1 (4.8)
Anticoagulant	1 (4.8)
Life effect of RLS	
Adversely affected	48 (32.4)
Unaffected	100 (67.6)
Status of using integrative medicine practices for RLS	
Using	75 (50.7)
Not using	73 (49.3)
Reason for using integrative medicine practices*	
Natural and safe	45 (60.0)
It is good for physical, social, spiritual and mental fatigue / and increases the quality of life	39 (26.35)
To cope with RLS	25 (33.3)
Do not think the drug is not helpful	2 (2.6)
Other	3 (3.9)

RLS, restless legs syndrome; x̄ ± sd, mean ± standard deviation; *(n=21) Calculated only; from those who said yes; ** More than one answer was given.

Table 3. Mean Scores of Integrative Medicine Practices Used by Pregnant Women for RLS (*n*= 75)

Methods			*n* (%)*	Practice Frequency Per week (times) x̄ ± sd	Per month (times) x̄ ± sd	Satisfaction score (0-10) x̄ ± sd
Biologically Based Therapies	Diet / regime change		19 (25.3)	4.56 ± 2.58	14.00 ± 11.88	6.11 ± 2.11
	Use of vitamins		43 (55.9)	6.01 ± 2.02	24.23 ± 9.79	7.11 ± 2.42
	Plant use		10 (13.3)	2.37 ± 2.06	7.9 ± 8.03	5.33 ± 3.64
	Beverage use		15 (20.0)	4.33 ± 2.74	14.86 ± 11.66	6.46 ± 3.35
Mind and Body Therapies	Music therapy		11 (14.2)	3.44 ± 2.35	11.63 ± 9.66	7.27 ± 3.03
	Hypnotherapy		1 (1.3)	0.0 ± 0.0	2.0 ± 0.0	2.0 ± 0.0
	Meditation/yoga		2 (2.6)	2.0 ± 0.0	5.0 ± 4.24	5.5 ± 6.36
	Dreaming		9 (12.0)	4.66 ± 2.82	19.11 ± 11.75	7.22 ± 2.68
	Praying		39 (51.9)	6.76 ± 1.36	25.94 ± 7.90	8.40 ± 2.47
	Get group support		6 (8.0)	6.60 ± 0.89	22.83 ± 11.32	9.5 ± 2.47
	Massage		25 (33.3)	4.0 ± 2.43	14.04 ± 10.76	7.01 ±2.83
Body-Based Therapies	Exercise	Brisk walking	34 (45.2)	3.82 ± 2.09	15.47 ± 8.67	7.43 ± 2.62
		Making cultural-physical movements	5 (6.6)	4.20 ± 2.68	17.20 ± 11.27	8.20 ± 2.48
		Swimming regularly	0 (0.0)	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Hydrotherapy	Bath with thermal water or shower in the bathtub at home	3 (4.0)	3.66 ± 3.05	12.33 ± 8.50	6.50 ± 4.49
		Herbal bath	0 (0.0)	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Reflexology		8 (10.6)	3.0 ± 2.56	12.25 ± 10.71	7.62 ± 2.77
	Acupuncture		0 (0.0)	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Acupressure		7 (7.3)	3.28 ± 2.75	13.0 ±11.78	6.0 ± 2.82
Energy Treatments	Reiki		1 (1.3)	5.0 ± 0.0	20.0 ± 0.0	10.0 ± 0.00
	Healing or therapeutic touch		5 (6.6)	3.60 ± 2.40	14.80 ± 10.35	7.40 ± 3.97
	Creative imagination		6 (8.0)	3.83 ± 2.85	15.66 ± 11.89	7.0 ±2.52
Alternative Medicine and Medical Systems Treatments	Aromatherapy		0 (0.0)	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Ayurveda		0 (0.0)	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0
	Homeopathy		2 (2.6)	3.0 ± 0.0	11.0 ± 1.41	7.0 ±1.41

RLS, restless legs syndrome; x̄ ± sd, mean ± standard deviation; *Yes percentages are given

The average onset of RLS symptoms was 20.29 ± 8.65 weeks into pregnancy, and 81.1% of pregnant women reported that they had not consulted a physician. More than half (57.7%) of those who did consult a physician reported that the department they consulted was gynecological and obstetrics, and 81.0% of them reported that they were recommended vitamin/mineral supplements as a treatment after the examination. 50.7% of pregnant women used methods of integrative medicine (Table 2).

Table 3 shows the integrative medicine practices used by pregnant women to manage RLS symptoms. The first most preferred method was the use of vitamins with 55.9% and the mean satisfaction score of the pregnant women regarding its use was 7.11 ± 2.42. Prayer was the second most preferred method (51.9%), with a mean satisfaction score of 8.40 ± 2.47. The third most preferred method was brisk walking (45.2%) to manage RLS symptoms, with satisfaction scores of 7.43 ± 2.62. Massage was in fourth place (33.3%) with a satisfaction score of 6.96 ± 2.83.

Table 4. IRLS Mean Scores of Pregnant Women Comparison by Integrative Medicine Practices Usage Status (*n*= 148)

IRLS	Status of Using Integrative Medicine Practices		Total	Test *P*
	Using (*n* = 75) *n* (%)	Not using (*n* = 73) *n* (%)	*n* (%)	
Light	13 (8.8)	14 (9.4)	27 (18.3)	
Middle	39 (26.1)	42 (28.1)	81 (54.7)	x^2 = 1.021 *P* = .600
Severe	23 (15.4)	17 (11.4)	37 (27.0)	
Total score (x̄ ± sd)	17.67 ± 5.96	15.89 ± 5.84	16.79 ± 5.95	*t* = 1.833 *P* = .069

IRLS, Restless Legs Syndrome Rating Scale; x̄± sd, mean ± standard deviation; *x²,* chi square test; independent sample t test

While the mean IRLS score of the women was 17.67 ± 5.96 in pregnant women using integrative medicine practices, it was 15.89 ± 5.84 in non-users, and there was no statistically significant difference between the groups (*P*= .069). When the cases of pregnant women using integrative medicine, practices are examined according to RLS severity categories, the users and non-users are respectively; while the severity of RLS was determined to be 8.8% to 9.4% in mild, 26.1% and 28.1% in moderate, and 15.4% and 11.4% in severe patients, the groups were statistically similar (*P*= .600, Table 4).

DISCUSSION

The present study aimed to investigate the utilization of integrative medicine practices among pregnant women for managing symptoms of RLS and their level of satisfaction with the applied therapies. Symptoms of RLS were found in 5.17 % of the women who were women attending for pregnancy follow-up during the study period. In a meta-analysis study, the prevalence of RLS in midwives was reported to be 21.4%, but the prevalence varies between countries.[4] The descriptive features of pregnant women included in this study, such as average age and educational qualifications, align with those of other studies analyzing

the implementation of integrative medicine practices for pregnant women.[11,25] The literature suggests a progressive increase in the severity of RLS in pregnant women during specific gestational weeks.[4,5]

Only 27.7% of expectant mothers experiencing RLS possess familiarity with the condition, with the majority procuring information from the media. Research indicates that pregnant women frequently take recourse to the media and social surrounds to tackle health apprehensions and augment their well-being.[26] Approximately one fifth (18.9%) of patients sought physician for RLS symptoms. Scanty instances of physician consultation may be due to a lack of awareness of RLS. The scarcity of consultations and the inadequate knowledge of the ailment among the populace emphasizes the necessity for expectant mothers to have thorough and exhaustive information regarding this topic.

In our study, 16 out of the 28 pregnant women who sought medical help reported symptoms of RLS to their obstetricians and gynecologists. The remaining 6 women sought care at the family health center, another pregnant follow-up center. In parallel with the results of our study, Aksu[27] came to a similar conclusion and found that women

generally sought antenatal care from their obstetricians and gynecologists and family health center physician during pregnancy. The results show that pregnant women mostly went to obstetricians and gynecologists for antenatal care. This situation shows that although antenatal care is accepted as a preventive health service, primary health centers should play a more active role. It has been found that physicians primarily provided pregnant with vitamin supplements, followed by exercise. Iron, magnesium, folate and B12 deficiency during pregnancy are recognized as risk factors associated with gestational RLS.[10] Furthermore, literature supports the notion that exercise can alleviate RLS symptoms.[14,28] Therefore, pregnant women may have been advised to partake in vitamin-mineral supplementation and exercise.

Awareness of integrative medicine practice is increasing daily in Türkiye and worldwide.[3,11,12] It was determined that half of the pregnant women who participated in this study used integrative medicine practices to reduce the severity of RLS and they preferred it the most (60.0%) because it was natural and safe. Similarly, Koç et al[11] found that pregnant women's use of such methods was due to their belief that they were safe. It is seen that pregnant women most frequently prefer vitamin, praying, brisk walking and massage among integrative medicine practices.[11] A study conducted by Akbaş[14] analyzed the impact of PRE-on pregnant women with RLS. The study partially questioned non-pharmacological measures used by these women to alleviate the severity of RLS. It was found that pregnant women mainly use walking, massage, hot and cold practice, warm shower, and magnesium to alleviate the severity of RLS.[14] Upon examination of practice satisfaction scores among pregnant women, it was found that their satisfaction levels were above average, except for involving hypnotherapy. The practice achieving the highest satisfaction score was reiki (n=1), however, the lack of a substantial sample size reduces the reliability of the results. Therefore, the study was compared the practices preferred by more than ten pregnant women to evaluate their satisfaction scores. The results showed that prayer (8.40 ± 2.47) obtained the highest satisfaction score. Praying is accepted as a therapeutic method in most societies. Similar to the results of the study, it is known that most people with chronic pain use the prayer method and feel relieved.[12]

It is seen that approximately half of the pregnant women try to cope with the disease by trying different integrative medicine practices for RLS. Among the methods used, in biological-based treatments; in the use of vitamins, in mind and body treatments, in music therapy, daydreaming, prayer and group support; reflexology, massage, walking

and cultural physical movements in body-based treatments; creative imagery, reiki and healing touch in energy treatments; in alternative medicine and medical systems treatments, it is seen that the satisfaction score in homeopathy is seven and above. Although it is known in the literature that hot and cold-water practices with the foot immersion method, PRE, walking, and vitamin use are effective in reducing the severity of RLS and reducing sleep quality[13,14,15,17] there is no study examining the effect of other integrative medicine practices with high satisfaction levels on pregnant women with RLS. These findings offer valuable insights for healthcare professionals and specialists advising expectant mothers. Therefore, supporting integrative medicine practices during pregnancy and further investigating their effects is needed. RLS severity of pregnant women was determined as moderate in this study. Although the symptoms of RLS during pregnancy show individual differences, they can vary from very mild to very severe. Similarly, in Dikmen's[9] study, RLS severity of pregnant women was determined as *moderate*, while Pantaleo et al[29] found that the severity of RLS in pregnant women was *severe*. Although RLS severity was higher among pregnant women who used integrative medicine practices versus those who did not use them in the study, the difference was not significant statistically. This may be due to pregnant women not applying their preferred integrative medicine practices in a regular and disciplined and regular form, or to the fact that the practices could not be carried out according to a protocol.

In conclusion, gestational RLS is a disease about which pregnant women lack comprehensive information. The negative effects of RLS on sleep health and quality of life necessitate an in-depth investigation into this condition during pregnancy. It is imperative to provide requisite information to pregnant women to combat this condition.[30] Therefore, health professionals have major responsibilities in this regard. Especially nurses, and physicians, who have important roles and responsibilities in pregnancy follow-up, awareness of RLS symptoms and treatment is important in this respect.

Awareness among pregnant women regarding RLS, their status of applying to the healthcare centers, the treatments, and practices recommended by their physicians, the practices of integrative medicine used by pregnant women to relieve their symptoms, and their satisfaction with these practices are very important for the diagnosis and treatment of RLS. The results of this study may help to conduct gestational RLS awareness trainings for both pregnant women and healthcare professionals, to plan more detailed studies on the use of methods that pregnant women use and are satisfied with, to conduct

studies with a high level of evidence to prove the effectiveness of these methods, and to develop effective strategies that can be used to improve the health and well-being of pregnant women.[31]

Limitations of the Study

The limitation of this study are that the integrative medicine practices (time, duration, pressure, and region of practice) used by pregnant women could not be evaluated in depth, the study was conducted in a single center, hemodynamic variables such as hemoglobin, iron and medications used by pregnant women were not questioned. However, our study does not provide information on the integrative practices of pregnant women who are not diagnosed with RLS. There may be pregnant women in the study group who use other practices and do not have RLS symptoms because they benefit from these practices.

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