

Psychometric Testing of the Perimenopausal Depression Scale–Turkish Version

Hülya Tosun,* Nilay Gül Bal, Jayasri Kulkarnii

Abstract: Perimenopausal hormonal fluctuations cause vasomotor, somatic, metabolic, cognitive, and menstrual cycle changes that may lead to depression. This study adapted and translated the Perimenopausal Depression Scale from English into Turkish and verified the validity and reliability of its psychometric properties in perimenopausal women not receiving hormone replacement therapy. This study was conducted between September and November 2020, and included 169 women aged between 40 and 53 years with perimenopausal symptoms, who visited a state menopausal polyclinic. The Perimenopausal Depression Scale–Turkish Version, Kupperman Index, Menopause Rating Scale, and demographic questionnaire were administered to the patients. Confirmatory factor analysis, Cronbach's alpha coefficient, and correlation coefficient were calculated. The overall scale and all five subscales of the Perimenopausal Depression Scale–Turkish Version had acceptable internal consistency scores, good construct and criterion validity, and a high intraclass correlation. Therefore, this translated scale and its subscales are suitable for Turkish women. Further verification is recommended for women receiving hormone replacement therapy. Mental health nurses and midwives could use the Perimenopausal Depression Scale–Turkish Version to distinguish depressive symptoms from perimenopausal depression in women visiting outpatient clinics or menopause polyclinics, or in the community mental health context.

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Introduction

The phase where a woman transitions from reproductive to non-reproductive stages of life is called the perimenopausal period.¹ This refers to the time interval between the first major change in the menstrual cycle length (i.e., changes that differ from an individual's normal cycle length by 7 days) and 12 complete months without any menstruation.² The perimenopausal period

Correspondence to: Hülya Tosun,* Kütahya Health Science University, Midwifery Department, Evliya Çelebi Campus, 43000. Kütahya, Turkey. E-mail: hulyaerbaba3@hotmail.com

Nilay Gül Bal, Erenköy Mental and Psychiatric Disorders Training and Research Hospital 19 Mayıs, Sinan Ercan Cd. No:23, 34736 Kadıköy/İstanbul. E-mail: nilaybal27@gmail.com

Jayasri Kulkarni, Monash Alfred Psychiatry Research Centre (MAPrc), Central Clinical School, Monash University and The Alfred Hospital, Melbourne, Victoria, Australia. E-mail: jayashri.kulkarni@monash.edu

usually occurs around 50 years of age (range: 40–60 years) and lasts for about 4 years.^{2–4} The most important perimenopausal change is the decrease in the production of ovarian steroid hormones estrogen and progesterone,

a natural physiological and endocrinological process due to the loss of ovarian follicular function and permanent cessation of menstruation.^{1,3,5} In addition to menstrual cycle changes, hormonal fluctuations during this period cause vasomotor, somatic, metabolic, and cognitive changes.⁶ These include headaches, dizziness, insomnia, hot flashes, night sweats, changes in texture of the skin, genital atrophy, arthralgia, myalgia, paresthesia, palpitations, mood changes, anxiety, and depression.^{3,7}

Studies conducted in Turkey show that Turkish women go through various and severe symptoms during their perimenopausal period, including depressive symptoms, and the risk of experiencing clinical depression is high.^{8,9} It remains unclear whether these symptoms are a specific type of perimenopausal depression. To resume their day-to-day activities normally, women often resort to medical or complementary and alternative treatment methods for their condition.^{10,11} It is essential to understand the characteristics of perimenopausal depression in Turkish women as soon as possible and to intervene early to protect them from non-evidence-based folk remedies or unconsciously using hormone replacement therapies.

We have a valuable tool at our disposal to evaluate and visualize a woman's transition from the reproductive period to the menopausal period, the Stages of Reproductive Aging Workshop + 10 (STRAW+10) criteria. This criterion refers to the changes in reproductive function during the perimenopausal period. The (STRAW) + 10 study was conducted with support from the National Institute on Aging and Office of Research on Women's Health of the National Institutes of Health, The North American Menopause Society, the American Society for Reproductive Medicine, the International Menopause Society, and the Endocrine Society. Scientists examined issues such as changes in ovarian markers of reproductive aging (including menstrual, endocrine, and anti-Müllerian hormone), inhibin-B, follicle-stimulating hormone, and the effect of changes in their levels on the number of antral follicles in the context of chronic disease and endocrine disorders.^{12,13}

The Meno-D is a questionnaire that helps rate the severity of symptoms of perimenopausal depression. We adapted and translated the Meno-D—Perimenopausal Depression Scale¹⁴ into Turkish and verified the validity and reliability of its psychometric properties in women who were perimenopausal and not receiving hormone replacement therapy.

Review of Literature

The intense changes in the perimenopausal period render it a critical stage for developing psychological disorders such as depression and anxiety. A previous study reported an increased risk of major depressive episodes due to hormonal changes during the perimenopausal years.⁷ During perimenopause, depressive symptoms are twice as frequent as those in the pre- and postmenopausal periods, and there is a positive relationship between vasomotor complaints and depression.⁶ While no studies have so far assessed the prevalence of perimenopausal depression, the risk of depression has been reported to increase 2.5 times in the menopausal period.¹³ Some studies have reported a peak prevalence during perimenopause.⁷

Biopsychosocial factors play an essential role in the etiology of perimenopausal depression.¹⁴ These include significant hormonal changes in the hypothalamic-pituitary-gonadal axis, length of the reproductive period, lifestyle habits, number of births, family stress, society's acceptance of elders, cultural perception of menopause, and smoking status.^{14,15} A study conducted in Turkey reported that 75% of women had a negative perception of menopause due to the termination of fertility and sexuality,¹⁶ and another study found that 19% of women experienced clinical depression.¹⁷

Overall, research has shown that perimenopausal depression is a subtype of depression with a unique etiology and characteristic symptoms.¹⁴ The fact that various symptoms and behaviors included in the *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition*'s criteria for major and minor depressive disorder are observed at a severe level during the perimenopausal period supports this hypothesis.¹⁵

Many aspects of clinical depression, major and minor, and depressive symptoms are evaluated and diagnosed by specialists at primary health care institutions (e.g., family medicine, gynecology, and psychiatry outpatient clinics) or hospitals.¹⁶ Early diagnosis of perimenopausal depression using a specialized scale for typical depression can help experts improve women's mental health and better assess the subtle nuance between perimenopausal depression and the tension resulting from the natural symptoms of menopause.^{17,18}

Currently, in Turkey, there are different validated rating scales used to evaluate menopausal symptoms, such as the Menopause Rating Scale,¹⁹ Menopause-Specific Quality of Life Scale,²⁰ Quality of Life Questionnaire, Kupperman Index,²¹ Beck Depression Scale (BDI),²² and Female Sexual Function Scale.²³ These measure depression and depressive symptoms or sub-dimensions of depression. However, these scales do not specifically rank paranoid thoughts, memory problems, concentration problems, low self-esteem, or social withdrawal. Therefore, there was a need for a particular scale designed to measure or monitor the symptom profile of perimenopausal depression. We considered that adapting the internationally-accepted Perimenopausal Depression Scale—the Meno-D scale¹⁴—into Turkish, for the first time, would guide future studies on the prevalence and risk factors for depression and etiological conditions related to perimenopause.

Study Aim

To determine the psychometric properties of the Turkish Version of the Meno-D (T-Meno-D) in women who were not using hormone replacement therapy (HRT) during the perimenopausal period.

Method

Design, Sample, and Setting: This translation and psychometric testing study was conducted at a hospital located in Turkey, between September and

November 2020. It included 169 women between the ages of 40 and 53 years, who visited the menopausal polyclinic with symptoms related to the perimenopausal period. The sample was chosen using purposive sampling methods with the following inclusion criteria: women who spoke Turkish, were not receiving HRT, had not received psychiatric treatment in the past, and had follicle-stimulating hormone (FSH) levels >25 IU/L (STRAW + 10 scale). Women with chronic diseases were excluded because the burden of these could increase the probability of depression and perimenopause symptoms. A total of 380 women were interviewed for meeting the participant criteria. Among the excluded women, 24 refused to participate in the study (because of limited time or lack of interest), 11 stated that they planned to consult a psychiatrist for melancholic feelings, and the rest (n=176) were receiving HRT (estrogen or progesterone preparations used for HRT may conceal depressive symptoms such as anxiety, depression, and irritability via serotonin-related mechanisms²⁴).

To determine the sample size for analysis while developing the scale, researchers suggested different approaches. For example, some researchers have argued that the number of items should be ten times the sample²⁵ while others have argued that it should be four times as much.²⁶ The number of samples studied was based on the literature.^{25,26} Since our study questionnaire contained only 12 items, the ideal sample size would have been 120 patients. However, we enrolled a total of 169 women, which was more than the required sample size.

While developing the Meno-D scale, Kulkarni et al.¹⁴ used the Mini International Neuropsychiatric Interview form. In this study, verbal statements of the women declaring that they did not receive psychiatric or psychological treatment were deemed sufficient when selecting volunteers. Applying the Mini International Neuropsychiatric Interview form is a time-consuming process; thus, we chose not use this because we did not want the women to be in the hospital for a prolonged period of time due to the ongoing coronavirus disease (COVID-19) pandemic.

Translation Process: The Meno-D–Perimenopausal Depression Scale was developed by Kulkarni et al.¹⁴ in 2018, in English. It was translated in this study from English to Turkish and evaluated for its psychometric properties, with permission of the authors or copyright holder. The World Health Organization forward–backward translation method was used during the translation process.²⁷ The advanced level translation of the Meno-D scale was done by a team of two English–Turkish bilingual language experts in accordance with the Turkish language and culture. To test content clarity and validity, the translated scale was evaluated by a team consisting of four midwives, two nurses, an obstetrician, and an independent psychiatrist (who worked in a psychiatric hospital). Their role was to find potentially incomprehensible expressions and evaluate and approve each item of T–Meno–D based on significance, clarity, and simplicity. The scale was administered as a pilot test to 39 women who visited the hospital. A suggestion box was added under each question in the T–Meno–D for the participants to respond to, and the women seemed to have no problems understanding the questions. The scale’s questions were back–translated to English by an expert panel from an accredited private company from a native English–speaking country. These translations were sent to the expert who developed the scale, and, after receiving suggestions, we reached a consensus on an appropriate translation. The purpose of the above translation process was to check for discrepancies between the original and translated instruments in terms of content and meaning.

Instruments: There were three scales and two questionnaire instruments included in the questionnaire administered:

1. *Clinical–Demographic Data Collection:* This part of the questionnaire requested information on the FSH levels (a laboratory result was required) and included the following questions: “Have you ever undergone curettage/had abortions?”; “How many living children do you have?”; “Do you use any

medications?”; “Do you undergo regular gynecological examinations?”; “What is the health problem that brought you here right now?”; and “Do you have problems for which you receive psychological therapy or psychiatric treatment?”

2. *Perimenopausal Depression Scale–Turkish Version (T–Meno–D):* The following 12 symptom areas can be identified by this instrument: energy, paranoia, irritability, self–esteem, isolation, anxiety, somatic symptoms, sleep, weight, sexual interest, memory, and concentration. Each symptom is rated on a scale from 0 to 4 (as the number increased, the symptoms became more serious). The total score can range from 0–48 points (scores 20–24, 24–32, and ≥ 32 points indicate mild perimenopausal depression that required prospective monitoring, moderate perimenopausal depression that required treatment, and severe perimenopausal depression that required treatment, respectively). The 5 Meno–D subscales are somatic, cognitive, self, sleep, and sexual.¹⁴

3. *Kupperman Index:* This was used to determine the severity of the women’s menopausal complaints. It consists of the following 11 weighted menopausal complaints: vasomotor complaints (flushing night sweats), weakness and decreased sensation, insomnia, irritability, unhappiness, dizziness, fatigue, joint and muscle aches, headache, palpitations, and tingling. The answer to each question in the index varies between 0 and 3 points. The index is evaluated based on a total of 51 points. As the index score increases, so do the menopausal symptoms. Scores 14–19, 20–34, and ≥ 35 are classified as mild, moderate, and severe, respectively. Although the original Turkish study assessing the validity and reliability of the original version of the index was not found in the literature, original and modified versions have been used in several studies.^{8,28,29}

4. *Menopause Rating Scale–Turkish:* This was developed by Schneider et al.³⁰ to measure the severity of menopausal symptoms and their impact on the quality of life. The Turkish validity and reliability

study was conducted by Gürkan.¹⁹ The Likert-type scale consists of 11 items, including menopausal complaints, and each item is scored as follows: 0, none; 1, mild; 2, moderate; 3, severe; and 4, very severe. The total score is calculated based on the scores given for each item. The minimum and maximum scores that can be obtained are 0 and 44, respectively. An increase in the total score indicates an increase in the severity of the complaints and a negative impact on patients' quality of life.

The Kupperman index and Menopause Rating Scale were used for scale validity and parallel form tests in this study.

5. *Demographic Questionnaire:* The primary demographic characteristics, such as age, economic and marital status, education level, social insurance, and employment status of the participants, were obtained using a short questionnaire.

Ethical Considerations: The Erenköy Mental and Neurological Diseases Training and Research Hospital Clinical Research Ethics Committee approved this study on February 3, 2020 (approval number 6). This study was conducted as per the Declaration of Helsinki agreement. All participants were verbally informed about the study, and their written consent was obtained. All information of the participants was kept confidential and not shared with anyone.

Data Collection: Most data were collected in person by the researchers in a gynecology and menopause polyclinic. However, 34 women were asked to complete our survey online because they were afraid of the risk of COVID-19 transmission. Due to COVID-19 precautions, it was not safe for patients to stay in the

hospital for a long time. To address this limitation and increase survey participation, we prepared an online survey on Google Docs (Google, Mountain View, CA, United States) and sent it to their WhatsApp numbers.

Data Analysis: The collected data were analyzed using IBM SPSS version 23 and IBM SPSS AMOS version 21 (IBM Corp., Armonk, NY, USA). The T-Meno-D was verified by performing a confirmatory factor analysis. The measurement model established to confirm the known structure consisting of 12 items and five factors was analyzed. As a result, the model did not fit satisfactorily; therefore, model improvement studies were carried out. The internal consistency was examined using Cronbach's alpha coefficient. The intraclass correlation coefficient was calculated while controlling the time-dependent change of the scale. Pearson's correlation coefficient was interpreted for parallel form validity. Factor analysis was done to evaluate whether the items in the scale could be grouped under different dimensions. Factor analysis can be descriptive or confirmatory/hypothesis-supportive. Confirmatory factor analysis is used in scale adaptations as it tests an existing hypothesis about the structure of the items in the scale.³¹

Results

Participant Characteristics

The demographic characteristics of the 169 women who were not taking HRT are presented in **Table 1**. The participants' mean age was 45.80±4.45 years, and most survey respondents were married.

Table 1. Participants' demographic characteristics (n=169)

	n	%
Marital status		
Single	28	16.9
Married	141	83.1
Employment status		
Actively working	75	44.6
Unemployed	86	50.8
Retired	8	4.6

Table 1. Participants’ demographic characteristics (n=169) (Cont.)

	n	%
Education level		
Primary school	9	5.4
High school	127	75.4
College/university	33	19.2
Menopausal phase		
Perimenopause	106	62.7
Early postmenopause	63	37.2
Social insurance		
Public servant insurance	62	36.8
Workers insurance	57	33.7
Other trade men insurance	28	16.5
Unemployed insurance	20	11.8
None	2	1.1
Menstrual complaints		
Vaginal secretion	44	8.1
Hot flashes	2	0.4
Headache	48	8.8
Other	28	5.1
Irregular menstruation	66	12.1
Weakness	88	16.2
Abdominal pain	16	2.9
Irritability	80	14.7
Sweating	46	8.5
Shaking	12	2.2
Tiredness	114	21.0
Total	544	100.0
	Mean	Standard deviation
Age (years)	45.80	4.45
Height (cm)	163.54	5.99
Weight (kg)	65.78	12.22
BMI (kg/m ²)	24.68	4.90

BMI = body mass index

Results of the Construct Validity–Confirmatory Factor Analysis for the Perimenopausal Depression Scale–Turkish Version

The measurement model established to verify the structure contained 12 items and five factors that were analyzed in this study. The results from the analysis demonstrated that model fit indices were not within acceptable limits in the model before the modification. For this reason, suggested and statistically possible modifications were made to the SPSS Statistics

AMOS package. After the modifications, it was observed that the model could be adapted. When the Fit Index Values and Good Fit Values of the Measurement Model were examined before and after the modification, the following values were obtained. Accordingly, it was found that χ^2/df value provided a good fit, whereas GFI, AGFI, IFI, TLI, CFI, RMSEA, and SRMR values provided acceptable fit ($\chi^2/df=2.044$, GFI=0.923, AGFI=0.861 IFI=0.926, TLI(NNFI)=0.903, CFI=0.923, RMSEA=0.079, SRMR=0.064.

First, chi-square (χ^2) decline values (modification index [MI] values) for possible changes in the model were examined by looking at the table of MIs to determine the highest MI. The model was run by connecting the modification indicated by the value in cases where conceptually appropriate. Consequently, the model was validated with a modification (combining item 2 and 4 errors). The verified measurement model is presented in **Figure 1**, which shows the constituent validated measurement model items and their factor

loadings. The fifth item (with a value of 0.871) to be the strongest indicator for the self-esteem dimension. In addition, item 1 (0.464) in the Sexuality sub-dimension, item 7 (0.681) in the Somatic sub-dimension, and item 12 (0.452) in the Cognitive sub-dimension, and item 8 (0.780) in the Sleep sub-dimension are the strongest indicators. **Table 2** examines the factor load of each item in detail. The factor load values for each confirmed item as a result of confirmatory factor analysis were >0.300 .

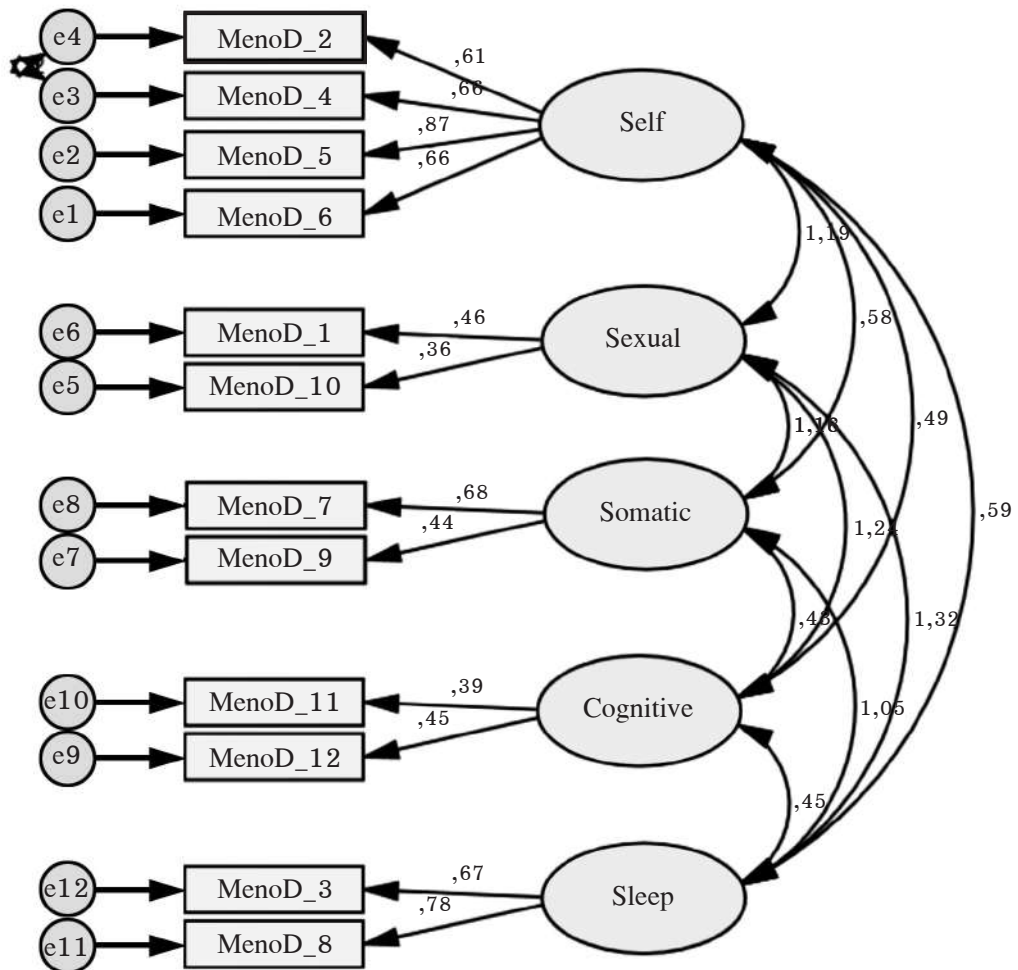


Figure 1. The T-Meno-D confirmatory factor analysis

Table 2. Confirmatory factor analysis results for each item

Item	Expression	Standardized factor loading	P value
Self-esteem			
Meno-D_2	B – Paranoid thinking: <i>Have you experienced an increase in paranoid thoughts over the last 2 weeks?</i>	0.609	***
Meno-D_4	D – Self-esteem: <i>Have you experienced low self-esteem over the last 2 weeks?</i>	0.661	***
Meno-D_5	E – Isolation: <i>Have you withdrawn socially over the last 2 weeks?</i>	0.871	***
Meno-D_6	F – Anxiety: <i>Has your anxiety level increased over the past 2 weeks?</i>	0.661	***
Sexual			
Meno-D_1	A – Low energy: <i>Have you noticed a decrease in your energy over the last 2 weeks?</i>	0.464	***
Meno-D_10	J – Sexual interest: <i>Have you had a decrease in your libido over the last 2 weeks?</i>	0.360	***
Somatic			
Meno-D_7	G – Somatic symptoms: <i>Have you experienced physical symptoms over the last 2 weeks?</i>	0.681	***
Meno-D_9	I – Weight: <i>Have you gained weight (in comparison to your pre-menopause weight)?</i>	0.440	***
Cognitive			
Meno-D_11	K – Memory: <i>Have you noticed any memory-related difficulties over the last 2 weeks?</i>	0.389	0.004**
Meno-D_12	L – Concentration: <i>Have you experienced problems concentrating over the past 2 weeks?</i>	0.452	***
Sleep			
Meno-D_3	C – Irritability: <i>Have you felt more irritable than usual over the last 2 weeks?</i>	0.670	***
Meno-D_8	H – Sleep disturbance: <i>Have you experienced sleep disturbances over the last 2 weeks?</i>	0.780	***

***p<0.001 **p<0.01

Second, the goodness-of-fit values were examined based on the confirmatory factor analysis results. Although the most common χ^2 test was used to evaluate the goodness-of-fit to the data, it was sensitive to the sample size of the χ^2 test. As the sample size increased, it tended to reject the χ^2 test model and accept low sample numbers. For this reason, many alternative goodness-of-fit values were developed to the square.

In this study, the fit index values for the measurement model were created with 12 items and five factors. The most widely used χ^2 goodness-of-fit value was examined, and the model was found to be significant. However, since the χ^2 value was susceptible to the sample size, this value alone was not sufficient to evaluate the fit between the model and the data. Therefore, other fit values were also examined. When

the fit index values obtained for the measurement model were examined, the χ^2 /standard deviation value provided a good fit. In contrast, the goodness-of-fit index, adjusted goodness-of-fit index, incremental fit index, Tucker-Lewis index, comparative fit index, root mean square error of approximation, and standardized root mean square residual values provided acceptable fits.

Table 3 shows that the reliability level of the T-Meno-D, validated with 12 items and five factors, was 0.830 and thus considered sufficient (Cronbach's alpha >0.7). In addition, when the total correlations between items in the scale were examined, no value was <0.3, and there were no items that negatively affected Cronbach's alpha value.

Table 3. Reliability analysis results

	Item-total correlation	Cronbach's alpha if item was deleted	Cronbach's alpha
Total Scale			0.830
Self-esteem			
B - Paranoid thinking	0.527	0.816	
D - Self-esteem	0.563	0.815	
E - Isolation	0.638	0.805	
F - Anxiety	0.508	0.816	
Sexual			
A - Low energy	0.549	0.812	
J - Sexual interest	0.461	0.821	
Somatic			
G - Somatic symptoms	0.496	0.817	
I - Weight	0.440	0.822	
Cognitive			
K - Memory	0.332	0.831	
L - Concentration	0.382	0.829	
Sleep			
C - Irritability	0.591	0.810	
H - Sleep disturbance	0.597	0.808	

To measure the stability of the T-Meno-D, 39 of 169 (23%) participants in the study were reevaluated with the scale after 1 month. There was a very high, statistically significant agreement between the retest and first test (intraclass correlation coefficient=0.833). Accordingly, the T-Meno-D did not change over time. In addition, its sub-dimensions had a high, statistically significant agreement between the retest and first test.

The relationship between the forms was calculated by Pearson Product Moments correlation, and the reliability coefficient was calculated. **Table 4** shows the statistically significant, highly positive linear relationships between the T-Meno-D, Kupperman Index, and Menopausal Symptoms Rating Scale scores (p<0.01). The increase in the correlation coefficient indicates that the equivalence of the scales increases.³²

Table 4. Comparison of the relationships between the T-Meno-D and Kupperman Index, and Menopausal Symptoms Rating Scale (Parallel Form)

		Meno-DTr
Kupperman Index	r	0.747**
	p	0.000
Menopausal Symptoms Rating Scale	r	0.829**
	p	0.000

**p<0.01

Meno-DTr = Turkish Meno-D Perimenopausal Depression Scale

Discussion

The results of this study demonstrated that the T–Meno–D is a reliable and valid tool for measuring and assessing the perimenopausal symptoms of depression in Turkish women in both hospital and primary or community–based settings.

A high internal consistency coefficient is vital to ensure a homogeneous structure.³³ In this study, Cronbach’s alpha coefficient for the internal consistency of the scale was high (0.830). Even the five subscales of the original Meno–D exhibited high–internal consistency with values of composite reliability above the cutoff point of 0.70.¹⁴ Cronbach’s alpha values reported in similar studies were as follows: the Greene Climacteric Scale Portuguese version, up to 0.80³⁴; the Turkish version of the Menopause Rating Scale, 0.84¹⁹; the Turkish Version of the Edinburg Depression Scale (EPDS), 0.79²²; and the Postpartum Depression Screening Scale (PDSS), 0.94.³⁵ In this study, the fact that no item affected Cronbach’s alpha value negatively in the overall item correlations (**Table 3**) supports the reliability of the scale. When Doğan and Çötök³⁶ were preparing the Turkish version of the Oxford Happiness Questionnaire, they removed a question from the scale, as the item–total correlation value was <0.30. Although a non–cultural feature of this scale was its evaluation of sexual desire and energy, the total correlation of sexuality was also high in our study. In Aydin and Aslan’s study on the adaptation of the female sexual function index,²³ sexual desire had a scale sub–dimension correlation of 0.89, and this value was similar to that in our study. One of the objectives in the reliability assessment was to determine whether the participant could respond to a repeated assessment in a consistent way to the first assessment.³³ The correlation analysis in this regard was expected to show a positive, high–level correlation. In this study, there was a very high, statistically significant agreement between the total scale and sub–dimension scores from the test and

retest (intraclass correlation coefficient=0.833). Aydin and Aslan found a retest correlation coefficient of 0.75 and Cronbach’s alpha coefficients of 0.98 and 0.92 for the menopausal symptom assessment scale.^{19,23}

When evaluating the parallel form, statistically significant moderate positive linear relationships found between the Meno–D scale scores, the Kupperman Index and Menopausal Symptoms Rating Scale indicated that the scale was a powerful instrument. The use of these scales in Turkish women experiencing menopause was approved based on their reliability and response effect sizes.²⁹ In a similar study³⁵ the criterion–related validity of the PDSS in Turkish women was examined and found to have a strong relationship between the PDSS, BDI, and EPDS.

Another study³⁷ showed that the postmenopausal status in women in Turkey was perceived as maturity, and the women had a low tendency toward depression at the beginning of menopause. However, Coşkun in 2008³⁸ and Yanikkerem et al. in 2018³⁹ reported that both perimenopausal and menopausal depression had significantly increased in Turkish women. Current data are insufficient to draw general conclusions at a national level; therefore, new data on menopausal depression in Turkey are needed to confirm if this tendency continues today. Avis et al.⁴⁰ stated, “psychological symptoms in menopause do not have a universal definition and differ between cultures.” This critical statement motivated us to conduct this study.

Limitations

This study was conducted in a city and an institution located in an area with one of the highest population densities and cultural diversity in the country. As a result, the participant group consisted of women from different education levels and cultures. Therefore, the T–Meno–D scale could be used efficiently throughout the country. COVID–19–related restrictions were put in place during the data collection phase of the scale. To ensure participants’ safety and reduce the time

spent at the hospital, we administered the questionnaire using online forms. Firstly, we believe that a lack of face-to-face communication might have led to participants being reluctant to answer a few questions. Moreover, some participants refused to answer questions pertaining to sexual desire, stating that they were embarrassed to disclose this information in the company of their caretakers. This behavior indicated that some women dismiss the changes in sexuality experienced during the menopausal period. Second, the use of medications for chronic diseases and the use of alternative medicine methods for menopausal symptoms made it difficult for researchers to accurately select samples. It remains unknown how such preparations and methods affect the existing perimenopausal symptoms. The exclusion of HRT recipients and chronic patients in this study is a significant limitation. Therefore, it is thought that using this scale in future studies involving women from these groups will help us obtain more meaningful results.

Conclusions and Implications for Nursing Practice

The T-Meno-D was able to identify the somatic symptoms associated with menopausal depression in women who are perimenopausal in Turkey and helped assess depression severity and its associated symptoms. This allowed for treatments and therapies for perimenopause to be developed individually and in the early period. This intervention may reduce the possible burden on the country's health insurance expenses and protect the mental health of women and society.

The T-Meno-D is a valid and reliable questionnaire that can be used to assess perimenopausal depression. While determining the suitability of the scale in the Turkish culture, we found that it could be used in similar cultures and other proximal Turkish-speaking countries. Hence, our results are also significant at an international level. Nurses can use this scale to screen and appropriately manage this type of depression that indirectly threatens women's health as it is challenging

to differentiate and progresses implicitly. Some may find it less expensive for nurses to administer this questionnaire, and this facilitating situation can help women express themselves better. The use of this tool by nurses will allow for a more straightforward diagnosis of typical depression.

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การทดสอบแบบประเมินทางจิตวิทยาของแบบวัดภาวะซึมเศร้าในวัยใกล้หมดประจำเดือน-ฉบับภาษาตุรกี

Hülya Tosun,* Nilay Gül Bal, Jayasri Kulkarni

บทคัดย่อ: ความแปรปรวนของฮอร์โมนในวัยใกล้หมดประจำเดือนทำให้เกิดการเปลี่ยนแปลงของอาการทางระบบประสาทอัตโนมัติ ความวิตกกังวลเกี่ยวกับอาการเจ็บป่วยทางร่างกาย เมแทบอลิซึม ภาวะการรู้คิดและรอบประจำเดือนที่อาจนำไปสู่ภาวะซึมเศร้า การศึกษานี้ได้ดัดแปลงและแปลแบบวัดภาวะซึมเศร้าในวัยใกล้หมดประจำเดือนจากภาษาอังกฤษเป็นภาษาตุรกีและตรวจสอบความตรงและความเที่ยงที่เป็นคุณสมบัติทางจิตวิทยาในสตรีวัยใกล้หมดประจำเดือนที่ไม่ได้รับการบำบัดด้วยฮอร์โมนทดแทน การศึกษานี้ดำเนินการระหว่างเดือนกันยายนถึงพฤศจิกายน พ.ศ. 2563 ในกลุ่มสตรีจำนวน 169 ราย อายุระหว่าง 40 ถึง 53 ปี ที่มีอาการในวัยใกล้หมดประจำเดือนซึ่งไปรักษาที่คลินิกของรัฐแห่งหนึ่ง เครื่องมือวิจัยที่ใช้ประกอบด้วยแบบวัดภาวะซึมเศร้าในวัยใกล้หมดประจำเดือน-ฉบับภาษาตุรกี ดัชนีคัพเปอร์แมน แบบวัดระดับอาการในภาวะหมดประจำเดือน และแบบสอบถามข้อมูลส่วนบุคคลของตัวอย่าง ในการวิเคราะห์ข้อมูล ใช้การวิเคราะห์ห้อยค์ประกอบเชิงยืนยัน คำลัสมประสิทธิ์อัลฟาของครอนบาคและสัมประสิทธิ์สหสัมพันธ์

แบบวัดโดยรวมทั้งฉบับและมิตี้อยู่ทั้ง 5 ด้านของ แบบวัดภาวะซึมเศร้าในวัยใกล้หมดประจำเดือน-ฉบับภาษาตุรกี มีคะแนนความสอดคล้องภายในที่ยอมรับได้ มีความตรงตามโครงสร้างและความตรงตามเกณฑ์ในระดับดี และสัมประสิทธิ์สหสัมพันธ์ภายในชั้นอยู่ในระดับสูง ดังนั้น แบบวัดภาวะซึมเศร้าในวัยใกล้หมดประจำเดือน ฉบับแปลเป็นภาษาตุรกีทั้งโดยรวมและรายด้านนี้ จึงเหมาะสำหรับใช้ในสตรีชาวตุรกี ข้อเสนอแนะต่อไป คือ ควรมีการทดสอบเพิ่มเติมในสตรีที่ได้รับการบำบัดด้วยฮอร์โมนทดแทน พยาบาลด้านสุขภาพจิตและพยาบาลผดุงครรภ์สามารถใช้แบบวัดภาวะซึมเศร้าในวัยใกล้หมดประจำเดือน-ฉบับภาษาตุรกีเพื่อแยกแยะอาการซึมเศร้าทั่วไปจากภาวะซึมเศร้าในวัยใกล้หมดประจำเดือนของสตรีที่เข้ารับการรักษาในคลินิกผู้ป่วยนอกหรือคลินิกวัยหมดประจำเดือน หรือในบริบทชุมชนด้านการดูแลสุขภาพจิต

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คำสำคัญ: แบบวัดระดับภาวะซึมเศร้า ภาวะใกล้หมดประจำเดือน การทดสอบแบบประเมินทางจิตวิทยา การแปลภาษา ภาษาตุรกี การศึกษาด้านความตรง

Correspondence to: Hülya Tosun,* Kütahya Health Science University, Midwifery Department, Evliya Çelebi Campus, 43000. Kütahya, Turkey. E-mail: hulyaerbaba3@hotmail.com

Nilay Gül Bal, Erenköy Mental and Psychiatric Disorders Training and Research Hospital 19 Mayıs, Sinan Ercan Cd. No:23, 34736 Kadıköy/İstanbul. E-mail: nilaybal27@gmail.com

Jayasri Kulkarni, Monash Alfred Psychiatry Research Centre (MAPrc), Central Clinical School, Monash University and The Alfred Hospital, Melbourne, Victoria, Australia. E-mail: jayashri.kulkarni@monash.edu