



## Adaptation of Menopausal Spousal Support Questionnaire into Turkish: Validity and reliability study

### Menopoz Eş Desteği Ölçeği'nin Türkçeye uyarlanması: Geçerlik ve güvenilirlik çalışması

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#### ABSTRACT

**Aim:** This study focused on the pivotal role of spouses in providing comprehensive and enduring support for menopausal women. The primary objectives were to assess the validity and reliability of the Menopause Spousal Support Scale and to adapt it for use in the Turkish context.

**Methods:** The research involved a cohort of 384 women aged 45-60, living with their husbands and not undergoing hormone replacement therapy. Data were gathered through face-to-face interviews utilizing an "Introductory Information Form" and the "Menopausal Spousal Support Questionnaire." The scale's validity was assessed through examinations of language, content, and construct, while its internal consistency and test-retest reliability were also evaluated.

**Results:** Exploratory factor analysis unveiled a four-factor structure, accounting for 60.2% of the total variance in the scale. Confirmatory factor analysis confirmed the compatibility of the scale. The Cronbach's Alpha coefficient for the scale was 0.96. Furthermore, item-total score correlations and test-retest analysis outcomes demonstrated strong, positive, and statistically significant results.

**Conclusion:** The Turkish adaptation of the Menopause Spousal Support Scale has been proven to be a highly valid and reliable instrument for assessing the support received by menopausal women from their spouses.

**Keywords:** menopause; nursing; spouses; women

#### ÖZ

**Amaç:** Menopozal dönemdeki kadınlarda eş, kapsamlı ve sürdürülebilir desteği sağlayan kişidir. Bu çalışmanın amacı Menopoz Eş Desteği Ölçeği'nin geçerlik ve güvenilirlik analizlerinin yapılarak, ölçeğin Türkçeye uyarlanmasıdır.

**Yöntem:** Araştırma grubunu 45-60 yaş arasında olan, eşile birlikte yaşayan ve hormon replasman tedavisi almayan 384 kadın oluşturmuştur. Veriler "Tanıtıcı Bilgi Formu" ve "Menopoz Eş Desteği Ölçeği" kullanılarak yüz yüze görüşme yöntemiyle toplanmıştır. Ölçeğin dil, içerik ve yapı geçerlikleri, iç tutarlılık, test-tekrar test güvenilirlikleri analiz edildi.

**Bulgular:** Açıklayıcı faktör analizine göre ölçeğin toplam varyansını %60.2 açıklayan dört faktörlü yapı elde edildi. Doğrulamalı faktör analizi sonucunda ölçeğin uyumlu olduğu saptandı. Ölçeğin Cronbach's Alfa katsayısı 0.96 olarak belirlendi. Madde-toplam puan korelasyonu ve test-tekrar test analizi sonuçlarının pozitif yönlü, yüksek düzeyde ve anlamlı olduğu belirlendi.

**Sonuçlar:** Menopoz Eş Desteği Ölçeği'nin Türkçeye uyarlanan formunun yüksek düzeyde geçerli ve güvenilir bir araç olduğu saptandı.

**Anahtar kelimeler:** eş desteği; hemşirelik; kadın; menopoz

#### Introduction

Menopause represents a significant life transition for women as they transition from their reproductive years to a state of non-reproductive capacity, typically due to declining ovarian function (Vardar et al., 2020). This transformative period encompasses three distinct stages: premenopause, menopause, and postmenopause. Premenopause signifies the time when menstruation ceases, and fertility declines. Menopause, on the other hand, is defined by the absence of menstruation for one year following the last menstrual cycle. The postmenopausal phase extends from one year after menopause to the onset of old age (Gürler, 2017; Ulusoy & Kukulcu, 2013). While the age range for menopause varies between 40 and 60, the most influential determinant is an individual's genetic makeup (Monterrosa-Castro et al., 2013).

The health and well-being of middle-aged women are globally recognized as important public health concerns, with over 80% of women facing various challenges during the menopausal years (Duman & Taşhan, 2018; Gürler, 2017). Menopause can bring about a range of symptoms affecting various aspects of a woman's health, including vasomotor

complaints, emotional changes, alterations in sexual function, and musculoskeletal issues due to hormonal fluctuations. Furthermore, it can induce shifts in women's family and work lives and influence their self-perception (Mannell, 2023). Given that the life expectancy for women in Turkey is 83 years (Turkey Demographic and Health Survey, 2018), women spend approximately one-third of their lives in the menopausal stage. In addition to the physiological and psychological changes accompanying menopause, women may encounter adjustments in their family dynamics, work responsibilities, and social interactions, influencing their roles as wives, mothers, colleagues, and friends. Consequently, menopause emerges as a crucial life phase, and enhancing women's social support networks can significantly alleviate physiological and psychological challenges linked to this transition (Kökkaya, 2018; Li et al., 2016; Zhao et al., 2019).

Social support systems encompass all interpersonal relationships that hold significance in individuals' lives, providing emotional, mental, and financial assistance when needed (Mannell, 2023). Research has demonstrated that social support can have a positive impact on psychological well-being

and effectively reduce the risk of mood disorders in women during the perimenopausal period (Kökkaya, 2018; Zhao et al., 2019). Among these vital sources of support, spouses play a crucial role. Spousal support is particularly significant during this pivotal stage in women's lives, yet there is currently no standardized measurement tool for assessing spousal support during menopause (Yıldırım, 2004).

While social support scales, including spousal support, exist in Turkey, dedicated scales for assessing menopause-related spousal support are currently unavailable. In light of this context, the present study was designed to undertake a validity and reliability assessment as part of the adaptation of the Menopausal Spousal Support Questionnaire into Turkish.

## Methods

The study was conducted between May and December 2022, with women attending family health centers affiliated with a public health institution. The study population comprised women aged 45 and above. To determine the sample size, a minimum of 10 times the number of items in the scale (17 items) was used as a guideline. According to the literature on determining the psychometric properties of the scale, reaching at least 340 individuals (Çokluk et al., 2014) or 20 times the number of items (Alpar, 2012) was considered appropriate. It is also recommended to conduct the test-retest phase with approximately 25% of the sample (Alpar, 2012). Consequently, the aim was to reach a minimum of 340 participants, and a total of 384 individuals were reached. Since there were no missing or erroneous data, the data of all reached individuals were included in the analysis. Inclusion criteria encompassed married women between the ages of 45-60, residing with their husbands, and not having undergone hormone replacement therapy within the three months preceding the study. Data collection utilized the "Participant Information Form," consisting of 21 questions related to descriptive characteristics, including age, education, employment, pregnancy history, number of children, cohabitation status, and menopause duration, along with the "Menopausal Spousal Support Questionnaire."

### Menopausal Spousal Support Questionnaire

The Menopausal Spousal Support Questionnaire, developed by Intan Idiana et al. (2022) is a Likert-type scale consisting of 17 items categorized into four sub-dimensions. The first five questions assess emotional support, questions 6, 7, and 8 pertain to helping support, questions 9, 10, 11, 12, 13, and 14 address caring support, while questions 15, 16, and 17 focus on sexual intimacy support. The original scale employed a 10-point Visual Numeric Scale (VNS) for each item, ranging from 1 (never) to 10 (almost always), with higher scores indicating a greater level of perceived spousal support (Intan Idiana et al., 2022).

### Data collection

The research team collected data using face-to-face interviews, with the participants' responses recorded in a data evaluation program. Additionally, a test-retest procedure was administered to 50 women at two-week intervals.

### Data analysis

The data collected for this study were processed and analyzed using statistical software, including SPSS 22.0 and AMOS (Analysis of Moment Structures) 25. The scale's original factor structure was assessed through confirmatory factor analysis. Internal consistency was examined using the Cronbach's Alpha coefficient, along with test-retest analysis using dependent groups t-tests and ICC (Intraclass Correlation

Coefficient). Discriminatory power was assessed by comparing the lower 27% and upper 27% groups using dependent groups t-tests. Convergent and divergent validity were determined by calculating AVE (Average Variance Extracted) and CR (Composite Reliability) values.

### Ethical dimension of the study

Ethical approval was obtained from the Lokman Hekim University Scientific Research Ethics Committee (Approval Date: 15.03.2022, Decision Number: 1, Meeting Number: 2022/5). We also secured permission from the original scale's authors for data collection. All research participants provided informed, voluntary written consent. The research adhered to ethical principles, followed established research and publication standards, and was conducted in accordance with the Declaration of Helsinki.

## Results

In the research group, 39.3% of women were found to be literate, 73.2% were not employed, and 49.7% reported having income equal to expenses. The average age of the women was 52.63 years (SD=6.352, Min=21, Max=72), while the average age of their husbands was 56.20 years (SD=6.935, Min=20, Max=80). The mean age at first marriage was 21.01 years (SD=4.245, Min=14, Max=43), with an average marriage duration of 30.48 years (SD=8.368, Min=1, Max=54). Women had a mean of 3.78 pregnancies (SD=2.296, Min=0, Max=19) and an average of 3.26 living children (SD=1.769, Min=0, Max=10).

Notably, 64.1% of the participants reported not having menstruated in the last five years, and 64.6% stated that they could frequently manage their menopausal complaints.

Table 1. Confirmatory factor analysis index values

Index	Normal Value*	Acceptable Value**	Menopause Spousal Support Questionnaire
$\chi^2/sd$	<2	<5	3.41
GFI	>0.95	>0.90	0.90
AGFI	>0.95	>0.90	0.90
CFI	>0.95	>0.90	0.96
RMSEA	<0.05	<0.08	0.08
RMR	<0.05	<0.08	0.07

\*, \*\* References: (Hooper & Mullen, 2008; Schumacker & Lomax, 2010; Waltz et al., 2010; Wang & Wang, 2012).

## Results related to scale validity stages

### Language validity

To establish the language validity of the original Menopause Spousal Support Questionnaire-MSSQ, a team of five experts in women's health, proficient in both Turkish and English, conducted the translation. Subsequently, the researchers assessed the translated items, finalizing the Turkish version. An independent linguist, unacquainted with the original scale, then translated the Turkish text into English, ensuring consistency with the original version.

### Content validity

The original and language-validated versions of the Menopause Spousal Support Questionnaire were distributed via email to 17 experts in women's health, including six professors, five associate professors, and six assistant professors specializing in nursing and midwifery. Feedback from these experts led to revisions in the 3rd, 7th, 11th, and 16th questionnaire items.

The analysis using Kendall's coefficient of concordance (W) to assess the experts' opinions revealed no statistically significant difference among them (W=0.306; p=0.000, p<0.05).

Table 2. Confirmatory factor analysis factor loadings

Sub-dimension	Items and Factors		$\beta$	Std. $\beta$	S.Error	t	p
Emotional Support	MSSQ5	F1	1.000	.848			
	MSSQ4	F1	1.158	.904	.048	24.242	p<0.001
	MSSQ3	F1	1.145	.901	.047	24.316	p<0.001
	MSSQ2	F1	1.117	.913	.045	24.936	p<0.001
	MSSQ1	F1	1.155	.931	.045	25.752	p<0.001
Instrumental Support	MSSQ8	F2	1.000	.770			
	MSSQ7	F2	1.016	.727	.073	13.921	p<0.001
	MSSQ6	F2	1.091	.801	.071	15.358	p<0.001
	MSSQ9	F3	1.000	.808			
Appraisal Support	MSSQ10	F3	1.041	.845	.053	19.726	p<0.001
	MSSQ11	F3	1.038	.893	.048	21.505	p<0.001
	MSSQ12	F3	1.016	.886	.048	21.219	p<0.001
	MSSQ13	F3	.918	.818	.049	18.787	p<0.001
	MSSQ14	F3	.916	.841	.047	19.529	p<0.001
	MSSQ15	F4	1.000	.768			
Sexual Intimacy Support	MSSQ16	F4	1.232	.907	.065	18.991	p<0.001
	MSSQ17	F4	1.213	.886	.065	18.558	p<0.001

Standardized factor loadings and t values are given in Table 2.

**Construct validity**

The construct validity of the Menopause Spousal Support Questionnaire was assessed through confirmatory factor analysis. The validity and reliability of the scale were evaluated using the Kaiser-Meyer-Olkin (KMO) test and Barlett's Test of Sphericity. The KMO test yielded a value of 0.960, indicating that the sample size was adequate for conducting factor analysis. The result of Barlett's test indicated a significant relationship among the variables included in the factor analysis (p=0.000, p<0.05), confirming the suitability of the data for factor analysis.

**Confirmatory factor analysis**

Confirmatory factor analysis were performed to assess the alignment of the predetermined factor structure of the scale with the data collected from the new sample. We utilized widely accepted goodness-of-fit indices in the study, and the results of confirmatory factor analysis are summarized in Table 1. The scale's fit statistics from the CFA (p<0.01;  $\chi^2/sd=3.41$ ; RMSEA=0.080; CFI=.96; GFI=.90) demonstrated that the previously established factor structure of the scale was acceptable (Table 1). Upon scrutinizing the standardized coefficients, it became evident that factor loadings were notably high, standard error values were minimal, and t values achieved significance (p<0.01). These outcomes affirm the construct

**Results related to scale reliability stages**

**Reliability and item analysis**

Table 3. Findings obtained from exploratory factor analysis and eigenvalues of the item

	Item-total correlation	Cronbach alpha when article deleted
MSSQ1	.851	.963
MSSQ2	.836	.963
MSSQ3	.827	.963
MSSQ4	.847	.963
MSSQ5	.819	.964
MSSQ6	.674	.966
MSSQ7	.694	.966
MSSQ8	.630	.966
MSSQ9	.802	.964
MSSQ10	.806	.964
MSSQ11	.859	.963
MSSQ12	.845	.963
MSSQ13	.784	.964
MSSQ14	.812	.964
MSSQ15	.697	.965
MSSQ16	.760	.964
MSSQ17	.722	.965

validity of the previously established factor structure.

In order to assess the reliability of the scale, Cronbach's alpha value and item analysis were analyzed. The overall scale reliability, encompassing all 17 items, yielded a Cronbach's Alpha of 0.966. In Table 3, we present the new Cronbach's Alpha values when individual scale items were removed, with item-total correlation values ranging from 0.630 to 0.851.

**Distinctiveness**

To assess discrimination, the scale's total score was divided into Lower 27% and Upper 27% groups, and significant differences between these groups were analyzed. Significant differences between the two groups indicate effective discrimination. The t-test results for the Menopause Spousal Support Questionnaire scores comparing the Lower 27% and Upper 27% groups can be found in Table 4.

It was found that the Menopause Spousal Support Questionnaire showed a significant difference between the Lower 27% and Upper 27% groups (t(206)=-44.231; p=0.000, <0.05).

**Scale score averages, convergent validity and divergent validity**

To assess the construct validity of the variables in the measurement model, the construct reliability (CR-composite reliability) and Average Variance Explained (AVE-average variance extracted) values were examined. Table 5 shows that CR values are greater than AVE values and AVE values are greater than 0.5 (Table 5).

**Test-retest**

To assess the scale's temporal stability in its Turkish adaptation, 50 participants were instructed to complete the scale again at 2-week intervals. High Intraclass Correlation Coefficient and test-retest correlation values demonstrated strong agreement between the measurements, and significant difference was observed in the test-retest correlation values (p<0.05).

**Discussion**

Scale validity refers to the accuracy in measuring the intended variables without introducing confusion from other factors. In contrast, reliability indicates the consistency of the measurement tool in assessing the desired variable while ensuring freedom from errors (DeVellis & Thorpe, 2021). The Menopause Spousal Support Questionnaire has been identified as a multidimensional, valid, and reliable tool, well-suited for the

Table 4. Means of MSSQ scores according to lower 27%-upper 27% groups

Groups	Lower %27 (n=104)		Upper %27 (n=104)		t	SD	p
	Mean	SD	Mean	SD			
MSSQ General	2.616	0.924	8.151	0.880	-44.231	206	<b>0.000</b>
Emotional Support	2.960	1.361	8.748	0.963	-35.419	206	<b>0.000</b>
Instrumental Support	2.430	1.295	7.481	1.802	-23.213	206	<b>0.000</b>
Appraisal Support	2.710	1.213	8.391	0.969	-37.313	206	<b>0.000</b>
Sexual Intimacy Support	2.042	1.112	7.346	1.707	-26.561	206	<b>0.000</b>

Independent Groups T-Test

Turkish population, particularly in assessing spousal support among menopausal women.

Adapting measurement tools to the cultural context of the target society is essential. The transition of these tools, often originally developed in English, from the source language to the target language, helps bridge language and cultural disparities (Deniz, 2007). In our study, we adhered to the recommended steps, including translation, expert evaluation, and back translation, as suggested by the World Health Organization, to promote linguistic and cultural equivalence between the original scale's development context and the adapted population. Content validity assesses how well the entire measurement tool and each individual item fulfill their intended purpose. To achieve this, expert opinions are sought (DeVellis & Thorpe, 2021). In the literature, it is recommended to consult between 5 and 40 experts to ensure objective content validity (Yeşilyurt & Capraz, 2018). In alignment with these guidelines, we obtained expert opinions from a total of 13 individuals, including 8 experts in women's health nursing and 5 in public health nursing. Their feedback helped determine the sufficiency of the scale items in capturing both factual and judgmental data.

Confirmatory Factor Analysis (CFA) is a Structural Equation Model (SEM) used to assess the construct validity of the Menopause Spousal Support Questionnaire, which examines the relationship between observed and latent variables (Brown, 2006). Commonly used goodness-of-fit indices in the literature include Chi-square fit statistics, Root Mean Square Error of Approximation (RMSEA), Standardized Root-mean-Square Residual (SRMR), Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), Goodness-of-Fit Index (GFI), and Adjusted Goodness of Fit Index (AGFI) (Özçoban et al., 2020). An acceptable model has a chi-square-to-degrees of freedom ratio of two or less (Çapık, 2014). Our study found that the data fits the model well. Reliability measures the consistency of participants' responses to scale items (Büyüköztürk, 2012). In the literature, Cronbach's Alpha coefficient is commonly used to assess scale reliability (internal consistency). According to evaluation criteria, if  $0.00 \leq \alpha < 0.40$ , the scale is unreliable; if  $0.40 \leq \alpha < 0.60$ , it has low reliability; if  $0.60 \leq \alpha < 0.80$ , it is highly reliable; and if  $0.80 \leq \alpha < 1.00$ , it is very reliable (Alpar, 2012). The Cronbach's alpha for the Menopause Spousal Support Questionnaire is high (0.96). In the original MSSQ developed by Intan Idiana et al. (2022) the Cronbach's alpha value was 0.93.

Table 5. CR and AVE values

	n	Mean	SD	Min.	Max.	Alpha	CR	AVE	*Test	Re-test (n=50)
									ICC <sup>b</sup>	r <sup>c</sup>
MSSQ General	384	5.440	2.224	1	10	0.966	0.813	0.602	0.899	.851
Emotional Support	384	5.896	2.485	1	10	0.953	0.811	0.599	0.883	.887
Instrumental Support	384	5.039	2.474	1	10	0.803	0.815	0.605	0.901	.920
Appraisal Support	384	5.690	2.358	1	10	0.938	0.808	0.588	0.876	.864
Sexual Intimacy Support	384	4.578	2.527	1	10	0.887	0.822	0.579	0.882	.891

\*p<0.05; AVE: Average Variance Extracted; CR: Composite Reliability

Our study indicates that the scale items are internally consistent and accurately measure the intended variable.

One method for assessing internal consistency, which is indicative of reliability in scales, is through the calculation of item-total correlations (Özçoban et al., 2020). A strong correlation between each item and the total score is essential for items to effectively discriminate. Item-total correlations are expected to be non-negative and should typically be 0.30 or higher (Büyüköztürk, 2012). In our study, the item-total correlation values, consistently exceeding 0.630, strongly confirm the internal consistency of the scale. This demonstrates that the scale items effectively discriminate and serve the same purpose. The t-test was used to compare the mean scores of the lower 27% and upper 27% groups, with scores ranked from highest to lowest. The absence of a significant difference between the two groups implies a limited range between the lowest and highest scores, which suggests that a scale measuring within a narrow range lacks discriminative ability (Schreiber, 2006). In our study, the upper group's scores were significantly higher ( $p < 0.05$ ) than those of the lower group. These results affirm that the scale effectively discriminates and makes sensitive measurements. Convergent validity assesses the extent to which statements are interrelated and linked to their underlying factor. To establish convergent validity, it is expected that the Composite Reliability (CR) values of the scale surpass the Average Variance Extracted (AVE) values, with AVE values typically exceeding 0.5 (Fornell & Larcker, 1981). In our study, we observed that both CR and AVE values met the criteria for convergent validity.

Test-retest reliability involves administering the same measurement tool to the same group under identical conditions at a defined time interval. Consistently obtaining the same results across test-retest applications indicates the tool's stability over time (DeVellis & Thorpe, 2021). The Pearson Correlation Equation was used to assess reliability over time, with the correlation coefficient (r) ranging from "0" to "1". Higher correlation values indicate increased statement effectiveness, while lower values suggest reduced effectiveness (Gözüm & Aksayan, 2003). Our test-retest analysis in this study demonstrates the scale's reliability over a short time.

The landscape of scale development and adaptation practices is continually evolving. It is imperative to ensure that scale development studies remain current to sustain their

relevance in the literature. While the statistical outcomes of the scale's adaptation to Turkish proved consistent in this study, it is advisable to undertake research involving larger cohorts. The evaluation was limited to participants from family health centers affiliated with a public health facility; thus, broader studies are warranted.

## Conclusion

The validity and reliability analyses conducted for the adaptation of the Menopause Spousal Support Questionnaire to the Turkish population affirm its status as a valid and reliable 17-item measurement tool, featuring four sub-dimensions. The scale can effectively assess spousal support among menopausal women in Turkish society and its influence on various menopause-related psychiatric, somatic, and social issues. It serves as a valuable tool for research until dedicated Turkish scales are developed. Moreover, it can facilitate the creation and assessment of new scales, contributing to research on their effectiveness.

## Conflict of Interest

We declare "No conflict of interest for this study".

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## Ethics Committee Approval

Ethical approval was obtained from the Lokman Hekim University Scientific Research Ethics Committee (Approval Date: 15.03.2022, Decision Number: 1, Meeting Number: 2022/5).

## Informed Consent

Written consent was obtained from the participant(s).

## Peer-Review

Externally peer-reviewed.

## Author Contributions

D.Ş.K.: Study Conception and Design, Analysis and Interpretation of Results, Draft Manuscript Preparation.

E.İ.K.: Study Conception and Design, Draft Manuscript Preparation.

O.K.: Data Collect, Draft Manuscript Preparation.

## References

Alpar, R. (2012). *Uygulamalı istatistik ve geçerlik güvenilirlik* (İkinci baskı). Ankara, Detay Yayıncılık (in Turkish).

Özçoban Aslantekin, F., Gelebek, N., Erkal Aksoy, Y., & Yalnız Dilcen, H. (2020). Prenatal Care Satisfaction Scale: Validity and reliability study. *Journal of Academic Research in Nursing*, 6(1), 141-147.

Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. The Guilford Press, New York, USA.

Büyüköztürk, Ş. (2012). *Data analysis handbook*. 17th Edition. Ankara; Pegem Publishing, 167-170.

Çokluk, Ö., Şekericioğlu, G., & Büyüköztürk, Ş. (2014). *Sosyal bilimler için çok değişkenli istatistik SPSS ve Lisrel uygulamaları* (Üçüncü baskı). Pegem Akademi, Ankara, 177-246. (in Turkish).

Çapık, C. (2014). Use of confirmatory factor analysis in validity and reliability studies. *Journal of Anatolia Nursing and Health Sciences*, 17(3), 196-205.

Deniz, Z. K. (2007). The adaptation of psychological scales. *Ankara University Journal of Faculty of Educational Science*, 40(1), 1-16.

Duman, M., & Taşhan, S. T. (2018). The effect of sleep hygiene education and relaxation exercises on insomnia among postmenopausal women: A randomized clinical trial. *International Journal of Nursing Practice*, 24(4), 1-8.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement errors. *Journal of Marketing Research*, 18(2), 39-50.

Gözüm, S., & Aksayan, S. (2003). Guidelines for cross-cultural adaptation of scales II: Psychometric properties and cross-cultural comparison. *Hemşirelikte Araştırma Geliştirme Dergisi*, 1, 3-14.

Gürler, M., Kızıllırmak, A., & Başer, M. (2017). *The effect of aromatherapy on sleep and quality of life in menopausal women*. [Master's thesis]. Nevşehir Hacı Bektaş Veli University, Nevşehir.

Hooper, D., Coughlan, J., Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53-60.

Intan Idiana, H., Nik Hazlina, N. H., Zaharah, Z., Azidah, A. K., & Mohd Zarawi, M. N. (2022). Developing and validating the menopausal spousal support questionnaire (MSSQ) for menopausal women. *Maturitas*, 158, 1-9.

Mannell, D. (2023). *The experience of receiving marital support during menopause: A generic qualitative inquiry* [Doctoral dissertation]. Capella University.

DeVellis, R. F., & Thorpe, C. T. (2021). *Scale development: Theory and applications*. Sage publications.

Kökkaya, D. (2018). Klimakterik dönemdeki kadınlarda algılanan sosyal desteğin menopozal tutum ve yakınmalar üzerine etkisi [Yüksek Lisans Tezi]. Manisa Celal Bayar Üniversitesi, Manisa.

Li, R., Ma, M., Xiao, X., Xu, Y., Chen, X., & Li, B. (2016). Perimenopausal syndrome and mood disorders in perimenopause: Prevalence, severity, relationships, and risk factors. *Medicine*, 95, E4466.

Monterrosa-Castro, A., Marrugo-Flórez, M., Romero-Pérez, I., Fernández-Alonso, A. M., Chedraui, P., & Pérez-López, F. R. (2013). Assessment of sleep quality and correlates in a large cohort of Colombian women around menopause. *Menopause*, 20(4), 464-469. <https://doi.org/10.1097/GME.0b013e31826e7649>

Schreiber, J. B., Stage, F. K., King, J., Amaury, N., & Barlow, E. A. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *Journal of Educational Research*, 99(6), 323-337.

Turkey Demographic and Health Survey, 2018. (2018). *Hacettepe Üniversitesi, Türkiye Nüfus ve Sağlık Araştırması 2018 Raporu*. [https://fs.hacettepe.edu.tr/hips/dosyalar/Ara%C5%9Ft%C4%B1malar%20%20raporlar/2018%20TNSA/TNSA2018\\_ana\\_Rapor\\_compressed.pdf](https://fs.hacettepe.edu.tr/hips/dosyalar/Ara%C5%9Ft%C4%B1malar%20%20raporlar/2018%20TNSA/TNSA2018_ana_Rapor_compressed.pdf)

Ulusoy, M. N., & Kukulu, K. (2013). Relationship between menopause and sleep problems. *Gümüşhane University Journal of Health Sciences*, 2(2), 206-213.

Vardar, O., Özkan, S., & Sercekus, P. (2020). Effects of exercise program on sleep quality in postmenopausal women. *Cukurova Medical Journal*, 45(3), 1108-1114.

Yeşilyurt, S., & Çapraz, C. (2018). Ölçek geliştirme çalışmalarında kullanılan kapsam geçerliği için bir yol haritası. *Erzincan Üniversitesi Eğitim Fakültesi Dergisi*, 20(1), 251-264.

Yıldırım, İ. (2004). Development of the spousal support scale. *Turkish Psychological Counseling and Guidance Journal*, 3(22), 19-26.

Waltz, C. F., Strickland, O. L., & Lenz, E. R. (2010). *Measurement in nursing and health research*. New York: Springer Publishing Company.

Wang, J., & Wang, X. (2012). *Structural equation modeling: Applications using plus*. West Sussex: John Wiley & Sons.

Zhao, D., Liu, C., Feng, X., Hou, F., Xu, X., & Li, P. (2019). Menopausal symptoms in different substages of perimenopause and their relationships with social support and resilience. *Menopause*, 26(3), 233-239.

## Appendix 1. Turkish version of the Menopausal Spousal Support Questionnaire

Aşağıdaki durumları geçen ay ne sıklıkla yaşadığınızı belirtmek için 1 ile 10 arasında bir puan seçerek işaretleyiniz.

\*10' a yaklaşmak, aşağıdaki durumları eşinizle daha sık deneyimlediğinizi gösterir.

\*1'e yaklaşmak, aşağıdaki durumları eşinizle daha az deneyimlediğinizi gösterir.

EŞİM ÇOĞUNLUKLA	Hiçbir Zaman	Neredeyse Her Zaman
1. Sorunlarımı paylaştığım zaman beni dinler.	1 2 3 4 5 6 7 8 9 10	
2. Benimle sohbet etmek için zaman ayırır.	1 2 3 4 5 6 7 8 9 10	
3. Problemlerimle ilgilenir (Örn. Sağlık sorunları, kişisel problemler gibi).	1 2 3 4 5 6 7 8 9 10	
4. Problemlerim olduğunda beni rahatlatır (Örn: şaka yapar, hikayeler anlatır gibi).	1 2 3 4 5 6 7 8 9 10	
5. Davranışlarımı tolere eder.	1 2 3 4 5 6 7 8 9 10	
6. Gönüllü olarak ev işlerine yardım eder.	1 2 3 4 5 6 7 8 9 10	
7. Alışveriş yaparken bana eşlik eder.	1 2 3 4 5 6 7 8 9 10	
8. Kişisel ihtiyaçlarını benden yardım almadan yapar (Örn: Ütü yapmak, yemek hazırlamak gibi).	1 2 3 4 5 6 7 8 9 10	
9. Rahatsızlıklarımı gidermeye yardımcı olur (Örn: Ovalama, masaj yapma gibi).	1 2 3 4 5 6 7 8 9 10	
10. Ev işlerini yönetme şeklimi takdir eder (Örn. Yemek pişirme, çocukların bakımı ve evin bakımı gibi).	1 2 3 4 5 6 7 8 9 10	
11. Problemlerimi çözerken benimle fikir birliği içindedir.	1 2 3 4 5 6 7 8 9 10	
12. Davranışları ile beni över (Örn. Sözlü değil fakat gülümsemek, isteğinin arttığını göstermek gibi).	1 2 3 4 5 6 7 8 9 10	
13. Problemlerim olduğunda bana tavsiye verir.	1 2 3 4 5 6 7 8 9 10	
14. Beni olaylar hakkında konuşmaya yönlendirir (Örn. Dini konular, sağlık gibi).	1 2 3 4 5 6 7 8 9 10	
15. Benimle cinsel hayatımızdaki konular hakkında konuşur (Örnek: seks sırasında ağrı, huzursuzluk, yorgunluk, cinsel dürtü eksikliği vb.).	1 2 3 4 5 6 7 8 9 10	
16. Bana sevgisini açıkça gösterir (Örnek: aile üyelerinin, halkın ve benzerlerinin önünde).	1 2 3 4 5 6 7 8 9 10	
17. Sevgisini beni okşayarak ve dokunarak gösterir (Örnek: sarılma, el tutma, öpüşme, sarılma vb.).	1 2 3 4 5 6 7 8 9 10	