Adaptation and Psychometric Evaluation of the Evidence-Based Practice Mentoring Scale into Turkish

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ABSTRACT

Objective: This study aimed to adapt the Evidence-Based Practice Mentorship Scale (EBP-Mentorship Scale) into Turkish and to evaluate its psychometric properties among Turkish nurses.
Methods: This methodological study was conducted with 152 nurses between October 2022 and May 2023. The EBP-Mentorship Scale was translated into Turkish, and its content and construct validity were assessed. Confirmatory factor analysis (CFA) was performed to validate the factor structure. Reliability was evaluated using Cronbach's alpha, Pearson's correlation, and intra-class correlation coefficients (ICC).
Results: The Turkish version of the EBP-Mentorship Scale retained the original 8 items and 1-factor structure. CFA results indicated a good model fit ($\chi2/df < 2$, RMSEA < 0.08, CFI > 0.90, GFI > 0.90). The scale demonstrated high internal consistency (Cronbach's alpha = 0.94) and strong test-retest reliability (r = 0.956, $p < .01$; ICC = 0.997). The average variance extracted (AVE = 0.535) and composite reliability (CR = 0.899) values were sufficient, indicating good convergent validity.
Conclusion: The Turkish version of the EBP-Mentorship Scale is a reliable and valid tool for assessing EBP mentorship among Turkish nurses. Its use can enhance the implementation and evaluation of EBP mentoring programs in nursing practice.
Keywords: Evidence-based practice, mentorship, nursing, scale adaption, reliability, validity.

Introduction

As life expectancy increases, health care costs and care burden increase. Appropriate use of resources and improving the quality of care is only possible with evidence-based practices. The use of evidence-based practice is known as the foundation of ensuring quality in healthcare. In order to develop an evidence-based health care approach, it is necessary to conduct research to be implemented in clinics and to create the necessary mechanisms to evaluate the research evidence and deliver the results to nurses (Çopur et al., 2015).

Evidence-based practice (EBP) is a problem-solving method healthcare professionals employ during clinical decision-making. It involves amalgamating research-derived evidence with the practitioner's expertise while also considering the patient's preferences and values (Çamveren & Vatan, 2019). In recent years, the EBP model has seen significant advancements and has been recommended for providing healthcare services in various professional fields, including nursing (Ephraim, 2021). EBP is a crucial link connecting top-tier research with its practical implementation in clinical settings. This connection results in improved patient outcomes, elevated care quality, and cost reductions within the healthcare system (Güngör & Özkütük, 2022; Hooge et al., 2022). However, due to known barriers like limited non-clinical time, perceived lack of institutional support, tradition-based cultures, and a shortage of EBP mentors, many healthcare professionals do not consistently engage in evidence-based practice (Jacobs, 2018; Khan et al., 2021). The presence of EBP mentors is instrumental in cultivating and upholding an environment that fosters EBP principles (Çamveren & Vatan, 2019). Mentoring is utilized in various fields, including health, management, and education.

Mentoring is a process "based on the principle of an experienced healthcare professional serving as a role model to a less experienced one, where counseling and guidance take place" (Çamveren & Vatan, 2019; Melnyk et al., 2012) Mentoring is a professional obligation for nurses and constitutes one of the foundational structures of clinical training and nursing practices (Melnyk et al., 2018). In a research investigation led by Melnyk et al. (2012), over 65% of nurses reported needing access to a mentor skilled in EBP to prioritize EBP in care and to confidently express their intentions and reasons to change any existing practice (Jacobs, 2018; Melnyk et al., 2022; Melnyk et al., 2021). Melnyk and colleagues (2021) have recently introduced a structural equation model. Their research offers support for the idea that mentorship and the promotion of an evidence-based practice culture have a direct impact on the competence and implementation of EBP, and they also have a positive influence on nurses' intention to stay within their respective healthcare institutions (Çamveren & Vatan, 2019). Nonetheless, numerous institutions face the challenge of having a limited number of EBP mentors. It is a common observation that these mentors often have minimal to no time outside of their clinical responsibilities for mentoring, consequently restricting the number of nurses who can benefit from mentorship (Jacobs, 2018). EBP mentors demonstrate extensive expertise thanks to their deep understanding of EBP and ability to enhance the EBP culture in healthcare systems (Çamveren & Vatan, 2019; Hooge et al., 2022). According to the Advancing Research and Clinical Practice Through Close Collaboration (ARCC©) Model, mentors typically acquire this knowledge and skillset through a 5-day training program. Furthermore, mentors acquire the knowledge and skills necessary to foster and align with the EBP culture (Ayhan Öncü, 2018; Çamveren & Vatan, 2019). Mentoring, when part of a multifaceted approach, is recognized as an important facilitator in the conduct of evidence-based science (Kim et al., 2017; Melnyk, 2012; Spiva et al., 2017; Wallen et al., 2010).

Mentoring supports nurses' readiness, belief in the EBP organizational culture, job satisfaction, and group cohesion (Spiva et al., 2017; Wallen et al., 2010). Because of these known benefits, it is critical to have a reliable tool to measure the effectiveness of EBP mentoring offered to nurses.

When Turkish literature is examined, it is seen that validity and reliability studies of various scales have been conducted regarding nurses' attitudes, knowledge levels and barriers to practice regarding evidence-based practice (Çay & Daşbaş, 2020; Yıldız, 2024; Yildiz & Güngörmüş, 2016). These scales are generally aimed at measuring perceptions and attitudes towards EBP at an individual level. However, there is no evaluation specific to mentoring in these studies. The EBP-Mentorship Scale is an original tool for directly evaluating evidence-based practice mentoring and comprehensively measures the quality, effectiveness and impact of the mentoring process on the nurse. In this respect, it differs from existing EBP scales in the Turkish literature and fills an important gap. In this context, the main purpose of this study is to evaluate the validity and reliability of the Turkish adaptation of the EBP-Mentorship Scale developed by Melnyk et al. (2022) and thus to make an original contribution to the literature.

Methods

Type of Study

This methodological research was undertaken by adapting the EBP-Mentorship Scale (EBP- Mentorship Scale) into Turkish to test its validity and reliability in nurses.

Study Population And Sample

The data of the study was collected online from nurses between October 2022 and May 2023. The population of the study consisted of nurses working in the hospital between these dates. The inclusion criteria were (1) having been working as a nurse for at least 2 years, (2) being older than 18 years of age, (3) having no psychiatric issues, and (4) possessing adequate communication skills. In the literature, it is stated that in scale development and adaptation studies, the sample size should be at least 10 to 20 times the number of items. A sample size determined in this range is considered sufficient to obtain valid and reliable results.(Andrew et al., 2019). There are 8 items in the original EBP-Mentorship scale. Hence, the anticipated sample size was between 80 and 160 participants. Consequently, the study included 152 nurses who met the inclusion criteria and consented to participate.

Data Collection Tools

The research data were collected through a descriptive information questionnaire and the EBP-Mentorship Scale. Psychometric assessments of the scale were collected between October 2022 and May 2023. Individuals were eligible for the research if they possessed a nursing designation and were employed within a healthcare system. Study of data collection tools were collected through an online questionnaire created through Google Forms. data collected online were obtained. The research data were collected through a descriptive information questionnaire and the EBP-Mentorship Scale. Online, 122 data sets were obtained. To assess temporal invariance, researchers collected an additional 30 data sets through face-to-face interviews. Subsequently, the analyses were conducted using 152 acquired data sets.

Personal Information Form

This form, which was prepared by the researchers, includes 6 questions that ask for nurses' socio-demographic information (e.g., age, gender, educational status, working unit, type of working, year of study).

EBP-Mentorship Scale

The EBP-Mentorship Scale, comprising eight items, was originally developed for the study conducted by Melnyk et al. in 2022. This scale was designed to assess the extent to which nurses have access to EBP mentors and mentorship support. It employs a 5-point Likert scale (Melnyk et al., 2022). By summing the responses to these items, a final score is calculated, which falls within the range of 8 to 40. A higher score on the scale indicates a greater presence of mentorship support.

Language Validity

The original EBP-Mentoring Scale was independently translated into Turkish by two linguists fluent in both English and Turkish, in accordance with internationally accepted scale adaptation guidelines (Seçer, 2020). The two translated versions were then compared and synthesized into a single draft by the research team. This preliminary Turkish version was subjected to expert assessment for content validity. Specifically, three Turkish linguists, including one expert in psychometrics and scale development, and five nursing academics with expertise in evidence-based practice examined each item for linguistic accuracy, conceptual equivalence, and cultural appropriateness. Based on their feedback, although the basic meaning of the items remained unchanged, minor wording adjustments were suggested to increase clarity and relevance. The revised Turkish version was then back-translated into English by a professional translator who was blind to the original scale. A comparison between the original English version and the back-translated version revealed a high degree of semantic and conceptual similarity, indicating strong linguistic and conceptual equivalence between the two versions. This comprehensive translation and expert validation process ensured that the Turkish version of the scale maintained the integrity and purpose of the original instrument. In addition, both the Turkish and back-translated versions of the final scale were sent to the author who developed the scale, and the pilot implementation phase was initiated after receiving the author's approval.

Content Validity

A content validity assessment was performed to verify both the linguistic and cultural equivalence of the Turkish version of the questionnaire, as well as the content validity of the items using numerical values. For an item to be considered valid in terms of content, the content validity index (CVI) must be greater than 0.80 (Chan & Idris, 2017; Yusoff, 2019). Experts evaluated each item in the scale prepared according to the Davis Technique as "the item is very suitable," "the item is suitable but minor changes are required," "the item needs to be brought into appropriate form" and "not suitable." In the Davis technique, the number of experts who marked the "item is very appropriate" and "item is appropriate but minor change is required" option is divided

by the total number of experts and the content validity index (CVI) for the item is obtained. In CVI, a value of .80 is accepted as a criterion (Davis, 1992). Based on the evaluations by the 10 experts, the CVI was calculated to be 0.84. This indicates that the content validity of the scale is statistically significant (Polit et al., 2007). As a result, no items were removed from the scale. The finalized version of the original scale was emailed to the author. Upon receiving the author's approval, the pilot implementation phase began.

Pilot Testing

In scale adaptation studies, the pilot phase should involve approximately 30 participants, aiming for a scale's internal consistency value greater than 0.70. It's also important to assess whether each item's correlation with the total score falls below 0.30 (Seçer, 2020). İn the current study, a pilot application was conducted in 30 nurses. The pilot application indicated that the questions were understandable. However, the data from the pilot application were not included in the study dataset. The main study commenced without making any revisions following the pilot application.

Study Application

The evaluation instrument was distributed to nurses by providing them with a data collection link using the Google Forms application, and it was administered only after securing their consent. A total of 122 nurses successfully submitted the data form. According to the existing literature, sample size is typically recommended to be 10-20 times the number of scale items (Andrew et al., 2019). In this study, data collection was accomplished with a sample size that exceeded the recommended 15.25 times the number of items in the 8-item EBP-Mentorship Scale. The stability of the scale was assessed using the test-retest method. İn the literature suggests conducting a retest within 15 to 30 days. In this study, the retest and ICC was performed after precisely 15 days.

Statistical Analysis

The statistical analysis for this study was performed using SPSS 22 (IBM SPSS Corp., Armonk, NY, USA) and AMOS software packages. The data obtained from the Personal Information Forms were analyzed using descriptive statistics, such as numbers and percentages.

To evaluate the content validity index and construct validity of the scale, factor analysis was conducted. Factor analysis is a technique used to determine if the items of a scale can be grouped under different factors, and it includes two types: exploratory factor analysis (EFA) and confirmatory

factor analysis (CFA). In this study, CFA was performed to validate the factor structure of the scale (Yaşlıoğlu, 2017). Bartlett's Test and Kaiser-Meyer-Olkin (KMO) analysis were performed to assess the adequacy of the sample size and the suitability of the dataset for analysis.

The acceptable range for CFA goodness-of-fit indices includes Chi-square/degree-of-freedom ($\chi2/df$) < 2, root mean square error of approximation (RMSEA) < 0.08, goodness of fit index (GFI) > 0.90, normed fit index (NFI) > 0.80, comparative fit index (CFI) > 0.90, adjusted goodness of fit index (AGFI) > 0.85, and Tucker–Lewis index (TLI) > 0.90 (Bae, 2017).

To assess the reliability of the scale, Cronbach's alpha coefficient, Pearson's correlation analysis, and item-total score correlation analysis were conducted. Convergent validity was evaluated using the average variance extracted (AVE) and composite reliability (CR)(Alarcón et al., 2015). Convergent validity criteria for the model include an AVE value > 0.5 and a CR value > 0.7, indicating that the scale exhibits good reliability (Netemeyer et al., 2003). For convergent validity, the composite reliability (CR) should be greater than the average variance extracted (AVE), and the AVE should be greater than 0.5 (Yaşlıoğlu, 2017). Intra class corelations (ICC) and re-test analysis was conducted to assess time invariance.

Ethical Approval

Initially, the necessary permissions were secured from the scale authors, Melenky et al., via email. Ethics committee approval was received from the ethics committee of Erzurum Technical University (Date: December 29, 2022, Decision no: 11-/ 12). Nurse participants were informed about the voluntary nature of their participation and were asked for their consent via the Google Forms application. Moreover, they were assured that their identities and data would be kept confidential throughout the research. All steps of the research were carried out in accordance with the Declaration of Helsinki.

Results

Sociodemographic Characteristics

The majority of the nursing population was female, accounting for 78.9%. The age group most prominently represented was 26-30, comprising 41.4% of the sample. Additionally, those with an undergraduate degree comprised 58.6% of the study population, while nurses working in internal services accounted for 36.8%. Of the nurses, 67.8% work in shifts, with 41.4% being in their first three years of professional practice (Table 1).

Construct Validity

Prior to assessing the construct validity of the scale, Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity were conducted to evaluate the adequacy of sample size and dataset for factor analysis. The KMO measure of sampling adequacy was 0.945, indicating high suitability. Bartlett's Test of Sphericity yielded a significant result (x2 = 1080.506; $p < .001$) (Aksu et al., 2017; Seçer, 2020). Based on these findings, it is concluded that the dataset is appropriate for factor analysis.

Table 1.
Sociodemographic Characteristics of the Participants

Descriptive Characteristics	n	%
Gender		
Female	120	78.9
Male	32	21.1
Age		
Between 20 and 25 years	38	25.0
Between 26 and 30 years	63	41.4
Between 31 and 35 years	27	17.8
36 years and above	24	15.8
Education Status		
Health Vocational High School	7	4.6
Vocational school of health	12	7.9
Bachelor's degree	89	58.6
Master's degree and more than	44	28.9
Working unit		
Internal Clinics	56	36.8
Surgical Clinics	38	25
Management	50	32.9
Other	8	5.3
Type of working		
Usually during the day	49	32.2
Day-night rotation	103	67.8
Year of study		
0-3 years	63	41.4
4-6 years	30	19.7
7-10 years	22	14.5
11 years and more	37	24.3

Confirmatory Factor Analysis

CFA was conducted to validate the identified factors. Table 3 presents the fit index values obtained from the CFA. It was concluded that the fit indices obtained from the analyses were adequate (Bae, 2017). (Table 2). The PATH diagram obtained from the confirmatory factor analysis is shown in Figure 1. The provided figure shows that the unidimensional structure of the 'EBP-Mentorship Scale' has been ascertained by incorporating two modification indices (Figure 1).

Table 2.
Goodness-of-Fit Indices and Corresponding Acceptable Values for the Confirmatory Factor Analysis of the EBP-Mentorship Scale

Discriminant Function Analysis (DFA) Fit Tests	Observed Value in the Scale Model	Acceptable Fit Criterion	Excellent Fit Criterion	Result
Ki-Kare/sd	2.477	<5	<3	Perfect compatibility
RMSEA	0.078	0.06≤RMSEA<0.08	0<RMSEA<0.05	Allowable compatibility
S-RMR	0,028	0.06≤S-RMR≤0.08	0≤S-RMR≤0.05	Perfect compatibility
NFI	0.969	0.95≤NFI≤0.96	0.96≤NFI≤1	Perfect compatibility
CFI	0.985	0.90<CFI<0.96	0.96≤ CFI≤1	Perfect compatibility
GFI	0.947	0.90<GFI<0.95	0.95≤ GFI≤1	Allowable compatibility
IFI	0.985	0.90<IFI<0.95	0.95≤ IFI≤1	Perfect compatibility

To evaluate the convergent validity of the factors, AVE values were calculated. Additionally, CR values were computed. The composite reliability values for the factors exceeded the AVE values, and the AVE values surpassed the critical threshold of 0.50 (Table 3).

Reliability Results

In the conducted analysis, Cronbach's Alpha coefficient was calculated to assess the internal consistency of the scale or instrument. The scale had a Cronbach's alpha of 0.94 (Table 3).

In order to emphasize and assess the scale's temporal stability, the Turkish version was administered to a sample of 30 individuals, with evaluations conducted 15 days apart (Kline, 2014). Examining the between pre-test and post-test scores using Pearson's correlation method yielded a notably strong and statistically significant relationship (r = 0.956, $p<.01$, n = 30). In addition, it was determined that the intra-class correlation coefficients, which include the correlation between measurements as well as the agreement between absolute results, were above 0.95.

Discussion

There is currently no scale specifically designed to evaluate nurses' evidence-based mentoring practices. Therefore, the EBP-Mentorship Scale was translated into Turkish, and its psychometric properties were investigated.

Table 3.
Mean Scores and Reliability Coefficients of the EBP-Mentorship Scale

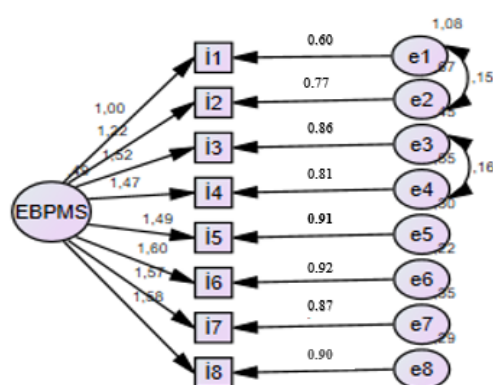| Scale	Alpha	AVE	CR	X ±sd
EBP-Mentorship Scale	0.944	0.535	0.899	8-40

Figure 1. Path Diagram of the EBP-Mentorship Scale

Scale adaptation is a complex process involving a thorough examination of how to maintain the content and psychometric properties of the scale, ensuring its overall validity for the target population. This process encompasses various stages (Borsa et al., 2012). The initial stage involves translation. In this study, the original scale was translated into Turkish by language experts and subsequently reviewed by field experts. To assess the content validity of the scale, the Content Validity Index (CVI) was calculated. A CVI value above 0.80 is generally considered acceptable, indicating adequate content validity (Polit & Beck, 2006). In this study, the CVI was found to be 0.84, demonstrating that the scale achieved sufficient linguistic and content equivalence. This high value also reflects substantial agreement among the experts regarding the relevance and clarity of the items (Beckstead, 2009).

After ensuring content validity, factor analysis was performed. Factor analysis is one of the most used approaches to assess construct validity. The two primary purposes of factor analysis are to reduce the number of variables (factor reduction) and to classify the variables (DeVellis & Thorpe, 2021). However, it is stated that

confirmatory factor analysis should be performed directly instead of exploratory factor analysis during the process of adapting a measurement tool (Seçer, 2020). Because confirmatory factor analysis allows testing an existing or constructed model. In this study, the same structure was found in the validation study of the original version of the scale. As a result of the analysis, CFA fit index values X2/df, RMSEA, CFI, NFI, GFI, AGFI, and TLI. X2/df < 2 and RMSEA < 0.80 (p > .05); GFI, AGFI, NFI, and CFI > 0.90 showed good fit (Kline, 2014; Seçer, 2020; Tabachnick BG, 2019; Yaşlıoğlu, 2017). Hence, all the goodness-of-fit indices of the scale were found to be within acceptable limits. For the original scale developed by Melenky et al. (Melnyk et al., 2022), the RMSEA value was 0.054. Overall, the findings of the current study indicated that the 8-item, one-factor model exhibited acceptable model fit. Therefore, no modifications to the original scale were deemed necessary, and some values even demonstrated a perfect fit (Kline, 2014; Seçer, 2020). All these findings indicate that the scale has high validity in Turkish culture. These findings also provide important evidence that the conceptual framework of the original scale is preserved in the Turkish context. This suggests that the underlying construct is understood and interpreted similarly across cultures. The fact that no modifications were required supports the cross-cultural stability of the scale, reinforcing its practical applicability in both research and clinical settings in Türkiye. The scale can therefore be used with confidence to assess the relevant construct in Turkish nursing practice, contribute to standardized assessments, facilitate international comparisons, and support evidence-based decision making in local healthcare settings. All these findings suggest that the scale has high validity in Turkish culture.

Convergent validity is one of the methods used to assess the validity of the scale. Convergent validity is assessed using average variance extracted (AVE) and composite reliability (CR) (Alarcón et al., 2015). An average variance extracted (AVE) greater than 0.50 and a composite reliability (CR) greater than 0.70 indicate that the scale has good reliability (Netemeyer et al., 2003). Additionally, to establish convergent validity, it is necessary that CR > AVE and AVE > 0.5 (Yaşlıoğlu, 2017). In the current study, the AVE was found to be 0.535 and CR was 0.899 for the scale, indicating that AVE values exceeded CR values. These results from the current study also demonstrated that the scale had high validity. These findings suggest that the items in the scale are strongly related to the underlying construct and that the scale provides consistent and meaningful measurements. This reinforces the scale's potential usefulness in accurately capturing the targeted concept in Turkish nursing practice.

Scale reliability refers to the consistency of responses to the test items and how accurately the scale measures the intended construct. Cronbach's alpha is widely used as a measure of internal consistency reliability (Bolarinwa, 2015). According to the literature, the reliability ranges for Cronbach's alpha are as follows: $0.80 < \alpha < 1.00$ indicates high reliability, $0.60 < \alpha < 0.80$ indicates quite reliable, $0.40 < \alpha < 0.60$ indicates low reliability, and $0.00 < \alpha < 0.40$ is considered not reliable (Şimşek, 2020). In this study, both the factor and total Cronbach's alpha coefficients of the scale were greater than 0.80. Melenky et al. reported a total Cronbach's alpha coefficient of 0.99 for the original scale (Melnyk et al., 2022). These results show that the scale items consistently reflect the construct being measured, supporting its dependable use in different settings and ensuring trustworthy assessments in Turkish nursing practice.

For the final reliability analysis of the EBP-Mentorship Scale, the test-retest method was applied. The EBP-Mentorship Scale was administered to 30 nurses, and then re-administered approximately 15 days later (Kline, 2014). The analysis revealed a very strong positive linear relationship between the pre-test and post-test scores ($r = 0.956$, $p < .01$, $n = 30$). Additionally, the intra-class correlation coefficient (ICC) was found to be within the reliable range (ICC = 0.997) (Shrout & Fleiss, 1979). These results indicate that the scale shows a high degree of consistency and stability over time. This temporal reliability strengthens confidence in the scale's use for repeated assessments and supports its practical applicability in longitudinal research and routine evaluations in clinical settings.

Limitations

This study was conducted online, which introduces certain methodological limitations. One major limitation is the exclusion of individuals without internet access or those who lack digital literacy, potentially leading to sampling bias. As a result, the findings may not be representative of the broader nursing population, particularly those working in regions with limited technological infrastructure. Furthermore, the voluntary nature of online survey participation may result in the overrepresentation of specific demographic groups—such as younger nurses or those more comfortable with technology—which could skew the results. These factors limit the generalizability of the study's findings across different geographic areas, healthcare settings, and levels of clinical experience.

Conclusion and Recommendations

Based on the analysis results, it was determined that the Turkish version of the scale consists of 8 items and one factor, mirroring the structure of the original scale.

Confirmatory factor analysis indicated a good model fit, and the Cronbach's alpha coefficient demonstrated high internal consistency, comparable to the original version. Additionally, adequate average variance extracted (AVE) and composite reliability (CR) values were observed. These findings support the cultural and psychometric equivalence of the Turkish version of the scale.

The EBP-Mentorship Scale provides a reliable and valid tool for assessing evidence-based practice mentorship among Turkish nurses. Its use in both clinical and academic settings is strongly recommended to evaluate and enhance mentorship quality. Nurse managers and educators can utilize this scale to identify strengths and areas for improvement in mentorship programs, support the development of evidence-based nursing culture, and guide policy and training efforts. Furthermore, incorporating the scale into mentorship evaluation processes may contribute to improving job satisfaction, professional development, and overall care quality in healthcare institutions.

References

Aksu, G., Eser, M. T., & Güzeller, C. O. (2017). *Açımlayıcı ve doğrulayıcı faktör analizi ile yapısal eşitlik modeli uygulamaları*. Detay Yayıncılık.

Alarcón, D., Sánchez, J. A., & De Olavide, U. (2015). Assessing convergent and discriminant validity in the ADHD-R IV rating scale: User-written commands for Average Variance Extracted (AVE), Composite Reliability (CR), and Heterotrait-Monotrait ratio of correlations (HTMT). Spanish STATA meeting,

Andrew, D. P., Pedersen, P. M., & McEvoy, C. D. (2019). *Research methods and design in sport management*. Human Kinetics.

Ayhan Öncü, Y., Seren İntepeler, Ş., & Kocaman, G. (2018). *The Validty and Reliability of Organizational Culture and readiness for system - Wide Implementation of EBP (OCRSIEP) for Turkish Sample . 7 th International Nursing Management Conference*

Bae, B.-R. (2017). Structural equation modeling with Amos 24. *Seoul: Chenngram Books*, 76-309.

Beckstead, J. W. (2009). Content validity is naught. *International journal of nursing studies*, *46*(9), 1274-1283.

Bolarinwa, O. A. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Nigerian postgraduate medical journal*, *22*(4), 195-201.

Borsa, J. C., Damásio, B. F., & Bandeira, D. R. (2012). Cross-cultural adaptation and validation of psychological instruments: Some considerations. *Paidéia (Ribeirão Preto)*, *22*, 423-432.

Chan, L. L., & Idris, N. (2017). Validity and reliability of the instrument using exploratory factor analysis and Cronbach's alpha. *International Journal of Academic Research in Business and Social Sciences*, *7*(10), 400-410.

Çamveren, H., & Vatan, F. (2019). Öğretim üyeleri için Mentorluk Yetkinliğini Değerlendirme Ölçeği'nin Türkçeye uyarlanması: Geçerlik ve güvenirlik çalışması. *Kastamonu Eğitim Dergisi*, *27*(1), 47-54.

Çay, M., & Daşbaş, S. (2020). KANITA DAYALI UYGULAMA ÖLÇEĞİNİN TÜRKÇEYE UYARLANMASI: GEÇERLİK VE GÜVENİRLİK ÇALIŞMASI. *Toplum ve Sosyal Hizmet*, *31*(4), 1514-1546.

Çopur, E. Ö., Kuru, N., & Seyman, Ç. C. (2015). Hemşirelikte kanıta dayalı uygulamalara genel bakış. *Sağlık ve Hemşirelik Yönetimi Dergisi*, *1*(2), 51-55.

Davis, L. L. (1992). Instrument review: Getting the most from a panel of experts. *Applied nursing research*, *5*(4), 194-197.

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

Ephraim, N. (2021). Mentoring in nursing education: An essential element in the retention of new nurse faculty. *Journal of Professional Nursing*, *37*(2), 306-319.

Güngör, M., & Özkütük, N. (2022). The Turkish Version of The Mentor Behavior Scale: Validity and Reliability Study. *Tıp Eğitimi Dünyası*, *21*(65), 71-83.

Hooge, N., Allen, D. H., McKenzie, R., & Pandian, V. (2022). Engaging advanced practice nurses in evidence-based practice: An e-mentoring program. *Worldviews on Evidence-Based Nursing*, *19*(3), 235-244.

Jacobs, S. (2018). An analysis of the evolution of mentorship in nursing. *International Journal of Mentoring and Coaching in Education*, *7*(2), 155-176.

Khan, S., Chambers, D., & Neta, G. (2021). Revisiting time to translation: implementation of evidence-based practices (EBPs) in cancer control. *Cancer Causes & Control*, *32*, 221-230.

Kim, S. C., Ecoff, L., Brown, C. E., Gallo, A. M., Stichler, J. F., & Davidson, J. E. (2017). Benefits of a regional evidence-based practice fellowship program: A test of the ARCC model. *Worldviews on Evidence-Based Nursing*, *14*(2), 90-98.

Kline, P. (2014). *An easy guide to factor analysis*. Routledge.

Melnyk, B. M. (2012). Achieving a high-reliability organization through implementation of the ARCC model for systemwide sustainability of evidence-based practice. *Nursing Administration Quarterly*, *36*(2), 127-135.

Melnyk, B. M., Fineout-Overholt, E., Gallagher-Ford, L., & Kaplan, L. (2012). The state of evidence-based practice in US nurses: critical implications for nurse leaders and educators. *JONA: The Journal of Nursing Administration*, *42*(9), 410-417.

Melnyk, B. M., Gallagher-Ford, L., Zellefrow, C., Tucker, S., Thomas, B., Sinnott, L. T., & Tan, A. (2018). The first US study on nurses' evidence-based practice competencies indicates major deficits that threaten healthcare quality, safety, and patient outcomes. *Worldviews on Evidence-Based Nursing*, *15*(1), 16-25.

Melnyk, B. M., Hsieh, A. P., & Mu, J. (2022). Psychometric properties of the evidence-based practice mentorship scale. *Worldviews on Evidence-Based Nursing*, *19*(4), 316-321.

Melnyk, B. M., Tan, A., Hsieh, A. P., & Gallagher-Ford, L. (2021). Evidence-based practice culture and mentorship predict EBP implementation, nurse job satisfaction, and intent to stay: Support for the ARCC© model. *Worldviews on Evidence-Based Nursing*, *18*(4), 272-281.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. sage publications.

Polit, D. F., & Beck, C. T. (2006). The content validity index: are you sure you know what's being reported? Critique and recommendations. *Research in nursing & health*, *29*(5), 489-497.

Polit, D. F., Beck, C. T., & Owen, S. V. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in nursing & health*, *30*(4), 459-467.

Seçer, İ. (2020). *Psikolojik test geliştirme ve uyarlama süreci: SPSS ve LISREL uygulamaları. : Anı yayıncılık*

Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: uses in assessing rater reliability. *Psychological bulletin*, *86*(2), 420.

Spiva, L., Hart, P. L., Patrick, S., Waggoner, J., Jackson, C., & Threatt, J. L. (2017). Effectiveness of an evidence-based practice nurse mentor training program. *Worldviews on Evidence-Based Nursing*, *14*(3), 183-191.

Şimşek, Ö. F. (2020). *Yapisal eşitlik modellemesine giriş: Temel ilkeler ve LISREL uygulamalari*. Ömer Faruk Şimşek.

Tabachnick BG, F. L., Ullman JB. . (2019). *Using multivariate statistics. 7 ed. Boston, MA: Pearson.*

Wallen, G. R., Mitchell, S. A., Melnyk, B., Fineout-Overholt, E., Miller-Davis, C., Yates, J., & Hastings, C. (2010). Implementing evidence-based practice: effectiveness of a structured multifaceted mentorship programme. *Journal of advanced nursing*, *66*(12), 2761-2771.

Yaşlıoğlu, M. M. (2017). Sosyal bilimlerde faktör analizi ve geçerlilik: Keşfedici ve doğrulayıcı faktör analizlerinin kullanılması. *İstanbul Üniversitesi İşletme Fakültesi Dergisi*, *46*, 74-85.

Yıldız, A. (2024). Validity and reliability of the Turkish version of the Implementation Leadership Scale in the context of nurses. *BMC Health Services Research*, *24*(1), 1347.

Yildiz, E., & Güngörmüş, Z. (2016). The validity and reliability study of the Turkish version of the evidence based practice evaluation competence questionnaire. *Nurse education today*, *45*, 91-95.

Yusoff, M. S. B. (2019). ABC of content validation and content validity index calculation. *Education in Medicine Journal*, *11*(2), 49-54.