ORIGINAL PAPER

Therapy area: Other

THE INTERNATIONAL JOURNAL OF
CLINICAL PRACTICE WILEY

Adaptation of the evidence-based practices attitude scale-15 in Turkish family medicine residents

Duygu Ayhan Başer[1] 🆔 | Ezgi Ağadayi[2] | Seval Gönderen Çakmak[3] | Rabia Kahveci[4]

[1]Department of Family Medicine, Faculty of Medicine, Hacettepe University, Ankara, Turkey

[2]Department of Medical Education, Faculty of Medicine, Cumhuriyet University, Sivas, Turkey

[3]Eldivan Healthcare Vocational School, Çankırı Karatekin University, Çankırı, Turkey

[4]Department of Family Medicine, Ankara City Hospital, Ankara, Turkey

Correspondence
Duygu Ayhan Başer, Department of Family Medicine, Faculty of Medicine, Hacettepe University, Ankara, Turkey.
Email: duyguayhan@outlook.com

Abstract

Aims: Aim of this study is to translate and apply a cross-cultural adaptation of the Evidence-Based Practice Attitude Scale (EBPAS) in Turkish and investigate its validity and reliability.

Methods: The original EBPAS-15 (a questionnaire assessing health professionals' attitudes to implementation of evidence-based practice) was translated into Turkish. To assess its validity and reliability, 151 family medicine residents answered the EBPAS-15 by web-based survey. In addition, relationships of family medicine residents' characteristics with EBPAS-15 total scores are examined.

Results: The results showed that the EBPAS-15 has good internal consistency and reliability. The Cronbach's alpha value for EBPAS-15 was 0.828. The scores of the two scales were highly correlated ($\rho = 0.72$). In the scale, there was no item with a total correlation value of less than 0.40. For this reason, no item was removed due to the high reliability value of all 15 items.

Conclusion: The Turkish version of the EBPAS-15 shows mainly good validity and reliability.

1 | INTRODUCTION

Evidence-based practice is a problem-solving approach to clinical practice that integrates the best evidence from studies and patient preferences and values and a clinician's expertise in making decisions about a patient's care.[1] Evidence-based practices are rapidly gaining importance for reasons such as reaching the truth in the most reliable way and encouraging scientific and critical thinking. Today, the need for new information leads to the rapid spread of evidence-based practices.

The attitudes of health care workers about evidence-based practices are substantial and play an important role in determining its implementation. EBPAS-15 also measures health worker's attitudes toward adopting new treatments, interventions, and practices. The Evidence-Based Practice Attitude Scale (EBPAS-15) was developed to assess the attitudes of mental health and social service providers toward evidence-based practices,[2] and the EBPAS-15 has been translated in different languages and is being used in several countries[3-7]; however, there is no Turkish version of the EBPAS-15.

Previous studies have suggested adequate internal consistency for the EBPAS-15 total score (0.79-0.77) and good internal consistency for the subscale scores (0.93-0.74).[2,7-9]

Family physicians are the first contact point for health services to people. They coordinate the health care systems and provide comprehensive and holistic care. Within this broad, evidence-based practice is very important for family physicians especially for make clinical decisions about diagnosis, prognosis, and patient management. Many studies have emphasised the need for evidence-based family medicine.[10,11] Family medicine residency training programmes now include evidence-based medicine courses in most countries to increase the use and implementation of evidence-based practices in family medicine. Also, the physicians' attitudes toward evidence-based practices may give useful information about practitioners' readiness to adopt a new intervention. In this case, it is important to evaluate the family medicine residents' attitudes towards evidence-based practices.

To our knowledge, a Turkish version of the EBPAS-15 has not yet become available, and no other study to date has examined

Turkish primary care physicians or family medicine residents' attitudes by using the EBPAS-15. Determining their attitudes may give clues about their preparedness to implement evidence-based practices and contribute to the prepare implementation strategies for evidence-based practices. Our first aim with this study is to translate the Evidence-Based Practice Attitude Scale (EBPAS-15) in Turkish and to test its factor structure, reliability, and validity with a sample of family medicine residents.

2 | METHODS

2.1 | Design and setting

This study was planned and applied as a methodological study. The survey was conducted in a social media group of family medicine residents between April 2020 and June 2020.

2.2 | Participants

The population of the survey was composed of family medicine residents. In the application of a scale to another culture, it is required to reach participant number to 5-10 times of scale item numbers.[12] The scale, which was to be tested for validity and reliability, contained 15 items. The required sample size was calculated as at least 150 participants (15 items × 10).

2.3 | Sample

The study included 151 family medicine residents who agreed to fill in the questionnaire shared on the web. The questionnaire consisted of sociodemographic and professional information data form (5 questions) and the final version of the EBPAS scale (15 items) which we translated into Turkish.

2.4 | Process

2.4.1 | Measures

The Evidence-Based Practice Attitude Scale (EBPAS-15) was developed to assess the attitudes of mental health and social service providers toward evidence-based practices.[2]

The EBPAS-15 consists of 15 items measured on a 5-point Likert scale ranging from 0 (not at all) to 4 (to a very great extent).

The items of the EBPAS-15 are organised into four dimensions. *The Appeal subscale*, assesses the extent to which the professional would adopt an evidence-based intervention if it was intuitively appealing, could be used correctly, or was being used by colleagues who were happy with it. *The Requirements* subscale assesses the extent to which the professional would adopt an evidence-based

What's known

The attitudes of health care workers about evidence-based practices are substantial and play an important role in determining its implementation. The EBPAS-15 measures health worker's attitudes toward adopting new treatments, interventions, and practices. EBPAS-15 has been translated in different languages and is being used in several countries; however, there is no Turkish version of the EBPAS-15.

What's new

As a result, this study shows that the scale can be used in daily practice and that the Turkish validity and reliability of the EBPAS-15 are at an acceptable level. The application of the scale in family medicine residents, a group that has not been studied before, is another important part of the study. This study has added to the knowledge about the EBPAS-15 in general and for the Turkey specifically. There are many studies in the literature using various forms of EBPAS-15, but few studies have used EBPAS-15, the shortest and fastest applicable form.

intervention if it was required by the supervisor, agency, or state. *The Openness* subscale assesses the extent to which the professional is generally open to trying new interventions and would be willing to try or use more structured or manualised interventions. *The Divergence* subscale assesses the extent to which the professional perceives evidence-based interventions as not clinically useful and less important than clinical experience. The EBPAS-15 total score is computed by first reverse scoring the Divergence scale item scores and then computing the overall mean.[13] The EBPAS-15 total score represents one's global attitude toward adoption of evidence-based interventions. The higher the score, the more positive the attitude toward evidence-based interventions.

2.5 | Permission

Permission was obtained by mail from Dr Gaarons who is the researcher who developed the scale. After the Turkish translation of the scale by two native Turkish translators, the scale was evaluated by 10 experts. The Davis technique was used to calculate content validity index (CVI).[15] CVI value of all items of the scale was calculated above 0.8. Scale was interpreted as having content validity. Conceptual equivalence was emphasised. Later, the scale was translated into English (back translation stage) and after translation completed, a second confirmation was received from Dr Gaarons by e-mail.

Adaptation stages of the scale to Turkish. The suggestions of World Health Organization (WHO) for the intercultural adaptation

of the scale and the literature review written on this subject were taken as the source.[15,16] These steps were shown in Table 1.

2.6 | Statistical analysis

To examine the differences in attitudes among practitioners, the analyses were run using SPSS (Version 23). Normality analysis was performed using the Shapiro-Wilk test for numerical values. Descriptive statistical analyses were calculated for sociodemographic data and for each item and subdimension of the scale. Mann Whitney U test was used to compare numerical data with no normal distribution between two categorical variables. A one-sample t test was used to compare the mean of the EBPAS total and the four factors in the family medicine residents. Correlational matrix was used to evaluate the association between practitioner demographic characteristics and the EBPAS. Levene's tests were used to decide whether the t tests should be performed under the assumption of equal variances. Confirmatory factor analysis was calculated using IBM SPSS Amos 20 package programme. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy test was performed. Afterwards, the Bartlett's Test of Sphericity was checked. Confirmatory factor analysis results were reported with total variance values and factor loadings, χ^2/df, comparative fit index (CFI), goodness of fit index (GFI) and root mean square error of approximation (RMSEA) values.

2.7 | RESULTS

2.8 | Descriptive characteristics of the participants

A total of 151 residents were included in the study. Participants' mean age was 28.09 ± 2.92, and 67.5% of the participants were male and 80.7% of them have active working years as a physician between 1 and 5 years; 49% of the participants were in their first residency year (Table 2).

2.9 | Evidence-based practice attitudes of participants

The mean EBPAS-15 total score was 44.16 ± 7.136 (min = 29; max = 62). The mean Appeal subscale score was 3.76 ± 0.64 (min = 2; max = 5), the mean Requirements subscale score was 3.24 ± 0.96 (min = 1; max = 5), the mean Openness subscale score was 3.04 ± 0.79 (min = 1.25; max = 5), the mean Divergence subscale score was 3.14 ± 0.47 (min = 1.75; max = 4).

A statistically significant difference was found at the total average score according to the gender of the physicians ($P = .028$); it was observed that women got higher scores. The total score of EBPAS-15 was not significantly different according to age, active working years as a physician, year of residency, year of graduation from medical school ($P > .05$). The subscales were not significantly different according to age, active working years as a physician, year of graduation from medical school ($P > .05$). Only year of residency has a positive weak relationship with openness subscale scores ($P = .038$, $t = 0.169$).

2.10 | Validity of the EBPAS scale

The validity analyses of the scale were tested with content validity and construct validity. For content validity analysis, the CVI was calculated. Table 3 presents the results of CVI consisting of 15 items of EBPAS-15.

Before the factor analysis phase, Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity tests were used to examine the suitability of the research sample for factor analysis. As a result of the analysis; KMO value was calculated as 0.783 and Bartlett's sphericity test results were $\chi^2 = 1171.407$, $P < .001$.

Confirmatory factor analysis (CFA) was performed to test the construct validity of the scale. EBPAS-15 items were modeled on four subscales as in the original scale. CFA model of the EBPAS-15 is given in Figure 1.

χ^2/df value calculated as a result of the analysis was 1.583 and $P < .001$. CFI = 0.745, GFI = 0.880, RMSEA = 0.062.

TABLE 1 Turkish adaptation stages

Step 1	Translation of the scale into Turkish	Two native Turkish translators	A professional translator who is not informed about the subject	
			A Family Medicine Specialist informed on the subject and purpose	
Step 2	Expert panel	Original text, translation, adaptation studies to other languages and some studies using the scale were sent to 10 experts in their field	Experts rated each item as follows A. Item represents property B. It needs a little correction C. It should be fixed quite D. Matter does not represent property	Content Validity Index (CVI) was evaluated with Davis Technique CVI = (A + B)/n n = the total number of experts
Step 3	Back translation	The Turkish text was translated into English by an independent translator who had no knowledge of the scale	After the back translation, the owner of the scale Dr Gaarons was obtained to whether there is a shift in meaning	
Step 4	Pilot application	Before starting the study, 10 people were piloted	Situations such as insufficient understanding of the participants, disturbing expressions, alternative expression requests were reviewed and the final version of the scale was decided	
Step 5	Test application	151 people tested	151 people tested	

TABLE 2 Descriptive characteristics of the participants (n = 151)

	n	%	Min/Max	M ± SD
Age			23/41	28.09 ± 2.92
Gender				
Male	102	67.5		
Female	49	32.5		
Active working years as a physician				
1-5 y	122	80.7	1/18	3.60 ± 2.81
6-10 y	25	16.5		
11+ y	4	2.8		
Year of residency[a]				
1 y	74	49.0	1/5	1.99 ± 1.16
2 y	26	17.2		
3 y	34	22.5		
4 y	12	7.9		
5 y	5	3.4		
Year of graduation from Medical school				
Before 1 y	24	15.9		
Before 2 y	25	16.6		
Before 3 y	25	16.6		
Before 4 y	24	15.9		
Before 5 y	13	8.6		
6+ y	40	26.4		

[a]Family medicine residency education duration in Turkey for 3 y. Since those who have more than 3 y are the people who extend their assistantship for various reasons, their number is low.

TABLE 3 The results of CVI on EBPAS using the Davis technique

Item	Appropriate	Needs minor revision	Needs major revision	Not appropriate	CVI
Item 1	10	—	—	—	1
Item 2	8	2	—	—	1
Item 3	9	1	—	—	1
Item 4	7	3	—	—	1
Item 5	6	3	1	—	0.9
Item 6	9	1	—	—	1
Item 7	8	1	1	—	0.9
Item 8	9	1	—	—	1
Item 9	7	3	—	—	1
Item 10	9	1	—	—	1
Item 11	9	1	—	—	1
Item 12	9	1	—	—	1
Item 13	8	2	—	—	1
Item 14	9	1	—	—	1
Item 15	10	—	—	—	1

2.11 | Internal consistency of the EBPAS-15 scale

In the scale, there was no item with a total correlation value of less than 0.40. For this reason, no item was removed due to the high reliability value of all 15 items. Then, the reliability coefficient of the questionnaire was examined. The Cronbach alpha (α) coefficient of the questionnaire used in the study is shown in the table below (Table 4).

The Cronbach's alpha (α) reliability coefficient calculated for the 15 items used in the application was 0.828. Since this coefficient was above 0.70, it can be said that the survey is quite suitable (Table 5).

In this analysis, the summability test of the ANOVA Turkey scale was used to collect the scale and obtain a scale total score. Considering the summability column, it was concluded that the scale was suitable for obtaining a scale total score by summing it as $P > .05$ (Table 5). In addition, a minimum score of 0 and a maximum of 32 points can be obtained for factor 1. For factor 2, a minimum score of 0 and a maximum of 28 points can be obtained.

3 | DISCUSSION

The evidence-based practice (EBP) is the bridge between research and practice and it is necessary to understand attitudes toward EBPs of physicians. Evaluation of family medicine residents' attitudes is essential to enable them to make more informed clinical decisions in clinical practice. The current study contributes to the adaptation and validation of the EBPAS-15 by examining psychometric properties of the Turkish version of the EBPAS-15. The results provide good support for a structure with a general factor plus four specific factors of

the Turkish version of the EBPAS-15 in a sample of family medicine residents.

The EBPAS-15 total score and subscale scores demonstrated acceptable to good internal consistency reliability and no item was removed due to the high reliability value of all 15 items. These findings are in accordance with other studies.[2,4,5,7,9] The Cronbach alpha value calculated to test the internal reliability of the scale was 0.828; subdimensions ranged between 0.66 and 0.89. In the original scale, the Cronbach alpha value of the total scale was 0.77; scale subdimensions ranged between 0.59 and 0.90[2]; while Cronbach's alphas ranged from 0.67 to 0.89 in Dutch translation; the overall scale alpha was 0.72[7]; in the Norwegian version, while subscales' Cronbach's alphas ranged from 0.64 to 0.88; the overall scale alpha was 0.81[9]; in the Swedish version; overall scale alpha was 0.74 and subscales' Cronbach's alphas ranged from 0.72 to 0.89.[5]

Acceptable lower value for Cronbach alpha value is 0.60.[18] In the subdimensions of the scale, Cronbach alpha levels were found to be greater than 0.60 and were interpreted as acceptable. In addition, when any of the items were deleted, no increase was found in the Cronbach alpha value.

Among the reliability analysis, item-total correlation analysis explains the relationship between the scores obtained from the
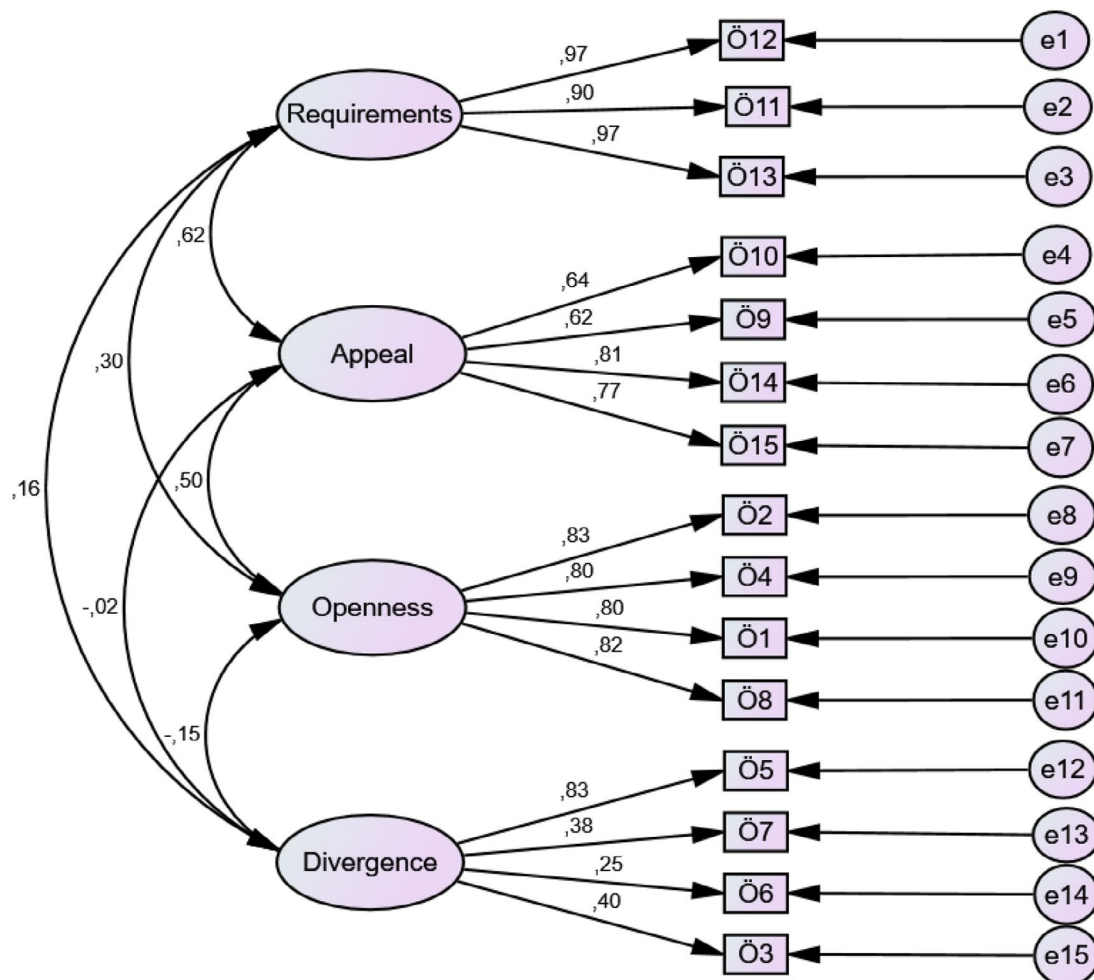

FIGURE 1 Confirmatory factor analysis model of the EBPAS-15

TABLE 4 Findings on item analysis of the EBPAS scale

	M	SD	Total correlations	When the item is erased Cronbach α
Requirements			0.842	
Item 12	41.31	46.611	0.591	0.808
Item 11	41.41	46.188	0.579	0.809
Item 13	41.37	46.248	0.605	0.807
Appeal			0.773	
Item 10	40.52	50.279	0.444	0.819
Item 9	41.71	45.852	0.576	0.809
Item 14	40.87	48.045	0.605	0.809
Item 15	40.25	49.642	0.482	0.817
Openness			0.668	
Item 2	41.71	46.699	0.512	0.814
Item 4	41.40	47.653	0.567	0.811
Item 1	41.39	46.965	0.582	0.809
Item 8	41.76	47.227	0.593	0.809
Divergence			0.897	
Item 5	43.35	54.927	0.039	0.835
Item 7	43.10	54.525	0.433	0.840
Item 6	41.83	53.224	0.489	0.842
Item 3	42.61	50.184	0.428	0.826
EBPAS total	49.56	7.038		0.828

Abbreviations: N = 151; M = mean, SD = standard deviation.

TABLE 5 Turkey's additive test ınformation with ANOVA for the EBPAS scale questions

	Sum of squares	Level of freedom	Average squares	F	P
In the population	112.549	105	1.072		
Out of the population	111.317	10	11.132	31.393	.000
Remains					
Collectibility	0.425[a]	1	0.425	1.198	.274
Balance variable	371.894	1049	0.355		
Total	372.319	1050	0.355		
Total	483.636	1060	0.456		
Total	596.185	1165	0.512		

test items and the total score of the test. If this value is 0.30 and above, it means that the discrimination ratio of the items is high.[19] In EBPAS-15, there was no item with a total correlation value of less than 0.40. For this reason, no item was removed due to the high reliability value of all 15 items. As a result of the application, the result of 15 items from the item analysis was a very favourable result, in accordance with other studies.[2,5,7,9] KMO and Bartlett tests were applied to determine the sampling adequacy and whether the data were suitable for factor analysis before the principal component analysis to provide more precise findings in the study. If KMO is higher than 0.60 and Bartlett test is significant, it shows that the data are suitable for factor analysis.[20] As a result of the analysis, KMO value was calculated as 0.783 and Bartlett's sphericity test results were $\chi^2 = 1161.591$, $P = .001$. The

values show that the research sample and the data were correlated with each other and were suitable for factor analysis. Based on the findings of our study, it was determined that the Turkish version of the "Evidence-Based Practices Attitude Scale" met the validity and reliability criteria at an acceptable level.

The validity analyses of the scale were tested with content validity and construct validity and the CVI values of all 15 items of EBPAS-15 were greater than 0.80, which means that these items had sufficient content validity for the scale.

Confirmatory factor analysis (CFA) was performed to test the construct validity of the scale. Acceptable fit indices were found, in accordance with United States samples and a Greek sample.[2,6,8,21]

The mean scores of total and subscales were slightly higher in our study in comparison with other studies from Sweden, Norway,

United States, Netherlands and Greece,[2,4,5,7,9] this result show that the family physician residents sample of our study had more positive attitudes to evidence-based practice.

Relationship of EBPAS-15 scores with individual differences of professionals was examined in several studies.[8,22-24] The EBPAS-15 total score had statistically significant according to the gender of the physicians and it was observed that women got higher scores. In accordance with our study, Aarons et al (2010) found that women had higher EBPAS-15 total scores[8] and Kim et al (2020, China) found that women had more positive global attitudes toward EBP in a study from social workers in Hong Kong.[25] The Openness score increases as the residency year increases; also, Aarons et al (2006) found that older professionals had higher Openness scores.[22] Openness subscale assesses the extent to which the professional is generally open to trying new interventions and would be willing to try or use more structured or manualised interventions.[13]

As the years of residency increased, physicians' self-confidence increased with experience and may have led to this result. In our study, in accordance with Dutch study,[7] requirements, appeal and openness subscale scores were positively correlated with each other and divergence subscale was not significantly correlated with any of the other subscales.

Some limitations should be noted. First, the sample was not large, and thus, statistical power was limited. Furthermore, while our sample consisted of family medicine residents, our findings may not generalise to all physicians. Additional research is needed to establish the factor structure of the Turkish version of the EBPAS-15. More research is also needed to examine differences by profession and attitude–participant characteristic relationship.

This study has added to the knowledge about the EBPAS-15 in general and for the Turkey specifically. There are many studies in the literature using various forms of EBPAS, but few studies have used EBPAS-15, the shortest and fastest applicable form. To our knowledge, this is the first study that used the EBPAS-15 in the Turkey. As a result, this study shows that the scale can be used in daily practice and that the Turkish validity and reliability of the EBPAS-15 are at an acceptable level. The application of the scale in family medicine residents, a group that has not been studied before, is another important part of the study. In this sense, it has been shown to be applicable to assistants as well as to the experts and intern among the target groups. In this respect, it is thought that it will contribute to the evaluation of the attitudes of physicians and physician candidates at every education stage starting from student hood towards evidence-based practice.

4 | CONCLUSION

In this study, the Turkish version of the EBPAS-15 was found to be reliable and valid with Turkish population. It could be a valuable instrument to assess family physicians and family medicine residents' attitudes toward evidence-based practice in Turkey.

RESEARCH INVOLVING HUMAN PARTICIPANTS AND/OR ANIMALS

Research involves only human participants.

INFORMED CONSENT

Informed consent was obtained from all individual participants included in the study.

DISCLOSURES

The authors have declared no conflict of interest.

ETHICAL APPROVAL

Approval was obtained from the Non-Invasive Clinical Research Ethics Committee of Hacettepe University on 09/06/2020 with the project number GO20/532 and the decision number 2020/12-20.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

ORCID

Duygu Ayhan Başer https://orcid.org/0000-0002-5153-2184

REFERENCES

1. Dawes M, Summerskill W, Glasziou P, et al. Sicily statement on evidence-based practice. *BMC Med Educ*. 2005;5(1):1–7.
2. Aarons G. Mental health provider attitudes toward adoption of evidence-based practice: the Evidence-Based Practice Attitude Scale (EBPAS). *Ment Health Serv Res*. 2004;6(2):61-74.
3. Ringle JL, James S, Ross JR, Thompson RW. Measuring youth residential care provider attitudes: a confirmatory factor analysis of the Evidence-Based Practice Attitude Scale. *Eur J Psychol Assess*. 2019;35(2):241-247.
4. Joaquín DP, Indias S, Arruabarrena I. Adaptation of the Evidence-Based Practices Attitude Scale in Spanish child welfare. *Psicothema*. 2015;27(4):341-346.
5. Skavberg Roaldsen K, Halvarsson A. Reliability of the Swedish version of the Evidence-Based Practice Attitude Scale assessing physiotherapist's attitudes to implementation of evidence-based practice. *PLoS One*. 2019;14(11):e0225467. https://doi.org/10.1371/journal.pone.0225467
6. Melas CD, Zampetakis LA, Dimopoulou A, et al. Evaluating the properties of the Evidence-Based Practice Attitude Scale (EBPAS) in health care. *Psychol Assess*. 2012;24(4):867-876. https://doi.org/10.1037/a0027445
7. Van Sonsbeek MA, Hutschemaekers GJ, Veerman JW, et al. Psychometric properties of the Dutch version of the Evidence-Based Practice Attitude Scale (EBPAS). *Health Res Policy Syst*. 2015;13:69.
8. Aarons G, Glisson C, Hoagwood K, et al. Psychometric properties and U.S. National norms of the Evidence-Based Practice Attitude Scale (EBPAS). *Psychol Assess*. 2010;22(2):356-365.
9. Egeland KM, Ruud T, Ogden T, et al. Psychometric properties of the Norwegian version of the Evidence-Based Practice Attitude Scale (EBPAS): to measure implementation readiness. *Health Res Policy Syst*. 2016;14:47.
10. Dawes MG. On the need for evidence-based general and family practice. *Evid Based Med*. 1996;1:68-69.
11. Barghouti F, Halaseh L, Said T, et al. Evidence-based medicine among Jordanian family physicians. *Can Fam Physician*. 2009;55:e6-13. https://doi.org/10.1186/s12961-016-0114-3

12. Akgül A, Çevik O. *İstatistiksel Analiz Teknikleri*. Ankara: Emek Ofset; 2003.

13. Aarons GA, McDonald EJ, Sheehan AK, et al. Confirmatory factor analysis of the Evidence-Based Practice Attitude Scale in a geographically diverse sample of community mental health providers. *Admin Pol Ment Health*. 2007;34(5):465-469. https://doi.org/10.1007/s10488-007-0127-x

14. Davis LL. Instrument review: getting the most from a panel of experts. *Appl Nurs Res*. 1992;5:194-197.

15. World Health Organization (WHO). Process of translation and adaptation of instruments. https://www.who.int/substance_abuse/research_tools/translation/en/. August 12, 2020.

16. Çapık C, Gözüm S, Aksayan S. Kültürlerarası Ölçek Uyarlama Aşamaları, Dil ve Kültür Uyarlaması: Güncellenmiş Rehber. *Florence Nightingale J Nurs*. 2018;26(3):199-210.

17. Aarons GA, Green A, Miller E. Researching readiness for implementation of evidence-based practice: a comprehensive review of the Evidence-Based Practice Attitude Scale (EBPAS). In: Kelly B, Perkins D, eds. *Cambridge handbook of implementation science for psychology in education: how to promote evidence-based practice*. Cambridge: Cambridge University Press; 2012.

18. Özdamar K. *Eğitim, sağlık ve davranış bilimlerinde ölçek ve test geliştirme yapısal eşitlik modellemesi*. Nisan Yayıncılık: Eskişehir; 2016.

19. Büyüköztürk Ş. Sosyal bilimler için veri analizi el kitabı (7. Baskı). Ankara, Pegem Akademi Yayınları. 2007.

20. Karagöz Y, Kösterelioğlu İ. İletişim becerileri değerlendirme ölçeğinin faktör analizi metodu ile geliştirilmesi. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*. 2008;21:81-98.

21. Wolf DAPS, Dulmus CN, Maguin E, et al. Refining the Evidence-Based Practice Attitude Scale: an alternative confirmatory factor analysis. *Soc Work Res*. 2014;38(1):47-58. https://doi.org/10.1093/swr/svu006

22. Aarons GA. Transformational and transactional leadership: association with attitudes toward evidence-based practice. *Psychiat Serv*. 2006;57(8):1162-1169.

23. Stahmer AC, Aarons G. Attitudes toward adoption of evidence-based practices: a comparison of autism early intervention providers and children's mental health providers. *Psychol Serv*. 2009;6(3):223-234. https://doi.org/10.1037/a0010738

24. Nakamura BJ, Higa-McMillan CK, Okamura KH, Shimabukuro S. Knowledge of and attitudes towards evidence-based practices in community child mental health practitioners. *Admin Pol Ment Health*. 2011;38(4):287-300. https://doi.org/10.1007/s10488-011-0351-2

25. Kim M. Exploring factors influencing social workers' attitudes toward evidence-based practice: a Chinese study. *International Social Work*. 2020;1–15.