

# Development of Midwives' Evidence-Based Practices Attitude Scale During Labor

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**Cite this article as:** Kurt Durmuş M, Zengin N. Development of midwives' evidence-based practices attitude scale during labor. *Arch Health Sci Res.* 2023;10(2):129-136.

## ABSTRACT

**Objective:** The aim of the study was conducted methodologically to develop Midwives' Evidence-Based Practices Attitude Scale During Labor and examine its validity and reliability.

**Methods:** The population of the study consisted of 3 hospitals in Turkey in the Istanbul European Region between September 2020 and January 2021, and the sample consisted of 490 midwives who participated in the study via e-mail. The Information Form, the Evidence-Based Nursing Attitude Questionnaire, and the Midwives' Evidence-Based Practices Attitude Scale During Labor were used to collect data.

**Results:** The mean content validity index of the scale was 0.893 by removing the items with a content validity index of less than 0.80 in the 86-item draft scale submitted for expert opinion. In the explanatory factor analysis of the scale, a 4-factor structure with a factor load value above 0.40, which explained 57.23% of the total variance, emerged. Criterion validity was confirmed with a moderately significant positive correlation between Evidence-Based Nursing Attitude Questionnaire and Midwives' Evidence-Based Practices Attitude Scale During Labor. Item-total score correlation values were positive and above 0.20. Cronbach's alpha coefficient was ideal in the scale's total and reasonable among the subdimensions.

**Conclusion:** It was determined that the Midwives' Evidence-Based Practices Attitude Scale During Labor is a valid and reliable measurement tool that can be used to evaluate attitudes toward the proposed evidence.

**Key Words:** Midwifery, scale development, evidence-based practices, validity, reliability


## Introduction

According to 2017 data of the World Health Organization, 810 women die every day from preventable causes related to pregnancy and childbirth. It states that midwifery care and practices play a key role for (in) safe pregnancy and delivery in reducing these preventable deaths. To assume this role, midwives should benefit from evidence-based practices created in the light of scientific knowledge.<sup>1,2</sup>

The development of the midwifery profession, which started traditionally and became professional, is possible with the interpretation and use of scientific knowledge. Since the profession of midwifery covers traditional and scientific facts, it is one of the professional disciplines that mostly need evidence-based practices.<sup>3</sup> In addition, the benefits of using evidence-based practices by midwives include increasing the quality of midwifery care, developing a positive view of the midwifery profession in society, increasing the professional autonomy and motivation of midwives, reducing cesarean rates, and providing guidance in the creation of health policies.<sup>2,4</sup> Risks related to maternal and infant health during pregnancy, childbirth, and postpartum period can be safely reduced by providing appropriate care under the guidance of evidence-based practices.<sup>5</sup>

Evidence-based practices aim to provide health services to the patient according to the practices determined by evaluating the current scientific literature. This approach supports the use of proven practices instead of practices that are not beneficial, ineffective, and harmful to the patient.<sup>6,7</sup> With the use of these applications, application differences that may vary according to healthcare professionals can be reduced, patients

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Received: November 08, 2022

Accepted: March 06, 2023

Publication Date: June 26, 2023

can be provided with standard evidence-based care, and errors that may occur in healthcare delivery can be prevented. However, individual team members' negative beliefs and attitudes are reported as an important obstacle in the use of evidence-based practices in patient care by health professionals.<sup>8,9</sup>

There is not enough information about the beliefs and attitudes of midwives, who have important responsibilities in the management of labor, which is vital for child and infant health, toward evidence-based practices in this process. Positive attitudes can only be developed by determining the beliefs and attitudes toward the use of evidence-based practices at labor by midwives, who include traditional practices.<sup>10,11</sup> Based on this information, there is a need for an assessment tool that can be used to determine the attitudes of midwives toward evidence-based practices in childbirth. Based on this information, it was conducted as methodological research in order to develop the Midwives' Evidence-Based Practices Attitude Scale During Labor and to examine its validity and reliability.

## Methods

### Aim

The aim of this research is to develop a valid and reliable method that can evaluate the attitudes of midwives toward evidence-based practices in labor.

### Sample

The sample size of the validity and reliability studies in the literature is 500 or more cases are very good<sup>12</sup> or sample to variable ratios it was recommended 15:1 or 20:1.<sup>12,13</sup> Accordingly, it was aimed to reach at least 10 times the number of items or more than 500 participants.<sup>29</sup> The research consisted of midwives working in 3 training and research hospitals in the Istanbul European Region under the Ministry of Health between September 2020 and January 2021. The sample of the study consisted of 490 midwives working in the delivery room and participating in the study via e-mail using the random Convenience sampling method. The midwives included in the sample from the 3 hospitals (30.81%, n=151; 35.30%, n=173 and 33.87%, n=166). Participants who were midwives working in other clinics and units were not included in the study.

### Data Collection Instruments

Information Form, Evidence-Based Nursing Attitude Questionnaire (EBNAQ), and Midwives' Evidence-Based Practices Attitude Scale During Labor were used in the study. In the Information Form, age, years of working in the profession, whether they gave birth after graduation, and whether they had an unassisted birth were questioned.

### Evidence-Based Nursing Attitude Questionnaire

The scale, which evaluates nurses' attitudes toward evidence-based practices, consists of 15 items and 3 subdimensions: beliefs and expectations, intention to implement, and emotions. Eight of the scale items are positive and 7 items are negative. In the evaluation of the scale, negative items are coded in reverse. The Turkish adaptation of the scale was done by Ayhan et al, and Cronbach's alpha coefficient of the scale was determined as  $\alpha=0.90$ .<sup>11</sup> In the current study, Cronbach's alpha of the scale was found to be 0.86.

### Midwives' Evidence-Based Practices Attitude Scale During Labor

In the first stage, the scale items were created, in the second stage, the content, face, and construct validity were examined within the scope of the validity study, and the reliability study was carried out in the third stage.<sup>14</sup>

**Generation of the Scale Items:** Item pool of the scale was generated according to WHO's recommendations. Total of 86 items focus on psychological support, oral intake, pain and massage, admission to the delivery room, partograph use, fetal monitoring practices, amniotomy application, vaginal examination, induction application movement restriction, perineum shaving, enema application, straining techniques, fundal massage, and episiotomy.<sup>2,3,15-19</sup>

## Validity

### Content Validity

The content validity of items of scale was tested with expert opinion,<sup>20</sup> and the content validity ratio (CVR) of the statements and the content validity index (CVI) of the scale were evaluated by the Davis technique. The form was created according to the Davis technique.<sup>21,22</sup> For content validity, the draft scale with 86 statements was submitted to the opinion of 16 experts via e-mail. The CVR of the items and the CVI of the draft scale were calculated using the Davis technique.<sup>20</sup> In the study, the CVR was expected to be greater than 0.78, and accordingly, the items were removed from the scale and necessary adjustments were made in the scale with expert recommendations.<sup>21</sup> Items that were closely related (n=2), repeated the same situation, and were difficult to understand (n=43) were excluded from the draft scale in line with the suggestions from the experts.

### Pilot Study

The scale was applied to a small sample (10-30 people) with similar characteristics to the sample with a literature recommendation.<sup>20,23</sup> In line with the literature, a pilot study of the scale was conducted in a group of 30 people. Items that were not understood according to the results of the pilot study were reviewed.

### Construct Validity

Construct validity is evaluated by explanatory factor analysis (EFA) and confirmatory factor analysis (CFA).<sup>20,24</sup> It is recommended that the suitability of data sets for factor analysis be assessed and the Kaiser-Meyer Olkin (KMO) test and Bartlett's test were run before proceeding with exploratory factor analysis. The suitability of data for factor analysis depends on the KMO value being greater than 0.50 and the significance of the result of Bartlett's test of sphericity.<sup>12</sup> In the study, it was expected that each statement would be under a factor, and the factor load value would be higher than 0.32. Items under more than one factor with a difference of less than 0.10 were considered to be overlapping and were excluded from the scale.<sup>25</sup> In the evaluation of CFA, fit indices are used. Goodness fit indices test the extent to which the designed model agrees with the reality, thus revealing the construct validity of the model.<sup>26</sup>

### Convergent Validity

Evidence-Based Nursing Attitude Questionnaire was used to evaluate the convergent validity<sup>27</sup> of the newly developed scale. In the study, a statistically significant moderate relationship was expected between the EBNAQ and the Midwives' Evidence-Based Practices Attitude Scale During Labor. In comparison made with scales similar to the conceptually developed scale are considered as proof of validity, while values below 0.30 are not recommended as they indicate uncertainty. Therefore, a correlation coefficient above 0.30 was expected.<sup>28</sup>

### Reliability

In the reliability analysis, it was examined with test-retest within the scope of the invariance of the scale, Cronbach's alpha coefficient, and item-total score correlation analysis within the scope of internal consistency.<sup>29,30</sup>

### Test–Retest

The correlation coefficient of the measurement values obtained from the 2 applications is the reliability coefficient of the scale. The test–retest correlation coefficient should be at least 0.80. Some scientists have stated that a reliability coefficient of 0.70 may also be sufficient.<sup>29,30</sup>

### Internal Consistency

Cronbach's alpha and item-total correlation were used to test the internal consistency reliability of the developed scale.<sup>30</sup> In studies, 0.90 is considered ideally reliable, 0.80 highly reliable, and 0.70 highly reliable. The recommended value of 0.80 and above was expected for the newly developed scales in the study.<sup>29,30</sup>

### Data Analysis

The data of the research were transferred to the computer environment and analyzed by Statistical Package for the Statistical Package for Social Sciences version 21.0 software (IBM Corp.; Armonk, NY, USA) and LISREL. Explanatory factor analysis was analyzed by principal component analysis and Varimax rotation method, item analysis Pearson product of moments, test–retest analysis, correlation analysis, and dependent groups *t*-test.

### Ethical Considerations

Ethics committee approval was received for this study from the ethics committee of Health Sciences University (Date: February 10, 2020, Number: 20/47). The written permissions of the Provincial Health Directorate were obtained before conducting the study. In addition, verbal consent was obtained from the midwives who agreed to participate in the research.

### Results

#### Demographic Information

The average age of the midwives participating in the study was  $33.00 \pm 7.91$ , of them 64.69% are undergraduates, 20.41% had master's degree, 7.35% had associate degree, 4.9% are high school graduates, and 3.27% had doctoral degree. It was determined that 80.20% of the midwives who had an average of  $9.81 \pm 7.76$  years of working time in the profession gave birth after graduation and 67.14% of them gave birth without assistance after graduation.

#### Validity

##### Content Validity

It was observed that the CVI of the items in the draft scale varied between 0.44 and 1.43, and items that were determined to have a CVI below 0.80 were removed from the draft scale.

According to the suggestions from the experts, 2 similar items were combined. The CVR of the 41-item draft scale was found to be 0.893.

After the pilot implementation, the scale was examined by the researchers. After the pilot study, items that were closely related ( $n=9$ ), repeated the same situation, and were difficult to understand ( $n=3$ ) were removed from the draft scale. In addition, it was determined that the correlation of these items with the scale total score was  $r=0.30$ . The number of items on the scale decreased to 29.

##### Construct Validity

**Explanatory Factor Analysis:** The KMO coefficient for the Attitudes Toward Evidence-Based Practices Scale was 0.936, and the result of the Barlett test was found to be highly significant ( $\chi^2=7161.738$ ,  $P=.000$ ). In the factor analysis of the Midwives' Evidence-Based Practices Attitude

Scale During Labor, a 4-factor structure was found that explained 57.2% of the total variance with factor load values above 0.32. Factor 1 explained 21.34% of the variance, factor 2 explained 17.89% of the variance, factor 3 explained 9.67%, and factor 4 explained 8.32% of the variance. It was seen that there were 11 items (5, 6, 12, 13, 14, 15, 17, 20, 21, 24, 26) about interventional practices with factor loads ranging from 0.489 to 0.849 under factor 1 and 10 items (1, 2, 3, 4, 8, 9, 10, 11, 16, 25) about supportive care practices with factor loads ranging from 0.438 to 0.762 under factor 2. It was determined that there were 4 items (18, 19, 22, 23) covering the practices related to movement and nutrition and 4 items (7, 27, 28, 29) related to the early postpartum period practices with factor loads under factor 4 ranging from 0.489 to 0.649 (Table 1).

**Confirmatory Factor Analysis:** First-level CFA was performed for the 4-dimensional model of the scale. In the first reduction, it was determined that although the fit index values were acceptable, they were not sufficient. For this reason, the modifications were proposed in order to obtain a better model. Goodness-fit indices were found to be acceptable, and the following values were determined;  $\chi^2/df=1142.12/367$ , root mean square error of approximation=0.066, standardized root-mean-square residual=0.092, comparative fit index=0.90, goodness-of-fit index=0.86, (Adjusted Goodness of Fit Index) AGFI=0.84, (Relative Fit Index) RFI=0.84, and non-normed fit index=0.089 (Table 2). Confirmatory factor analysis of the draft scale revealed that item factor loadings ranged between 0.49 and 0.82 (Figure 1).

**Convergent Validity:** When the relationship between the total score of the EBNAQ and the Midwives' Evidence-Based Practices Attitude Scale During Labor was examined, a moderate statistically significant correlation was found between total score of the EBNAQ and the Midwives' Evidence-Based Practices Attitude Scale During Labor ( $r=0.679$ ,  $P=.00$ ). As a result of the simple linear regression analysis for the scale, it was determined that  $R^2=0.418$ ,  $t=23.349$ , and  $P<.01$ . Therefore, it was concluded that the Midwives' Evidence-Based Practices Attitude During Labor predicted the EBNAQ at a rate of 41.8% (Table 3).

#### Reliability

##### Internal Consistency

In Cronbach's alpha, the total scale was found to be 0.912. The Cronbach's alpha of the subdimensions of the scale was determined as 0.913, 0.887, 0.770, and 0.73 for Interventional Practices, Supportive Care Practices, Movement and Nutrition Practices, and Early Postpartum Period Practices, respectively (Table 4).

##### Test–Retest Analysis

The correlation coefficient between the test–retest measurements of the Midwives' Evidence-Based Practices Attitude Scale During Labor was  $r=0.87$ ;  $P=.000$  was determined. It was determined that the test–retest correlation coefficients of the subdimensions ranged from 0.75 to 0.92. When the mean scores obtained from the test–retest were compared to evaluate the invariance of the Midwives' Evidence-Based Practices Attitude Scale During Labor and its subdimensions over time, and no statistically significant difference was found (Table 5).

#### Discussion

With the use of evidence-based practices by midwives, the effectiveness of care may increase, the financial burden of care on the health system may decrease, and the trust of pregnant women who receive care from midwives and health services may increase. There is not enough information about their attitudes toward evidence-based practices during labor.

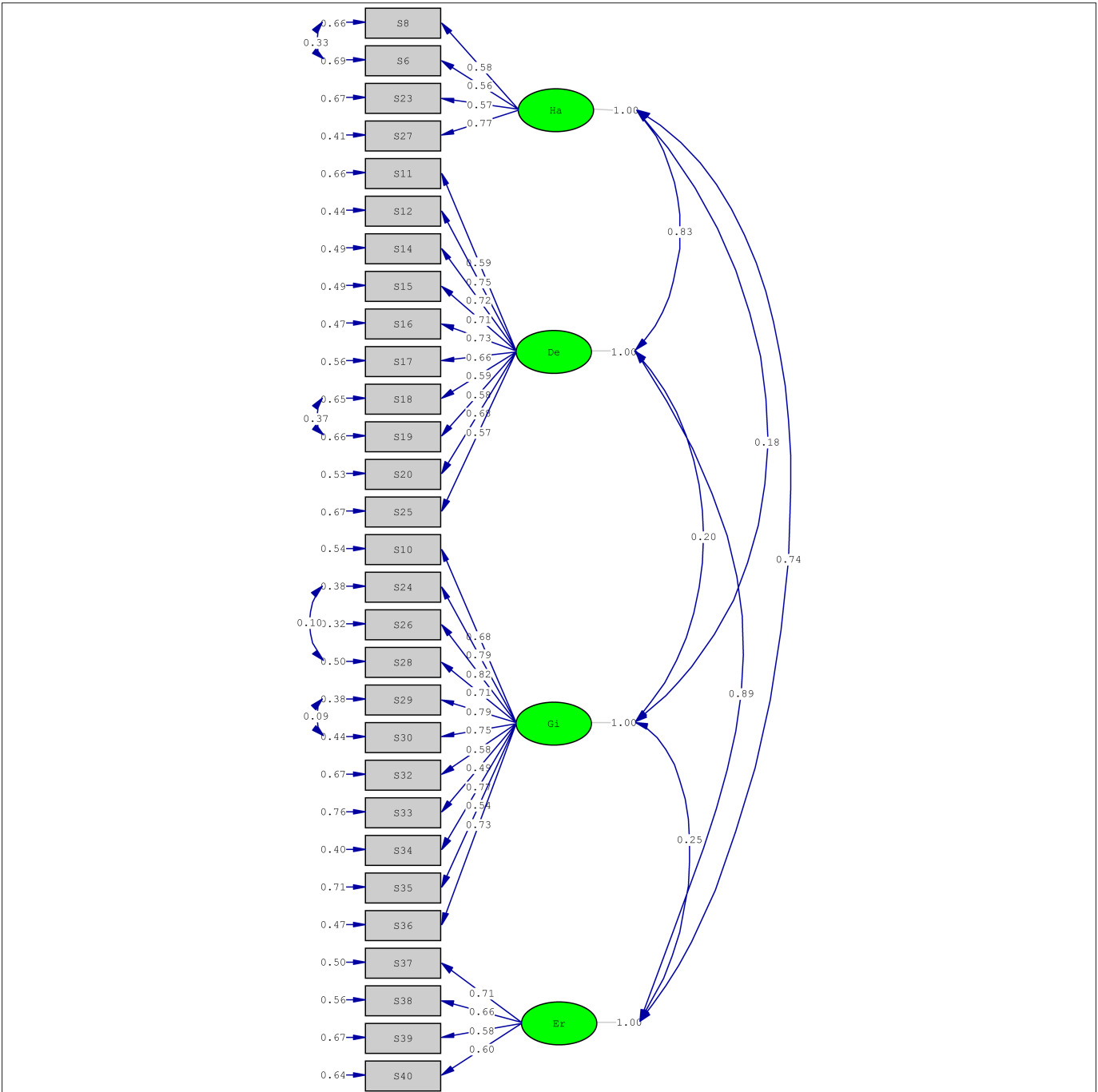
**Table 1.** Explanatory Factor Analysis of the Midwives' Evidence-Based Practices Attitude Scale During Labor

		KMO	0.936			
		Bartlett test of sphericity				
		$\chi^2 = 7161.738, P = .000$				
		Interventional Practices	Supportive Care Practices	Movement and Nutrition	Early Postpartum Period Practices	
No	Items	Factor 1	Factor 2	Factor 3	Factor 4	
1.	I do not leave the pregnant woman alone during labor / I always stay with the pregnant woman		0.571			
2.	I do not feel uncomfortable when the pregnant woman expresses her pain		0.664			
3.	I encourage the pregnant woman to use breathing techniques in the first stage of labor		0.686			
4.	I support the pregnant woman to take a warm shower when the pain begins		0.625			
5.	I always shave the perineum for every pregnant woman admitted to the delivery room	0.819				
6.	I apply an enema to every pregnant woman admitted to the delivery room	0.787				
7.	I apply controlled umbilical cord traction at birth				0.635	
8.	I think that the pregnant woman should be admitted to the delivery room when the active phase begins		0.438			
9.	I use partograph to follow labor		0.762			
10.	Partograph for tracking labor		0.756			
11.	I support the use of intermittent electronic fetal monitoring for low-risk pregnant women		0.594			
12.	In the second stage of labor, I make the woman strain by holding her breath (closed glottis)	0.561				
13.	I think that IV fluids should be inserted into pregnant women admitted to the delivery room	0.694				
14.	I apply amniotomy to all pregnant women who are in labor	0.824				
15.	I support induction for all primiparous pregnant women	0.849				
16.	I massage the waist and back of the pregnant woman to help her cope with the pain		0.648			
17.	In the second stage of labor, I make the woman strain by suffocating or making a sound (open glottis)	0.489				
18.	I allow the pregnant woman to drink water unless there is a risky situation that will require an operation			0.789		
19.	If the pregnant woman does not have a risky condition that requires an operation, I support her to be fed with light foods			0.785		
20.	In the second stage of labor, I ensure that the crede maneuver (fundal compression) is performed to facilitate the exit of the baby	0.781				
21.	I always perform episiotomy in primiparous pregnant women	0.728				
22.	I allow the pregnant woman to move as much as she wants, if she does not mind during the birth process			0.492		
23.	I think that continuous fetal monitoring slows down the progress of labor			0.624		
24.	I make sure that the pregnant woman stays in the lithotomy position	0.780				
25.	I avoid frequent vaginal touching		0.559			
26.	I perform episiotomy after evaluating the perineum for tearing in all pregnant women at the time of the baby's head exit	0.534				
27.	As soon as the baby is born, I put it on the mother's belly/chest, ensuring skin-to-skin contact				0.489	
28.	I give uterine massage to all pregnant women in the postpartum period				0.555	
29.	I start breastfeeding within 1 hour at the latest after birth				0.649	
Eigenvalues of factors		8.788	5.162	1.614	1.054	
Variance ratios explained by factors		21.340	17.892	9.677	8.325	
Announced cumulative rates of variance (%)		21.340	39.232	48.909	57.234	
Ratio of total variance explained		57.234				

**Table 2.** Confirmatory Factor Analysis of the Midwives' Evidence-Based Practices Attitude Scale During Labor

Good Fit Index		Modification 1 18 and 19	Modification 2 6 and 8	Modification 3 28 and 24	Modification 4 30 and 29
$\chi^2/df$	1549.66/371=4.17	1350.18/370=3.64	1104.95/369=2.99	1165.68/368=3.16	1142.12/367=3.11
RMSEA	0.081	0.074	0.068	0.067	0.066
SRMR	0.096	0.096	0.094	0.092	0.092
CFI	0.85	0.88	0.89	0.90	0.90
GFI	0.82	0.84	0.85	0.86	0.86
AGFI	0.79	0.81	0.83	0.83	0.84
RFI	0.79	0.82	0.83	0.84	0.84
NNFI	0.84	0.87	0.88	0.89	0.89

$\chi^2/df$ ,  $\chi^2$ /degree of freedom; CFI, comparative fit index; GFI, goodness-of-fit index; NNFI, non-normed fit index; RMSEA, root mean square error of approximation; SRMR, standardized root-mean-square residual.



**Figure 1.** Factor structure of the four-factor Midwives' Evidence-Based Practices Attitude Scale.

**Table 3.** Examining the Relationship between Evidence-Based Nursing Practices and the Midwives' Evidence-Based Practices Attitude Scale During Labor

MEBPAS	EBNAQ							
	Beliefs and Expectations		Implementation Intent		Sum of Emotion		Total Points	
	<i>r</i>	<i>P</i>	<i>r</i>	<i>P</i>	<i>r</i>	<i>P</i>	<i>r</i>	<i>P</i>
Interventional Practices	0.006	.902	0.681**	0.000	0.693**	0.000	0.548**	.000
Supportive Care Practices	0.583**	.000	0.087	0.054	0.045	0.320	0.342**	.000
Movement and Nutrition Practices	0.467**	.000	-.080	0.077	-0.082	0.071	0.179*	.000
Early Postpartum Period Practices	0.585*	0.000	0.130*	0.004	0.125*	0.006	0.400**	.000
Total Scale	0.556**	.000	0.491**	0.000	0.471**	0.000	0.679**	.000

EBNAQ: Evidence-Based Nursing Attitude Questionnaire; MEBPAS, Midwives' Evidence-Based Practices Attitude Scale During Labor.

\**P* < .05, \*\**P* < .01.

In this study, the questions are named as Midwives' Evidence-Based Practices Attitude Scale During Labor that was developed to determine the attitude of midwives toward evidence-based practice. As well this determined toward, developed and its validity and reliability were tested. It was found that this developed measurement tool could be used to evaluate the attitudes and beliefs toward evidence-based practices in labor.

A consensus among experts in the evaluation of content validity indicates that the scale reflects the subject to be measured, and content validity is provided as 24.27. In the study, it was found that the mean

CVI of the scale was 0.893, and there was a concordance between the evaluation scores of the experts. It was concluded that 41 expressions in the developed scale consisted of evidence-based practices that should be utilized during the labor process and represented the area to be measured.

In line with the reviews from the midwives during the application, it was seen that the scale was long, causing boredom while answering, and it was decided by the researchers to remove 12 items from the draft scale. As a result, after the content validity analysis, the 41-item draft scale was reduced to 29 items as a result of the pilot study.

**Table 4.** Item-Total Correlation of Total Scale and Subscales of the Midwives' Evidence-Based Practices Attitude Scale During Labor

	Total Scale		Interventional Practices		Supportive Care Practices		Movement and Nutrition Practices		Early Postpartum Period Practices	
	Item-Total Correlation	If Deleted Item, Cronbach's Alpha	Item-Total Correlation	If Deleted Item, Cronbach's Alpha	Item-Total Correlation	If Deleted Item, Cronbach's Alpha	Item-Total Correlation	If Deleted Item, Cronbach's Alpha	Item-Total Correlation	If Deleted Item, Cronbach's Alpha
1	0.58	0.91			0.55	0.91				
2	0.40	0.91			0.67	0.90				
3	0.49	0.91			0.69	0.89				
4	0.48	0.91			0.65	0.90				
5	0.52	0.91	0.76	0.90						
6	0.51	0.91	0.72	0.90						
7	0.49	0.91							0.49	0.68
8	0.49	0.91			0.59	0.91				
9	0.58	0.91			0.61	0.91				
10	0.56	0.91			0.61	0.90				
11	0.56	0.91			0.64	0.91				
12	0.57	0.91	0.55	0.90						
13	0.56	0.91	0.65	0.88						
14	0.51	0.91	0.76	0.87						
15	0.50	0.91	0.78	0.87						
16	0.48	0.91			0.67	0.87				
17	0.49	0.91	0.47	0.87						
18	0.40	0.91					0.65	0.67		
19	0.39	0.91					0.63	0.68		
20	0.56	0.91	0.77	0.88						
21	0.54	0.91	0.68	0.87						
22	0.49	0.91					0.52	0.74		
23	0.42	0.91					0.49	0.76		
24	0.39	0.91	0.68	0.68						
25	0.33	0.91			0.53	0.76				
26	0.53	0.91	0.51	0.74						
27	0.42	0.91							0.53	0.67
28	0.54	0.91							0.52	0.68
29	0.44	0.91							0.56	0.65
Cronbach's Alpha		0.91		0.91		0.88		0.77		0.73

**Table 5.** Reliability of the Midwives' Evidence-Based Practices Attitude Scale During Labor

Test-Retest		Split in Half	
Test	Re-test	<i>t</i>	Guttman Split-Half Coefficient
Mean ± SD	Mean ± SD	<i>P</i>	
129.85 ± 9.75	130.91 ± 10.19	.73	
		.47	.889

SD, standard deviation; *t*, independent sample *t*-test.

After the pilot study, KMO measure of sampling (KMO test) and Barlett Sphericity tests were performed to evaluate whether the sample size was sufficient for factor analysis before the EFA, which was conducted to examine the construct validity of the 29-item Midwives' Evidence-Based Practices Attitude Scale During Labor. In the present study, the KMO was found to be 0.936, and Barlett test results were found to be highly significant. It was determined that the sample size was at the desired level for EFA.<sup>20,24</sup> Later, EFA was applied to the Attitude Scale of Midwives toward Evidence-Based Practices in Labor.

In the EFA analysis of the 29-statement scale (Midwives' Evidence-Based Practices Attitude Scale During Labor), factor loads were above 0.32 and a 4-factor structure was found. It was determined that the factor loads of the items in the scale were above 0.30 and did not show an overlapping load value as suggested in the literature.

When items collected under each factor were evaluated, Midwives' attitudes toward evidence-based interventional practices under 1 factor, the expressions of attitude toward physical and mental support of pregnant women, the statements of the midwife toward the mobility and nutrition of the pregnant during the delivery period under another factor, and it was determined that the statements of attitude toward midwifery practices were gathered under another factor in the phase of the factors were named as Interventional Practices, Supportive Practices, Movement and Nutrition, Early Postpartum Period Practices, respectively.

A scale development study, CFA, is recommended after EFA analysis, and fit indices are used in its evaluation.<sup>31</sup> When the fit index values were examined, it was determined that they were within acceptable limits, and the 4-factor structure was confirmed.

In convergent validity, the correlation between the score obtained from the developed scale and the scores of another scale measuring the same phenomenon is examined.<sup>27</sup> In the research, the relationship between the EBANQ, which was previously developed and used in many studies, and the Midwives' Evidence-Based Practices Attitude Scale During Labor, developed in the current study, was examined.

The Midwives' Evidence-Based Practices Attitude Scale During Labor was applied to the same group with an interval of 20 days. After the analysis, it was determined that there was no difference between the 2 values obtained and there was a high level of correlation ( $r=0.87$ ;  $P=.000$ ). In line with these results, the invariance and consistency of the scale have been proven.

In the present study, the total Cronbach's alpha of Midwives' Evidence-Based Practices Attitude Scale During Labor was found to be 0.91. Its Interventional Practices, Supportive Care Practices, Movement and Nutrition Practices, and Early Postpartum Period Practices subdimension of the scale were 0.913, 0.887, and 0.770; It was found to be 0.734. The Interventional Practices subdimension was highly reliable, and the Supportive Care Practices, Movement and Nutrition Practices, and Early Postpartum Period Practices subdimension Cronbach's alpha coefficients were found to be quite reliable.

When the item-total score correlations of the Midwives' Evidence-Based Practices Attitude Scale During Labor were examined for the reliability study, it was between 0.29 and 0.83 for the whole scale. According to the subdimensions, Interventional Practices ranged from 0.290 to 0.820, Supportive Care Practices ranged from 0.713 to 0.638, Movement and Nutrition Practices ranged from 0.660 to 0.804, and Early Postpartum Period Practices ranged from 0.648 to 0.771. It showed that the item-total correlation coefficients of each item were positive and over 0.20, and that the items forming the scale were of equal weight and in the form of independent units.<sup>30,32</sup>

## Conclusion

As a result of the study, a scale was developed that can evaluate the attitudes of midwives toward evidence-based practices in labor. As a result of expert opinions and statistical analyses, it was determined that the Midwives' Evidence-Based Practices Attitude Scale During Labor is a highly valid and reliable scale that can be used to measure midwives' attitudes toward evidence-based practices in labor. Evaluation of midwives' attitudes toward evidence across Turkey with the developed scale. It is recommended to use the scale in studies to be conducted with different samples in Turkey in order to obtain standardized and comparable measurement results.

**Ethics Committee Approval:** Ethics committee approval was received for this study from the ethics committee of Health Sciences University (Date: February 10, 2020, Number: 20/47).

**Informed Consent:** Written informed consent was obtained from midwives who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept – M.K.-D., N.Z.; Design – M.K.-D., N.Z.; Supervision – M.K.-D., N.Z.; Resources – M.K.-D., N.Z.; Materials – M.K.-D., N.Z.; Data Collection and/or Processing – M.K.-D., N.Z.; Analysis and/or Interpretation – M.K.-D., N.Z.; Literature Search – M.K.-D., N.Z.; Writing Manuscript – M.K.-D., N.Z.; Critical Review – M.K.-D., N.Z.; Other – M.K.

**Declaration of Interests:** The authors declare that they have no competing interest.

**Funding:** The authors declared that this study has received no financial support.

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