

Reliability and Validity Assessment of the Turkish Version of the Emotional Availability and Responsiveness in Intrapartum Care Scale (EAR-IC)

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ABSTRACT

Background: Emotional availability and responsiveness in intrapartum care increase women’s birth satisfaction, comfort, and quality of nursing/midwifery care. In Turkey, there is no instrument for measuring emotional availability and responsiveness in intrapartum care. **Aim:** An established translation, reliability, and validation approach was used to obtain the Turkish form of the A-EAR-IC scale. **Methods:** A descriptive cross-sectional study was used. This study was conducted in Istanbul, Turkey. The study sample consisted of 132 Turkish midwives working in the birth room. The construct validity of the scale was tested using confirmatory factor analysis, whereas the concurrent scale validity was tested using the Emotional Labor Behavior Scale. Internal consistency analysis was performed to test the reliability of the scale. **Results:** The results of the EAR-IC measure showed that it fit the one-factor model. The goodness-of-fit indices of the one-factor model containing eight items were acceptable. The instrument showed satisfactory content validity (I-CVI =0.80–1.00, S-CVI =0.88). According to CFA, the structure with one factor showed acceptable model fit (χ^2/df : 1.74, CFI: 0.96, IFI: 0.96, RMSEA: 0.07, and SRMR: 0.02). Concurrent validity of the instrument was assessed with the “in-depth behavior” subscale of the Emotional Labor Behavior Scale for Nursing. Spearman’s correlations revealed that the EAR-IC was moderately positively correlated with the in-depth behavior concern subscale of the ELBS ($\rho =0.62, P < 0.001$). **Conclusion:** The Turkish version of the EAR-IC is a suitable, effective, and reliable instrument for measuring the emotional aspects of intrapartum caregiving midwives.

KEYWORDS: Emotional adjustment, empathy, midwifery, obstetric nursing, reliability and validity

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INTRODUCTION

Supportive care by midwives during childbirth may include emotional support, information, satisfaction, comfort, and favor. These factors may increase physiological birth activity as well as women’s feelings of control and ability, decreasing the need for obstetric intervention.^[1]

Emotional support, such as belonging, love, and affection, meets the basic needs of an individual.^[2] Moreover, empathy, active listening, effective verbal communication, respect, reducing


anxiety, safeguarding privacy, instilling confidence, encouraging women, focusing on positivity, supporting women in managing labor pain, and respecting their spiritual values and care are essential elements of care during pregnancy.^[1]

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The significance of sentimental support during labor and women's future sentimental well-being is the focus of interest. Emotional support enables women to think positively, preventing them from feeling fear, terror, negative moods, and anxiety.^[3,4] Emotional supportive care during delivery decreases the risk of awareness of birth as a traumatic event.^[5] This supports effective care behaviors, such as focus, affirmative words or sentences, soft tones of voice, encouraging words, eye contact, and soft facial expressions, including religious values and the support of spouses/relatives.^[2]

Mukamurigo *et al.*^[6] reported that mothers' sense of well-being during the birth process is related to the behavior and attitudes of caregivers. Midwives should care about the emotional state of not only the woman but also the spouse and other family members, encourage the whole family, provide trust, and be present as a "midwife." Emotional relaxation of the woman, her husband, and her family helps reduce birth stress.^[2] Intrapartum care aims for every mother to experience the birth process as a positive event and for the caregiver health professional/midwife to eliminate harmful or ineffective practices.^[7,8]

In the literature, the greatest expectations of women from midwives in the birth and postpartum periods are in the direction of empathic communication skills. These expectations include being friendly, respectful, and sincere; being an active listener; being guiding and encouraging; not using judgmental and embarrassing words; participating in decisions; giving feedback; and being comforting.^[9,10]

Meeting women's expectations for these empathetic communication skills is possible by providing care on the basis of the philosophy of midwifery. The midwifery philosophy, midwives' empathic communication skills, ethical and respectful care principles and approaches, and midwifery values are components. In a study on women's fear of childbirth, some nulliparous women did not have enough support/care for their health personnel; they reported that they experienced fear of physical (e.g., hitting one's leg) and verbal violence (e.g., shouting), saying insulting words (e.g., are you the only one giving birth), disruption of privacy at birth, and negative experiences with health personnel before.^[11] These psychological factors, such as fear and helplessness, affect birth at least as much as physical factors do. The positive effect of midwives' care, which is based on a good level of empathic approach to the obstetric process, including the labor and postpartum periods, and the perception of the midwifery profession is clearly evident. Despite a growing awareness of the emotional aspects of midwifery care, most of the

emotional dimensions involved in midwives' mutual relationships with women during care are not fully understood.^[12] In the literature, the place of continuous emotional and physical support provided to women via empathetic communication during labor emphasizes that this support of the midwife is unique and that no tool/medicalized intervention can be provided.^[9,10]

Bonding, sensual presence, and responsiveness are intimately related to the concept of "being with women" during midwifery. The midwife shows that to "be together," the woman can respond to the physical and emotional needs of the woman during childbirth.^[13] Taheri *et al.*^[14] reported that effective birth support and special emotional support programs should be included in the healthcare services provided to women to create positive birth perceptions and minimize obstetric interventions. Meeting the physical and emotional needs of women during childbirth and delivery is at the center of high-quality midwifery care.^[15]

Intrapartum midwifery care must be continually evaluated to ensure a high standard of care and favorable birth outcomes for maternal and child health. Mothers' birth satisfaction is related to their perceptions of midwives' support and approach.^[16,17] The increased involvement of spouses in intrapartum care may lead to the assumption that the couple who gives birth shares common attitudes and expectations regarding intrapartum care. However, there is limited information on couples' satisfaction with delivery and intrapartum midwifery care.

The EAR-IC tool was developed in 2019 by Leinweber *et al.*^[15] to assess the emotional aspects of midwives' caregiving. It is essential to determine midwives' emotional aspects and emphatic behavior status. Thus, midwifery care quality and women's satisfaction may be enhanced during labor and birth.

With the adaptation of the EAR-IC, which has not yet been adapted to Turkish and other languages, it would be possible to determine the emotional aspects of Turkish midwives in intrapartum care. This study aims to translate the EAR-IC and test the reliability and validity of the instrument in the Turkish maternity care context.

Despite the critical role of emotional support in midwifery care, tools to assess midwives' emotional and empathic behaviors in the Turkish context are lacking. Adapting the EAR-IC tool to Turkish individuals will fill this gap, allowing for the evaluation and enhancement of emotional support provided by midwives, ultimately improving the quality of care and satisfaction for women during labor and birth.

This study aims to translate the EAR-IC tool into Turkish and test its reliability and validity in the Turkish maternity care context to assess the emotional aspects of midwives' caregiving and enhance midwifery care quality and women's satisfaction during labor and birth.

METHODS

The approval of the Istanbul Medipol University Clinical Research Ethical Committee (Nu. 10840098-604.01.01.E.16514 and Ethical Approval Number: 475/06.10.2020) was obtained before the study was conducted. In addition, verbal consent was obtained from the women who agreed to participate in the research.

This study is a methodological study to measure the reliability, validity, and predictive value of the EAR-IC. The data used in this study were obtained by sending the link of the data collection tools developed on the Google Forms application between July 2020 and December 2020 to the midwives who volunteered to participate in the research. As the sample size should be at least five, or even ten, times larger than the number of items in validity and reliability studies, we aimed to reach 132 participants for this instrument, which is composed of eight items.

Participants and setting

The survey was carried out with Turkish midwives who agreed to complete the question form and who participated in the study between July and December 2020. Data collection tools were created with a Google Form. The data were subsequently collected by sending a link to the midwives who agreed to participate in the study. This study was conducted with midwives working in the birth room who agreed to participate in the study to measure the availability and responsiveness of midwives in intrapartum care. Participants who worked in wards other than delivery rooms and did not agree to participate in the study were excluded from the study.

Instruments

The data were prepared by the researchers through the Google Form link in line with the literature, and three forms were used: the form containing the sociodemographic, socioeconomic, and occupational information of the participants; the EAR-IC scale; and the ELBS scale.

Participant form

This form, which was created by the authors according to the literature, consists of a total of 13 questions concerning the sociodemographic characteristics and socioeconomic and professional knowledge of midwives.

Emotional availability and responsiveness in intrapartum care (EAR-IC)

Leinweber^[15] comprises eight items scored on a 5-point Likert-type scale with possible responses. There is no negative score (reverse scoring) on the scale. The responses to the scale items are "I strongly disagree" - 1 point; "Disagree" - 2 points; "Undecided" - 3 points; "I agree" - 4 points; and "I totally agree" - 5 points. The minimum score that can be obtained from the scale is 8, and the maximum score is 40. The Cronbach's α value for the scale is 0.88.

Emotional labor behaviors scale (ELBS)

The Emotional Labor Behavior Scale for nurses was developed by Değirmenci Öz and Baykal.^[18] The internal consistency coefficients (Cronbach α information) for these dimensions are somewhere above 0.80; thus, they can be taken as a reliable measuring tool for the complex area of the relevant scale. There is no negative score (reverse scoring) on the scale. The responses to the scale items are "I strongly disagree" - 1 point; "Disagree" - 2 points; "Undecided" - 3 points; "I agree" - 4 points; and "I totally agree" - 5 points. While evaluating the grain scores from the scale, the arithmetic mean is obtained by dividing the total score from each subdimension and the item in the subdimension. Accordingly, in each subdimension, the mean score average is "1" and "5." In the subdimensions of the scale, emotional labor behavior is low as the average score approaches "1," and the behavior is higher as the score approaches "5." The in-depth behavior dimension of the ELBS scale, consisting of eight items, was used in parallel.

Procedures

In this study, the scale adaptation stages developed by Leinweber *et al.* (2019)^[15] were applied. This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE).^[19]

A three-phase process (translation, back-translation, and cultural adaptation) was implemented to refine the EAR-IC.

Phase I: Translation

Two professionals were invited to individually translate the EAR-IC into Turkish: a midwife trainer and an English teacher at a university.

Stage II: Back translation

After the first Turkish version of the EAR-IC was created, it was sent separately to two bilingual academic midwives with bicultural backgrounds who had not read the original scale for translation into English. The translations were combined to create a back-translated English version. The authors' team (translators and

researchers) compared the two back-translated versions, discussed their findings, and examined any discrepancies together.

Stage III: Cultural adaptation

Eight experts, including a nursing educator and a midwife, were consulted. They examined the original English version and the back-translated version for semantic equivalence. In line with the suggestions of the experts, minor changes were made to create the second Turkish version. In the three-stage process, differences in translations were discussed until an agreement was reached on the most accurate translation of each item. The Lawshe technique was used in the content validity analysis, and as a result of the survey, the content validity criterion was found to be 0.62, and the item was not removed because there was no lower value at this stage.^[20]

Pretest and evaluation of content validity

After the translation process, the scale was applied as a pilot application to a group of 20 midwives (these 20 midwives were not included in the subsequent study). After the pilot test, necessary changes were made in line with the opinions of the participants.

Each of the eight items in the scale was evaluated by experts in terms of comprehensibility, discrimination ability, suitability for purpose, and cultural appropriateness. Accordingly, the content validity index (CVI) was calculated for each item. They scored the correlation between each item and the content to be determined (1 = not at all relevant, 2 = unrelated, 3 = related, 4 = very relevant). The content validity index of each item varies between 0.8 and 1.0, and the content validity index (S-CVI) of the scale is 0.88, indicating that the scale has good content validity. As a result, content validity was found to be sufficient.

Data analysis

The data were analyzed using the SPSS for Windows and AMOS package programs. The content validity index was used to ensure the content and content validity of the scale. For item analysis, Cronbach's α reliability coefficient was calculated, and in the construct validity analysis, the fit statistical analysis was calculated. Internal consistency analysis, parallel form reliability, and test-retest methods were used in the reliability evaluation of the scale.

RESULTS

This study was completed with 132 midwives who voluntarily participated in the study. The mothers' mean age was 30.7 years (SD: 7.49), 44.7% of the midwives were married, 78.8% were university graduates, and

49.2% had 9 years of work experience. It has been reported that 38.4% of the participating midwives could perform another job if their situation was suitable.

Results concerning the reliability of the EAR-IC

Internal consistency

Cronbach's α technique, which is suitable for application to Likert-type scales, was used in the internal consistency analysis. The total Cronbach's α coefficient of the scale was calculated as 0.84. Item analysis was performed to determine the predictive power of the items in the scale and to determine the discrimination levels. The item-total correlation values for the factors were found to be between 0.48 and 0.69.

As Cronbach's α value did not increase when any of the items in the scale were deleted, no item was removed from the scale [Table 1]. Principal component analysis (PCA) was performed, and the data were analyzed via the varimax method.

Test-retest reliability

Test-retest reliability was used to determine the scale's invariance over time. According to the test results, which were applied to the same sample at an interval of two weeks, there was no statistically significant difference between the two applications ($P > 0.05$) [Table 2]. In line with this result, the invariance of the scale against time was ensured.

To evaluate the invariance over time, the agreement between the two measures (ICC: 0.85, $P < 0.001$) was calculated, and the scale was determined to be reliable according to the intraclass correlation result.

Parallel-form reliability

For equivalent form reliability, the relationships between the EAR-IC and ELBS were examined. According to the correlation analysis, there was a statistically significant relationship ($P < 0.001$). There was a moderate positive correlation between the EAR-IC scale and the ELBS in-depth behavior subdimension [Table 3].

Results concerning the validity of the EAR-IC

Explanatory factor analysis

In this study, the Kaiser-Meyer-Olkin (KMO) test was used to evaluate the suitability of the dataset for factor analysis, and the Bartlett test was used to assess the correlations of the variables with each other. The KMO value was calculated as 0.86, and it was determined that the sample size was suitable for factor analysis. According to the Bartlett test results ($X^2 = 399.90$, $P < 0.001$), the relationships between the data and sample adequacy were confirmed.

For the explanatory factor analysis, principal component analysis was performed, and the data were analyzed

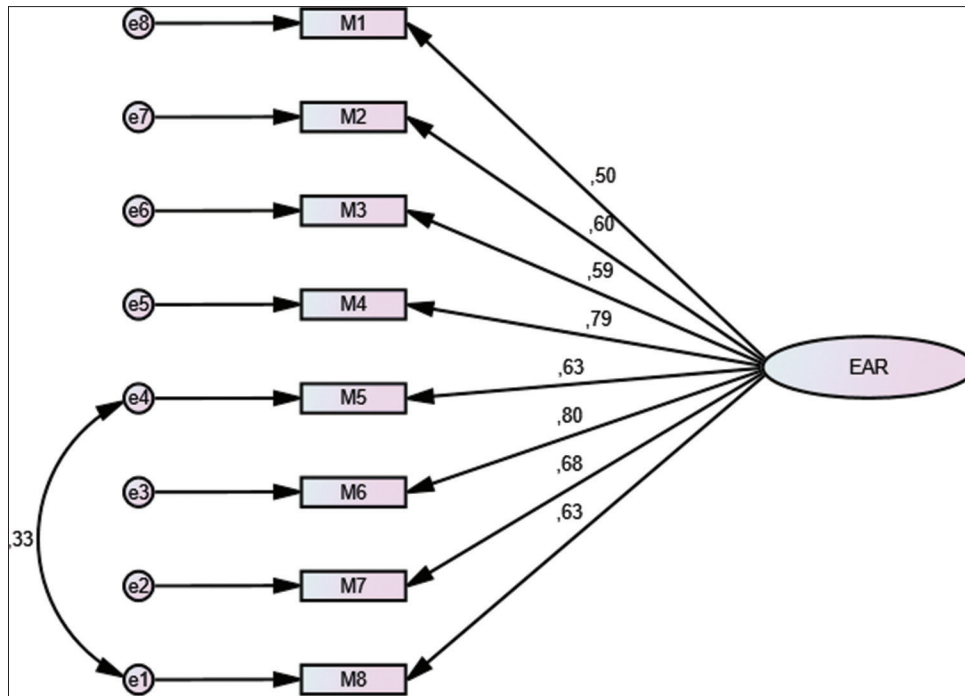


Figure 1: Path diagram of EAR-IC

Table 1: Cronbach’s alpha coefficient of the EAR-IC scale

Item	M±SD	Corrected item total correlation	Cronbach’s alpha if item removed	Factor loading
1 - I can usually comfort a woman when she is distressed.	4.6±0.7	0.48	0.84	0.58
2 - I usually know what a woman wants during the different stages of labor and birth.	4.5±0.6	0.57	0.83	0.67
3 - I usually achieve an emotional connection with a woman.	4.2±0.9	0.55	0.84	0.66
4 - I usually know when a woman wants me to give emotional support.	4.6±0.6	0.68	0.81	0.79
5 - I believe women respond well to my emotional support.	4.7±0.6	0.61	0.82	0.73
6 - I usually know when a woman wants me to ‘be with’ her	4.6±0.6	0.69	0.81	0.79
7 - I usually allow myself to get ‘in sync’ with a woman’s emotions.	4.4±0.7	0.62	0.82	0.74
8 - I feel good about how I respond to women in my care.	4.8±0.4	0.61	0.83	0.73
Cronbach’s Alpha				0.84
Variance Explained				51.1%

M: Mean, SD: Standard Deviation

Table 2: Test-retest reliability

EAR-IC	t*	P	ICC**	P
Firs application (n=32)	36.1±4.6	0.93	0.369	0.85
Second application (n=32)	34.9±3.8			<0.001

t*: Wilcoxon W test, ICC**: Inter-class coefficient

via rotation via the varimax method. According to the varimax rotation result, the scale had one factor, and the factor loads of the items varied between 0.48 and 0.69. The explained variance was calculated as 51.1% [Table 1].

Confirmatory factor analysis

Confirmatory factor analysis, which is another step of construct validity, aims to confirm the results of

explanatory factor analysis and to test the Turkish version of the scale. Goodness-of-fit indices and chi-square tests were performed to evaluate the fit of the model tested in the AMOS program. Confirmatory factor analysis revealed that the measures of the root mean square error of approximation (RMSEA) = 0.07, incremental fit index (IFI) = 0.96, goodness-of-fit index (GFI) = 0.94, adjusted good fit index (AGFI) = 0.89, comparative fit index (CFI) = 0.96, relative fit index (RFI) = 0.88, standardized root mean square residual (SRMR) = 0.02 and relative chi-square index (CMIN/DF) = 1.74 were at the desired levels. These results also showed a good fit of the model, as shown in Table 4. The item–total correlation factor loadings

Table 3: Correlations of the EAR-IC items and total score comparison with the ELBS subscale and total score

EAR-IC (Item and Total) Score	1	2	3	4	5	6	7	8	Total
In-depth behavior	0.35**	0.37**	0.50**	0.60**	0.51**	0.49**	0.52**	0.59**	0.62**

EAR-IC: Emotional availability and responsiveness in intrapartum care scale, ELBS: Emotional labor behavior scale, * $P < 0.05$, ** $P < 0.001$

Table 4: Fit criteria from the confirmatory factor analysis

Fit Criteria	Good Fit	Acceptable Fit	Model results
CMIN/DF	$\chi^2/df < 3$	$\chi^2/df < 5$	1.74
GFI	$0.90 \leq GFI \leq 1$	$0.85 \leq AGF I \leq 0.90$	0.94
AGFI	$0.90 \leq AGFI \leq 1$	$0.85 \leq AGF I \leq 0.90$	0.89
CFI	$0.97 \leq CFI \leq 1$	$0.95 \leq CFI \leq 0.97$	0.96
RMSEA	$0 < RMSEA < 0.05$	$0.05 \leq RMSEA \leq 0.10$	0.07
IFI	$0.97 \leq IFI \leq 1$	$0.95 \leq IFI \leq 0.97$	0.96
RFI	$0.90 \leq RFI \leq 1$	$0.85 \leq AGF I \leq 0.90$	0.88
SRMR	$0 \leq SRMR \leq 0.05$	$0.05 \leq SRMR \leq 0.10$	0.02

CMIN/DF: relative Chi-square index, GFI: goodness-of-fit index, AGFI: adjusted good fit index, CFI: comparative fit index, RMSEA: root mean square error of approximation IFI: incremental fit index, RFI: relative fit index, SRMR: standardized root mean square residual

(path coefficients) varied between 0.50 and 0.80 [Figure 1].

DISCUSSION

This study aimed to validate a Turkish version of the EAR-IC in a Turkish sample of midwives who were intrapartum caregivers.^[15] To adapt the original scale to Turkish society, first, the translation phase was completed, and then its content validity was verified in line with expert opinions. In this study, the CGI was greater than 0.80 for all the items. Although it varies according to the number of specialists, it is recommended that the CGI values calculated using Lawshe's technique should not be below 0.78.^[21,22] Explanatory and CFA were performed to evaluate construct validity.

In the EFA in the literature, it is expected that sample adequacy should be determined on the basis of the KMO value, which should be above 0.60; a KMO value between 0.80 and 90 is considered very good.^[21,22] The calculation of the KMO value as 0.86 in this study shows that the sample size is satisfactory for factor analysis. However, in factor analysis, the population should have a normal distribution. For this purpose, the Bartlett test is applied to evaluate whether the data have a multivariate normal distribution, and the significance value is checked to evaluate the suitability of the data for factor analysis. If $P < 0.05$, the items in the scale are suitable for factor analysis.^[20] In the original version of the EAR-IC, the KMO value was 0.90. The result of

Bartlett's χ^2 value was $X^2 = 399.90$ ($P < 0.001$) for the EAR-IC.

For RMSEA in DFA, the second pillar of the construct validity phase value is 0.07, the CFI value is 0.96, the IFI value is 0.96, the SRMR value is 0.02, the GFI value is 0.94, the AGFI value is 0.89, and the RFI value is 0.88. The corrected chi-square value is 1.74 ($0 < \chi^2/df < 3$). Although the model seems to have a good fit according to the literature, a comparison could not be made because the fit analysis indices of the original scale were not calculated.

To analyze the concurrent validity of the instrument, emotional availability and reliability were assessed using the "in-depth behavior" subscale of the Emotional Labor Behavior Scale for Nursing.^[18] Spearman's correlations revealed that the EAR-IC was moderately positively correlated with the in-depth behavior concern subscale of the ELBS ($\rho = 0.62$, $P < 0.001$). The results show that factor loading and interpretation variance are strong, consistent with the EFA results, and have a good factor structure. To ensure the concurrent validity of the original scale, the EAR-IC scores were compared with the Interpersonal Reactivity Index (IRI) empathic concern and personal distress subscale scores. Spearman's correlations revealed that the EAR-IC was moderately positively correlated with the empathic concern subscale of the IRI ($\rho = 0.25$, $P < 0.001$) and moderately negatively correlated with the personal distress subscale of the IRI. ($\rho = -0.25$) ($P < 0.001$).^[15] In summary, the findings from the study reported here showed that the EAR-IC is a suitable instrument for measuring the emotional aspects of midwives' caregiving. The single-factor CFA fit of the scale was consistent with that of the original scale and was good.

One of the most frequently used evaluations in scale reliability studies is the internal consistency calculation. Cronbach's α coefficient is used to calculate internal consistency and reliability in Likert-type scales.^[21,22] In this study, Cronbach's α coefficient and item-total correlation and test-retest analyses were used to determine the reliability of the Turkish version of the EAR-IC. Cronbach's α coefficient was calculated as 0.84. The original version of the scale was prepared by Leinweber *et al.*^[15] Cronbach's α coefficient has been reported to be 0.88.

The discriminative power of the items in the scales is an important feature. The item–total score correlation coefficient is a method used to determine the measurement ability of each item in measuring the feature to be measured with the scale.^[22]

If the item–total correlation coefficient is not negative and is 0.30 and above, it is considered sufficient in terms of distinguishing the feature to be measured for the items. If the relationship between an item and the scores obtained from the whole scale shows a positive and “high enough” correlation, that item is distinctive or the item is included in the scale, assuming that these items exemplify similar situations.^[23] In this study, the item–total correlation values related to the factors of the scale were found to be between 0.48 and 0.69, and it was determined that there was no item that should be removed from the scale. As a result, the scale items that make up the scale are distinctive in terms of the feature they measure, the reliability of the items that make up the scale is high, and they aim to measure the same purpose. Similarly, in the original version, the item–total correlation of the EAR-IC was determined to be between 0.59 and 0.74.^[15]

To show the stability of the measuring tool in measuring, one of the methods used is test-retest. The measurement correlation used to determine reliability between coefficients should be between 0 and 1. Similarly, in healthcare evaluations, repeated measurements taken from the individual ICC are frequently used for this purpose.^[22,23] In this study, an ICC with 32 midwives who filled out the form every 2 weeks high between the two measurement degrees of agreement was found (ICC: 0.85). According to the evaluations performed to determine the reliability of the scale, the Turkish version of the EAR-IC showed good internal consistency and reliability.

Limitations

This study aimed to reach a sample of close to 200 midwives, considering that at least 10 people should be recruited for each item to increase the reliability of the study, and the sample should be between 100 and 200 for confirmatory factor analysis. However, the study was completed with 132 midwives. The cost constraints, time, and difficulty in creating suitable conditions for the research caused the research population and sample to be limited. The sample consists of midwives registered in Istanbul. However, Istanbul constitutes almost a quarter of Turkey’s population, and considering that midwives registered in Istanbul come to work from different regions of Turkey, it can be said that they represent Turkish society.

CONCLUSIONS AND RECOMMENDATIONS

The Turkish version of the EAR-IC scale was found to be highly valid and reliable. The EAR-IC is a self-report measure specifically developed to assess the extent to which emotional aspects affect intrapartum caregiving. Testing the validity and reliability of the scale in other countries to investigate differences between cultures is recommended. It can also be used as a measurement and evaluation tool for the training and professional development of midwives and midwifery students.

Author(s) contribution(s)

YYV and PIV conceptualized and designed the study. YYV was involved in data collection/acquisition and statistical analysis; All authors (YYV and PIV) were involved in the writing and revising the manuscript for intellectual content. All authors read, and approved the final manuscript and agreed to be accountable for all aspects of the work.

Institutional Review Board (IRB) and ethical app

Approval of the Istanbul Medipol University Clinical Research Ethical Committee (Nu. 10840098-604.01.01.E.16514 and Ethical Approval Number: 475/06.10.2020), were obtained before the study was conducted.

Informed consent

In addition, verbal and written consent was obtained from the midwives who agreed to participate in the research.

Declaration of Helsinki

The research conforms to the provisions of the Declaration of Helsinki (as revised in Brazil 2013). All the participants provided informed consent for the research, and their anonymity was preserved. The aim of the study was explained to women to fulfill the “informed consent” principle before starting to collect study data, the “Privacy and Protection of Privacy” principle was met by stating that the information obtained would be kept confidential, and the principle of “Respect for Autonomy” was fulfilled by making the study on a voluntary basis and that “Nonmaleficence/Beneficence” ethical principles were fulfilled in general.

Availability of research data

The authors are available and ready to supply the data upon any requests through the corresponding author.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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