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The Turkish Version of the Infant Feeding Intention Instrument (IFI-T)

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ABSTRACT

Objective: The purpose of this research was to translate the Infant Feeding Intentions Scale (IFI) into Turkish, modify it according to the Turkish cultural state, and detect the reliability and validity of the translated version.

Materials and Methods: The research data was collected in the pregnancy polyclinic from 128 healthy pregnant women at a university hospital. A personal information form and a Turkish version of the IFI scale (IFI-T) were used for data collection. Language equivalence, content validity, construct validity, and predictive validity were used in the validation research of the IFI-T Scale. In the reliability research, Cronbach's alpha coefficient, item analysis, split-test, and re-test methods were used. The t-test was used for the dependent groups to test the time invariance of the scale.

Results: The consistency of specialist opinion on the scale, translated into Turkish and back-translated, was revealed (Kendall W=0.600; p>0.05). The factor loading values resulting from the factor analysis that was directed at the construct validity of the scale were between 0.69 and 0.89 and the items were collected under one factor. The scale total correlation value of all items was over 0.20. In the reliability research, the Cronbach's alpha value was 0.86. The test-retest and split-half test results also supported the reliability of the scales.

Conclusion: We found that the IFI-T scale can be used as a valid and reliable tool for evaluating the infant feeding intention in pregnant women.

Keywords: Breastfeeding, the infant feeding intentions scale, validity and reliability

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INTRODUCTION

Breastfeeding is very beneficial for mothers, babies and community health. Breastfeeding helps the babies' healthy growth and development, protects maternal health, and provides emotional communication between mothers and babies (1). The American Academy of Pediatrics (APA) recommends that infants should be only breastfed for the first 6 months, after which the mothers should continue to breastfeed along with nutritional supplements until babies reach the age of 2 years (2). However, the number of developed and developing countries that meet these recommendations remains very low (1–3). Despite many incentive efforts in our country and worldwide, the duration of breastfeeding is below the desired level and one of the most important problems is the early use of nutritional supplements.

In the Turkish Demographic and Health Analysis 2013 report, the majority of mothers (92%) started to breastfeed their babies just after birth and while the rate of breastfeeding was 57.9% in the 1st month of life, it fell to 9.5% in the 4th–5th months (4). The high initial ratio indicates that women may have strong intentions to start breastfeeding. However, the low ratio of specific breastfeeding for up to 6 months also indicates the presence of contextual barriers that may affect the continuation of specific breastfeeding (5). Maternal breastfeeding behaviors and the factors that affect them have been investigated in many retrospective and descriptive studies regarding breastmilk and breastfeeding in our country (6–8). These studies were conducted to identify variables related to breastfeeding success or failure and although groups that are at high risk of discontinuing breastfeeding have been identified based on age, ethnic group, working status, etc., the reason for including these people in their risk groups was not mentioned (6–8).

It is significant that healthcare professionals determine the factors that influence breastfeeding behaviors according to specific models and ensure successful breastfeeding by educating and supporting mothers' efforts to breastfeed their babies as long as they desire (9, 10). One such model is the planned behavior theory, according to which; individuals who believe that a behavior will lead to the desired outcome, whose social environments approve of the behavior, and who believe that they can easily perform a behavior tend to engage in that particular behavior (11). Several studies based on planned behavior theory have been applied to infant feeding intention and behavior (12–16).

Research conducted in Turkey showed that multiparous mothers and older mothers had higher breastfeeding control perceptions. Mothers with a bachelor's degree and mothers in nuclear families had positive attitudes toward breastfeeding, while multiparous mothers had more negative attitudes. It has also been found that the relationship between mothers' breastfeeding intentions and their breastfeeding behaviors had no statistically significant in the first 6 months (16). These studies inquired about mothers' breastfeeding intentions without using valid and reliable tools, thus are of limited use because they only measure the strength of intention to initiate breastfeeding and do not take into account intended breastfeeding duration or exclusivity (12–17). When mothers were asked about how long they plan to breastfeed in an open-ended fashion, they gave problematic, non-numerical, and generic answers such as "as long as I can" or "as long as the baby wants" (18, 19).

Breastfeeding intention should be determined with a scale that is appropriate for infant feeding recommendations and assesses the strength and duration of intention in the first 6 months. In short, quantitative measurement is needed to assess maternal breastfeeding intention in breastfeeding behavior studies. The Infant Feeding Intentions (IFI) scale, improved by Nommsen-Rivers and Dewey (2009), is a valid and reliable tool that can be used to determine maternal breastfeeding intentions. There is no such measurement tool in our country. Therefore, a validity and reliability research of the Turkish version of the Infant Feeding Intentions (IFI-T) scale is needed for its proper use in our country.

MATERIALS and METHODS

Design
The present research was cross-sectional and based on scale validation.

Setting
The research was conducted on 128 healthy pregnant women who were admitted to the pregnancy polyclinic at Ege University Medical Faculty Hospital between February 2015 and April 2015. Permission to conduct the research was obtained from the Ege University School of Nursing's Ethics Committee and from the hospital (no. 27344949/229).

Sample
The participants were informed about the aim and benefits of the research, and their written informed consent was obtained. The inclusion criteria were: being pregnant for 28 weeks or longer, not having been diagnosed with a mental illness that would prevent them from responding to the questionnaire, literacy, healthy pregnancy, non-multiple pregnancy, and voluntary participation. Based on the knowledge that the sample size should be between 5 and 20 times higher than the number of items in validity and reliability studies, 128 pregnant women were included (20). The same women were telephoned for information about the infants' nutrition in the 1st postnatal week and at 1, 3, and 6 months, and were specially asked whether the infant was only given baby formula, mixed feed (baby formula and breastfeeding), or only breastfeeding. Of the original sample, 72.7%, 67.2%, 59.4%, and %55.5 respectively were successfully contacted at each time point (n=93, 86, 76, 71, respectively). In order to evaluate the invariance of the IFI-T scale against time with test retesting, data were collected again after 3 weeks from 30 individuals via a telephone survey.

Measurement
The Personal Information Form and the Turkish Infant Feeding Intentions Scale (IFI-T) were used to collect data.

The Personal Information Form: A total of 29 questions on the data collection form were prepared by the researcher based on the relevant literature (21, 22). They dealt with sociodemographic characteristics (age, employment status, education status, marital status, income status, social security status, and spouses' education status) and previous and current pregnancies (number of pregnancies, number of living children, gestational problems, desire to have a baby, gender of the baby, previous breastfeeding experiences, breastfeeding durations, being informed about breastfeeding in their current pregnancy, and information sources).

The Turkish Infant Feeding Intentions Scale (IFI): In 2009, the IFI Scale was developed by Nommsen-Rivers and Dewey. It is a 5-item Likert-type scale consisting of questions about pregnant women's breastfeeding intentions. Its Cronbach's alpha coefficient was determined to be 0.90. The first two items measure the strength of the intention to start breastfeeding. The other items measure the strength of the intention to use breastmilk for the baby as the only source of milk in the 1st, 3rd, and 6th months. Each item is scored from 0 to 4. The total IFI score is calculated by calculating the average of the first two items and adding them to the average of the last three items. Possible results can range from 0 to 16, where 0 indicates no intention to breastfeed and 16 indicates the intention to use the breastmilk as the only milk source for the first 6 months. According to the IFI score, breastfeeding intention was classified as follows: very low (0–3.5), low (4.0–7.5), moderate (8.0–11.5), strong (12.0–15.5), and very strong (16.0) (17).

Scale Translation Procedures (Language Validity) and Pilot Study
For language validation, the scale was converted from English to Turkish by 10 experts including nurses, educators, and linguists. After the Turkish translation of the scale was made, the translators agreed on a common Turkish text for concordance and clarity. Then, the retranslation of the scale was done from Turkish to English by a language expert who knew both languages very well. After the most suitable expressions were selected an English questionnaire form was prepared by an expert who works in a related field. This form was sent to the primary author of the scale and approved for compliance with the original (L.A. Nommsen-Rivers, personal communication, 23 February 2015).

In the pilot study, the scale was administered on 10 pregnant women who met our inclusion criteria at the pregnancy outpatient clinic at Ege University Medical Faculty Hospital, to determine the applicability of the language and content validity. The scale had five items, so was easier to understand than the longer original scale. The study was conducted by face-to-face interviews that indicated that each item was comprehensible. There was no negative feedback about the items on the scale. Therefore, the pilot study was concluded with just 10 people. Considering the aim of the study, the sociodemographic information of these women was not taken into account. The data of the pregnant women obtained from this preliminary assessment were not included in the final research.

Data Analysis

The data was evaluated using the Statistical Package for Social Science (SPSS) 20.0 software. Descriptive statistics for each item score and scale scores were calculated. The validity of language, content, predictive, and construct was investigated to examine the total validity of the IFI-T Scale. The distribution of the data was tested by the Kolmogorov-Smirnov test and was found to be in the normal distribution. For this reason, the relationships between categorical variables were used for the scale parametric tests. The experts' views of scores were assessed using the Kendall W analysis. Levene's statistic test was used to test the homogeneity of variance between the groups. For predictive validity, the participants' IFI-T scale scores and infant feeding method at the postnatal 1st week and at 1, 3, and 6 months (only breastfeeding, both breastfeeding and formula feeding, or only formula feeding) were evaluated using one-way ANOVA, followed by the post hoc Scheffe multiple range test for analysis. KMO and Bartlett's sphericity method were used to perform factor analysis. The Cronbach's alpha coefficient calculation, item analyses, and split-half reliability analyses were calculated to determine the internal consistency of the IFI-T Scale. The t-test was used for the dependent groups to test the scale's time invariance.

RESULTS

Baseline Characteristics

The sociodemographic characteristics and breastfeeding intentions of the pregnant participants are summarized in Table 1. All the participants were married. Their mean age was 28.56±5.37 years and 48.5% (n=62) had completed elementary school. The competitors' breastfeeding intentions varied from low to very strong. Their mean IFI-T (SD) score was 14.23±2.49 and ranged from 0 to 16.

The Validity Analysis Results

Content Validity

The IFI-T Scale was given to 9 different expert faculty members the evaluation of content validity. Each question on the IFI-T was evaluated by experts on a scale of 0–100 points. The experts evaluated the scale items in terms of distinctiveness, intelligibility, fitness for a purpose, and cultural compatibility. The form was made into its final version by revising it according to the recommendations of the experts. The scores given by the experts to the items on the IFI-T Scale were between 80 and 100. The fourth item had the lowest mean score with X=83.88 points, and the first item had the highest mean score with X=96.22 points. After evaluating the expert views and making the necessary corrections, there were no mean scores below 70, which is the lowest acceptable score. Their scores were assessed using Kendall W analysis. Kendall's coefficient of concordance analysis found no statistically significant difference (Kendall's W=0.600, p=0.142>0.05) among the experts' views. Therefore, no items were removed from the scale for lack of content validity.

Construct Validity

Exploratory Factor Analysis

KMO and Bartlett's test values were 0.75 and XI=264.857 respectively, in a manner significant at the p<0.001 level for both

Table 1. Participants' baseline characteristics and infant feeding intentions (n=128)

Variable	n	%
Parity		
Primiparous	50	
39.1		
Multiparous	78	60.9
Employment		
Yes	99	77.3
No	29	22.7
Educational level		
<Middle school	62	48.5
Secondary	47	36.7
University	19	14.8
Monthly income		
Weak	15	11.7
Moderate	90	70.3
Good	23	18
Breastfeeding intention (IFI –T score)		
Very low (0-3.5)	-	-
Low (4-7.5)	2	1.6
Moderate (8-11.5)	16	12.5
Strong (12-15.5)	48	37.5
Very strong (16)	62	48.4

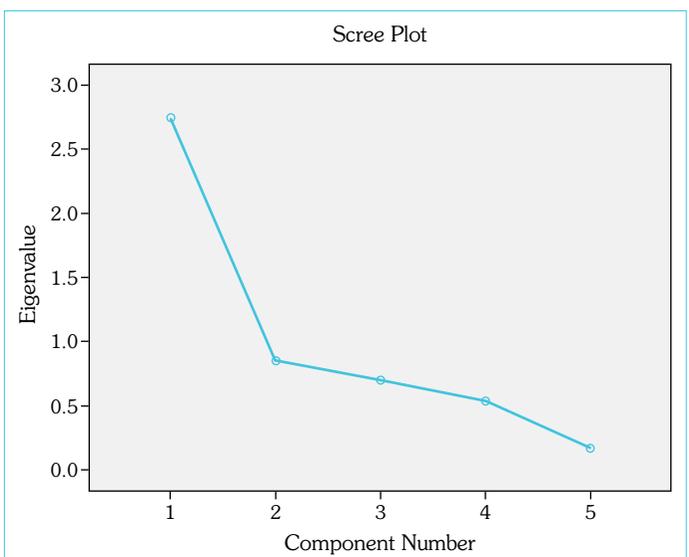n: Number of cases in a subsample; %: Percentage of cases in a subsample

Figure 1. Total survival based on lymphatic dissection-groups

tests. The sample size was also adequate and sufficient for factor analysis. Based on these findings, a basic component analysis of the explanatory factor analysis methods was applied to reveal the factor structure of the 5-item IFI-T Scale. In the factor analysis, a uni-factor structure with an eigenvalue of over 1 (Fig. 1) was

Table 2. Comparison of the mean IFI-T scores of women according to the feeding method

Groups	First week		1 m		3 m		6 m	
	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)
Exclusive breastfeeding	58	14.9 (1.53)	63	15.23 (1.35)	45	14.8 (1.56)	41	15.03 (1.42)
Breastfeeding + baby formula	22	13.93 (1.74)	17	14.88 (1.28)	18	13.52 (1.76)	14	13.10 (1.54)
Baby formula	13	8.88 (1.94)	6	11.5(4.97)	13	8.88(1.94)	16	10.93(2.68)
F		71.057		11.953		62.690		30.838
p		0.00001*		0.00001*		0.00001*		0.00001*

SD: Standard deviation; F: ANOVA Analysis; m: Month; *p<0.001

Table 3. Psychometric properties of the IFI-T Scale

IFI-T scale item content	Corrected item-total correlation	Cronbach's α if item deleted
I plan to feed my baby with only an infant formula (I will not breastfeed at all)	0.53	0.79
At the very least, I plan to try to breastfeed my baby	0.39	0.81
I will be breastfeeding without using any infant formula or other milk when my baby is 1-month-old	0.74	0.76
I will be breastfeeding without using any infant formula or other milk when my baby is 3-months-old	0.87	0.73
I will be breastfeeding without using any infant formula or other milk when my baby is 6-months-old	0.71	0.75

obtained. The variance in the scale explained by these factors amounted to 59.09%.

Predictive Validity

The behavior measured in this research is the feeding method of babies. A total of 93 (72.7%) mothers in their postnatal 1st week, 86 (67.2%) mothers in their postnatal 1st month, 76 (59.4%) mothers in their postnatal 3rd month, and 71 (55.5%) mothers in their postnatal 6th month were evaluated. The results were evaluated by comparing the mean IFI-T scores in the antenatal period with the baby feeding methods of the same mothers in the postnatal 1st week and at 1, 3, and 6 months. Before the one-way ANOVA test, the hypothesis of whether the variances of the group distributions were homogenous with the Levene's test was tested, where the variances were found to be homogeneous (1st week, 1 month, 3 months, and 6 months, respectively: LF=0.817; LF=41.644; LF=0.720; LF=5.510; p<0.05). There was a statistically significant difference (p<0.001) between the mean IFI-T scores of the mothers only breastfeeding, breastfeeding and feeding with infant formula, and feeding with only infant formula during the abovementioned times (Table 2). The Scheffe multiple comparison test determined that this difference was present between the only breastfeeding and only feeding with infant formula groups (p=0.001). The mothers who fed their babies with only breast milk for during the 1st week and during the 1st, 3rd, and 6th month were found to have higher mean scores.

The Internal Consistency Reliability Analysis Results for the IFI-T Scale

In the reliability analysis of the IFI-T Scale, Cronbach's alpha coefficient was found to be 0.86. Cronbach's alpha coefficient means that the Scale items are consistent with each other and they tested positively for an intention to breastfeed during pregnancy. Item-total cor-

Table 4. The Split-half Reliability Analysis of the IFI-T Scale (n=128)

Guttman Split-Half	0.79
Spearman-Brown	0.78
3-items first half Cronbach's Alpha value	0.58
2-items second-half Cronbach's Alpha value	0.76
Correlation between the two-halves	0.65
Number of items	5

relations ranged from 0.39 for Item 2 to 0.87 for Item 4 (Table 3).

The half-test reliability results of the IFI-T Scale are shown in Table 4. The Guttman split-half coefficient was 0.79, and the Spearman-Brown coefficient was 0.78. The Cronbach's alpha values of the first half and the second half were 0.58 and 0.76 respectively, and the correlation between the two halves was 0.65 (Table 4).

Test-retest Reliability

A test-retest assessment was done with 30 people at 3-week intervals to evaluate the time invariance of the IFI-T Scale. There was no statistically significant difference between the mean scores of the test-retest results for the dependent groups compared by the t-test (p>0.001). When the relationship between the scores on the first and second administrations of the IFI-T Scale was examined using Pearson's correlation analysis, the reliability coefficient between two measurement points in 3-week intervals was r=0.93, indicating a very strong and statistically significant relationship (Table 5).

DISCUSSION

In this research, the authors determined the psychometric qualities of the Turkish version of the IFI (17). In accordance with other

Table 5. The comparisons and correlations of the test-retest means of the IFI-T Scale (n=30)

	The first application	The second application
n	30	30
X	14.63	14.71
SD	1.90	1.91
t	-1.980	
p*	0.057	
r	0.93	
p	0.000	

n: Number of cases in a subsample; X: Mean; SD: Standard deviation; t: T-test; p*: T-test significance level; r: Pearson correlation coefficients; p: Correlation significance level

cultures and contexts that validated the IFI scale (5, 17), our results proved the IFI- T scale to be valid and reliable in the Turkish context.

Validity

In this research, the validity of the scale was investigated by content validity, predictive validity and construct validity.

For determining content validity, an expert was consulted on whether the questions on the measurement tool are suitable for the purpose of measurement and accurately represent the subject to be measured (23). When the evaluation scores of the experts were assessed using the Kendall W analysis, no statistically significant differences were seen between the experts' views. The revised scale was compatible with the purpose of the scale and represented the subject to be measured. As a result of expert views and suggestions, the scope of the validity criterion was met. In order to determine if there are any further corrections to be made for the scale items, the preliminary application of the scale was performed with 10 pregnant women. Their data were not included in the research.

Construct validity was evaluated by factor analysis. The result of the KMO test was 0.75 and the result of Bartlett's test of sphericity was 264.857. This statistically significant (p<.000) data indicated that both data are normally distributed and that the sampling is sufficient (24, 25). In the factor analysis, a uni-factor structure with an eigenvalue of over 1 (Fig. 1) was obtained. The variance in the scale declared by these factors amounted to 59.09%. Similarly, Yehya (2017) found that the factor structures were the same in the Arabic version of the IFI Scale (5).

Predictive validity was determined by examining the mothers' infant feeding method at the postpartum 1st week and after 1, 3, and 6 months and their respective IFI-T scale scores. It was determined that 72.7%, 67.2%, 59.4%, and 55.5% of the participants in their postpartum 1st week and after 1, 3, and 6 months were breastfed exclusively. This result had a very little difference from the Arabic version of the scale research, according to which 77%, 46.5%, 41.2%, and 31.6% of all children were breastfed exclusively (5). This research found that the total score for the predictive validity of the scale was higher for mothers who only breastfeed than for mothers who breastfed and used infant formula and those who used infant formula only.

Reliability

The reliability of this research was determined by Cronbach's alpha coefficient, item analysis, split-test reliability methods, and test-retest. Reliability is the basic feature that every measurement tool must have, i.e., the ability to record measurements without errors. This feature determines that the tool collects accurate and repeatable data. For reliability analysis, the correlation coefficient is calculated for item analysis, which is commonly used for item selection and determines how the scale items relate to the measurement tool as a whole (26). The correlation between the respondents' total scores on the measurement tool and item scores is calculated (27). Since a low total item score correlation reduces reliability, these items were excluded from the scale. In our research, item-total correlations ranged from 0.39 for Item 2 to 0.87 for Item 4 (Table 3). Since there were no items lower than 0.20 in the item analysis, no items were excluded from the scale. It was determined that the item-total correlations of all items in the scale were at a sufficient level.

Cronbach's alpha coefficient is a measure of the homogeneity of the internal consistency of the items on the scale. A higher Cronbach's alpha coefficient represents a higher consistency between items that examine the same feature (26). In this research, the Cronbach's alpha coefficient was evaluated to calculate the internal consistency coefficient of the IFI-T Scale. The internal consistency reliability coefficient of the IFI-T Scale was 0.86 and was highly reliable. The Cronbach's alpha coefficient was reported as 0.90 in the original validity and reliability research of the scale (17). Like our results, the Cronbach's alpha reliability coefficient of the Arabic version of the scale was 0.82 (5). Since the Cronbach's alpha reliability coefficient of our research was 0.86, it means that the scale items were consistent with each other and that they tested a positive intention to breastfeed during pregnancy.

The reliability coefficient obtained by dividing a scale into two is known as the split-half method. If the scale consists of one dimension, this coefficient can be calculated for the whole scale. If the scale has sub-dimensions, each sub-dimension can be considered on its own. Split-half is the most commonly used method for determining scale reliability (28). An equation developed by Spearman and Brown is used to obtain the confidence coefficient for the whole test (23). The Spearman-Brown coefficient (0.78) and Guttman Split-Half coefficient (0.79) were found to be high in the split-test reliability analyses of the Infant Feeding Intentions Scale (Table 4). These findings indicated that the scale has acceptable internal consistency and is a reliable scale.

Test-retest reliability is the capacity of a measurement tool to give consistent results in different administrations and the power of time invariance. In order to determine the test-retest reliability, the correlation between the scores obtained from the two different administrations is calculated. As correlation (r) rises, the level of effectiveness of the statement increases, and it decreases with a decreasing r-value. A high-enough correlation coefficient indicates the stability of the measurements obtained from the test and means that there is no significant change in the quality measured between the two administrations over time (23). The test-retest analysis value was r=0.93, which reveals there is a significant high correlation and indicates that the stability of the scale is high.

CONCLUSION

The IFI-T Scale is a valid and reliable tool for pregnant women in our country. IFI-T Scale supplies an easy and quantitative evaluation of maternal feeding intentions. Retesting this scale with larger populations and on pregnant women with different characteristics will ensure that it can be used in a generalized environment.

Limitations

In this study, the duration and composition of feeding information was noted according to the mothers' self-report and no other measure was used to confirm the reliability of this report.

In our research, the pilot study was performed only in Turkish due to the inability to reach to the pregnant women who knew both English and Turkish.

REFERENCES

1. Irmak N. The importance of breastmilk and the factors that effect exclusive breastfeeding. The Journal of Turkish Family Physician 2016; 7(2): 27–31.
2. Gartner LM, Morton J, Lawrence RA, Naylor AJ, O'Hare D, Schanler RJ, Eidelman AI; American Academy of Pediatrics Section on Breastfeeding. Breastfeeding and the use of human milk. Pediatrics 2005; 115(2): 496–506. [CrossRef]
3. Çalık KY, Çetin FC, Erkaya R. Breastfeeding Practices of Mothers and Influencing Practices. GUSBD 2017; 6(3): 80–91.
4. Turkey Demographic and Health Survey Main Report. Hacettepe University Institute of Population Studies. Turkish Republic Prime Ministry State Planning Organization European Union, Ankara 2013.
5. Yehya N, Tamim H, Shamsedine L, Ayash S, Abdel Khalek L, Abou Ezzi A, et al. Validation of the Arabic Version of the Infant Feeding Intentions Scale Among Lebanese Women. Journal of Human Lactation 2017; 33(2): 383–9. [CrossRef]
6. Sağlam NÖ, Bülbül L, Kazancı SY, Hatipoğlu SS. Factors Affecting Breastfeeding and Complementary Nutrition Preferences of Children Between 24-48 Months. Med Bull Sisli Etfal Hosp 2019; 53(2): 165–71.
7. İnce T, Aktaş G, Aktepe N, Aydın A. Evaluation of the factors affecting

8. Şafak Ç, Ata Tutkun N. Analyzing the factors influencing the duration of breastfeeding: An examle of Turkish Republic of Northren Cyprus. İzmir Dr. Behçet Uz Çocuk Hast. Dergisi 2015; 5(3): 167–76. [CrossRef]
9. Chantry CJ, Dewey KG, Peerson JM, Wagner EA, Nommsen-Rivers LA. In-hospital formula use increases early breastfeeding cessation among first-time mothers intending to exclusively breastfeed. J Pediatr 2014; 164(6): 1339–45.e5. [CrossRef]
10. Karayağız-Muslu G, Basbakkal Z, Janke J. The Turkish version of the breastfeeding attrition prediction tool. Journal of Human Lactation 2011;27(4): 350–7. [CrossRef]
11. Dick MJ, Evans ML, Arthurs JB, Barnes JK, Caldwell RS, Hutchins SS, et al. Predicting early breastfeeding attrition. J Hum Lact 2002; 18(1): 21–8. [CrossRef]
12. Wambach KA, Koehn M. Experiences of infant-feeding decision-making among urban economically disadvantaged pregnant adolescents. J Adv Nurs 2004; 48(4): 361–70. [CrossRef]
13. Swanson V, Power KG. Initiation and continuation of breastfeeding: theory of planned behaviour. J Adv Nurs 2005; 50(3): 272–82. [CrossRef]
14. Giles M, Connor S, McClenahan C, Mallett J, Stewart-Knox B, et al. Measuring young people's attitudes to breastfeeding using the Theory of Planned Behaviour. J Public Health (Oxf) 2007; 29(1): 17–26.
15. McMillan B, Conner M, Green J, Dyson L, Renfrew M, Woolridge M. Using an extended theory of planned behaviour to inform interventions aimed at increasing breastfeeding uptake in primiparas experiencing material deprivation. Br J Health Psychol 2009; 14(Pt 2): 379–403.
16. Karayağız-Muslu G, Başbakkal Z. Planned behavior theory and breastfeeding behavior. Turkey Clinics of Journal Nursing Science 2013; 5(1): 28–40.
17. Nommsen-Rivers LA, Dewey KG. Development and validation of the infant feeding intentions scale. Matern Child Health J 2009; 13(3): 334–42. [CrossRef]
18. Wells KJ, Thompson NJ, Kloeblen-Tarver AS. Intrinsic and extrinsic motivation and intention to breast-feed. Am J Health Behav 2002; 26(2): 111–20. [CrossRef]
19. DiGirolamo A, Thompson N, Martorell R, Fein S, Grummer-Strawn L. Intention or experience? Predictors of continued breastfeeding. Health Educ Behav 2005; 32(2): 208–26. [CrossRef]
20. Büyüköztürk S. Factor analysis: Basic concepts and scale development. Education Management Magazine 2002; 32: 470–83.
21. Eryılmaz G. Lactation and breastfeeding. Şirin A, Kavlak O, (Eds.). Women's health. Istanbul: Bedray Press Publishing; 2008. p. 757–90.
22. Gür E. Breastfeeding. Turk Ped Arch 2007; 42(Suppl 1): 11–5.
23. Karasar N. Scientific research method. [in Turkish]. Ankara: Ankara Nobel Publication 2000.
24. Akgül A. Statistical Analysis Techniques for Medical Research – SPSS Practices. Ankara: Emek Ofset; 2003.
25. Weis D, Schank MJ. Development and psychometric evaluation of the Nurses Professional Values Scale--Revised. J Nurs Meas 2009; 17(3): 221–31. [CrossRef]
26. Ozdamar K. Statistical data analysis with packet programs. 4th Ed. Eskisehir: Kaan Bookstore; 2004.
27. Tavşancıl E. Measuring attitudes and SPSS advanced data analysis. Ankara: Nobel Publishing House; 2005.
28. Aydemir O, Köroğlu E. Clinical scales usedn psychiatry. Ankara: Physicians Publishing Association; 2006.

mothers' breastfeeding self-efficacy and breastfeeding success. Izmir Journal of Dr. Behçet Uz Children's Hospital 2017; 7(3): 183–90.