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Validity and Reliability of the Turkish Version of the Self-Efficacy Regarding Vaginal Birth Scale: A Methodological Study*

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ABSTRACT

Aim: The aim of the study was to test validity and reliability of the Self-efficacy Regarding Vaginal Birth Scale in Turkish.

Material and Methods: The methodological study was conducted in a university hospital with 165 pregnant women. The data were collected using "Personal Information Form", "Self-Efficacy Regarding Vaginal Birth Scale and "Childbirth Self-Efficacy Inventory - Short Form". Language validity, content validity, confirmatory factor analyse and criterion-dependence validity and were performed to test the validity of the scale. The scale's reliability was assessed using the item-total correlation, Cronbach's alpha, split-half test method and test-retest analysis.

Results: The scale content validity index was found above 0.80. In the confirmatory factor analysis, all the goodness of fit indexes had acceptable values. Item-total correlations ranged between 0.167 and 0.809 for each item and were positively correlated with the scale total. In line with the recommendations of experts, no items were removed from the scale. It was determined that the scale was collected under one factor as 9 items. The correlation between the two halves of the scale is 0.76, the Spearman-Brown coefficient is 0.86, and the Gutmann Split-Half coefficient is 0.85. The Cronbach's alpha coefficient calculated for the overall scale was 0.87. The total correlation of the items and the test-retest correlation showed high reliability with 0.924 ($p<0.05$).

Conclusion: As a result of this study, the Turkish language version of the Self-Efficacy Regarding Vaginal Birth Scale is valid and reliable.

Keywords: Reliability; scale; self-efficacy; validity; vaginal birth.

Vajinal Doğuma İlişkin Öz Yeterlik Ölçeği Türkçe Versiyonunun Geçerlik ve Güvenirliği: Metodolojik Bir Çalışma

ÖZ

Amaç: Araştırmanın amacı Vajinal Doğuma İlişkin Öz-yeterlik Ölçeği'nin Türkçe geçerlik ve güvenirliğini test etmektir.

Gereç ve Yöntemler: Metodolojik tipteki çalışma, bir üniversite hastanesinde 165 gebe kadın ile gerçekleştirilmiştir. Veriler "Kişisel Bilgi Formu", "Vajinal Doğuma Öz Yeterlilik Ölçeği" ve "Doğum Öz Yeterlilik Ölçeği - Kısa Formu" kullanılarak toplanmıştır. Ölçeğin geçerliliğini test etmek amacıyla dil geçerliliği, içerik geçerliliği, doğrulayıcı faktör analizi ve ölçüt bağımlılık geçerliliği yapılmıştır. Ölçeğin güvenirliği madde-toplam korelasyonu, Cronbach alfa katsayısı, iki yarı test yöntemi ve test-tekrar test analizi kullanılarak değerlendirilmiştir.

Bulgular: Ölçeğin kapsam geçerlilik indeksi 0,80'in üzerinde bulunmuştur. Doğrulayıcı faktör analizinde uyum iyiliği indekslerinin tamamı kabul edilebilir değerlere sahiptir. Madde-toplam korelasyonları her bir madde için 0,167 ile 0,809 arasında değişmekte olup, ölçek toplamı ile pozitif yönde ilişkili olduğu belirledi. Uzmanların önerileri doğrultusunda ölçekten herhangi bir madde çıkartılmadı. Ölçeğin 9 madde olarak tek faktör altında toplandığı belirlendi. Ölçeğin iki yarısı arasındaki korelasyon 0,76, Spearman-Brown katsayısı 0,86 ve Gutmann Split-Half katsayısı 0,85'tir. Ölçeğin geneli için hesaplanan Cronbach alfa katsayısı 0,87 olarak bulundu. Maddelerin toplam korelasyonu ve test-tekrar test korelasyonu 0,924 ile yüksek güvenilirlik gösterdi ($p<0,05$).

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Sonuç: Bu çalışmanın sonucunda Vajinal Doğuma İlişkin Öz Yeterlilik Ölçeği'nin Türkçe versiyonu geçerli ve güvenilirdir.
Anahtar Kelimeler: Güvenirlik; ölçek; öz-yeterlik; geçerlik; vajinal doğum.

INTRODUCTION

Although birth is a normal physiological process, it is an essential and unique experience for the survival of the human genome and the formation of familial integrity, which affects women physically, mentally and socially, causing significant changes in lifestyle (1,2). This perception, which is an important step in the transition to the role of motherhood, is experienced by pregnant women as an important source of stress from time to time (3,4). Therefore, it is very important to be ready for this experience; to manage and complete the process without adversely affecting health (5).

The "perceived stress" situation directly affects the confidence of the pregnant woman in her ability to cope with birth, the ability to make plans, and her belief in her ability to successfully manage the situation. Self-efficacy in labor is the woman's confidence in coping with birth. The concept of self-efficacy in birth is about being ready for labor, believing that you will manage the labor, and accepting its possible consequences. (6). Many studies report that pregnant women with low self-efficacy perception experience fear (7-9). However, they have also reported to having felt a loss of control during labor and feeling a high level of pain (10). As a result, pregnant women see cesarean delivery as an alternative to vaginal delivery (11) or they are exposed to birth interventions such as epidural anesthesia (12,13). However, it is stated that negative birth experiences cause conditions such as depression (14), posttraumatic stress disorder (15), changes in future fertility behavior, preference for cesarean delivery (16), sexual dysfunction (17), insufficient mother-infant attachment (18), and various breastfeeding problems (19). It has been reported that pregnant women with high self-efficacy perception can end the action effectively by using different coping strategies at each stage of labor. It is reported that coping with labor is associated with the pregnant woman's ability to tolerate pain, develop a positive perception of the birth experience, and a higher level of satisfaction with motherhood (10).

Nurses are the health professionals who have the greatest opportunity to communicate with both patient and healthy individuals. In this way, by motivating pregnant women to have a positive birth experience, they can help them improve, change and increase their self-efficacy perception (20). In this study, it is aimed to adapt the Self-efficacy Regarding Vaginal Birth Scale (SEVB) into the Turkish society.

MATERIAL AND METHODS

Design and Samples

The research was planned in a methodological manner in order to determine the validity and reliability of SEVB, which was developed to determine the self-efficacy levels of pregnant women regarding vaginal delivery, by adapting it to the Turkish society. The research was conducted in the obstetric clinic of a university hospital in western Turkey. Gynecology and obstetrics outpatient clinic accepts patients in three different areas as infertility, obstetrics and gynecology. Approximately 3000 pregnant women apply to the field of obstetrics annually. The sample of the research consisted of the pregnant women between the ages of 18-35, who had no medical indications for cesarean delivery, who had applied to the outpatient clinic between August 2018 and April 2019, who were at the 14-40th week of pregnancy (2nd and 3rd Trimester) and were voluntary to participate in the research. In scale validity and reliability studies, it is reported that the participant/item ratio should be at least 10/1 to satisfy factor analysis conditions when calculating sample sizes (21). By considering the possible data losses due to repeated measurements, 30% reserve participant was added to the research. Thus, the study's sample size was calculated as 117 for the 9-item SEVB and the reserve participant rate. The study consisted of 165 pregnant women who met the inclusion criteria between specified dates.

Data Collection

The data were obtained from pregnant women who applied to the obstetrics clinics and met the inclusion criteria, were interviewed in the waiting room before the examination. The data collection process was carried out in 2 stages using "Personal Information Form", "SEVB and "CBSEI". In the first stage, pregnant women were informed about the subject, importance and method of the study. Written and verbal consent was obtained from pregnant women who wanted to participate in the study. Pregnant women between the 14th and 40th weeks answered all data collection forms (165 pregnant women). In the second stage, the pregnant women who participated in the study were contacted by phone within one month after birth and, were talked with them about topics such as type of birth and the interventions performed during the birth (149 pregnant women).

Data Collection Tools

Personal Information Form

The form developed by the researchers by examining the relevant literature (10,12,22,23) consists of 17 questions that question the sociodemographic (7 questions), gynecological and obstetric (10 questions) characteristics of pregnant women.

Self-Efficacy Regarding Vaginal Birth Scale (SEVB)

The original scale was first developed by Chu et al. to measure self-efficacy related to vaginal delivery during pregnancy. It consists of nine items. The confidence level for each item is rated on an 11-point scale (0-10). The total score obtained from the scale varies between 0 and 90, and the increase in scores indicates a higher level of self-efficacy. There is no item to be coded in the scale. Cronbach's alpha coefficients are 0.93 and 0.94 during the second and third trimesters, respectively (23). In this study, Cronbach's alpha coefficients are 0.88 and 0.86 during the second and third trimesters, respectively, and the total Cronbach's alpha coefficient is 0.87.

Childbirth Self-Efficacy Scale – Short Form

Designed by Lowe (24) in 1993 to measure the self-confidence and coping skills of women, CBSEI, consisting of 62 items, was reduced to 32 items by Ip, Chung and Tang (25) in 2008. The adaptation of CBSEI to the Turkish society was conducted by Ersoy and Kukulu in 2011. The questions in the 10 point Likert type scale are scored

between 1 and 10. The scale consists of two sub-dimensions, each containing 16 questions: “Result Expectation” and “Efficacy Expectation”. The total score that can be obtained from the scale varies between 32 and 320. The increase in the score obtained from the scale indicates that the self-efficacy level has increased. Cronbach’s alpha coefficient of the scale is 0.90 (22). In this study Cronbach's alpha coefficient is 0.93.

Cultural adaptation process of the SEVB

The cultural adaptation of the scale consists of three stages as language validity, content validity and pilot implementation.

Language Validity

The Brislin method was used to ensure the language validity of the scale (26). For this purpose, the scale was first translated into Turkish by four experts who knew English and Turkish fluently, mastered the terminology of the scale and had data collection experience. After the scale items were reviewed by the researcher and made into a single form, they were translated back to English by three experts. After the translation, the items of the scale were compared in terms of conceptual, semantic, idiomatic, linguistic and contextual differences and the most appropriate expressions were selected and brought together on a common ground. After the scale was finalized, the English back translation of the scale was submitted to developer for approval for evaluation in terms of meaning and content. Thus, the language validity of the scale was completed.

Content Validity

According to the basic information, for the content validity of the scale, five academicians who are not involved in the translation stage and who are experts in the field of obstetrics and gynecology were contacted via email. Thus, their expert opinions were obtained. The content validity of the scale was determined by the Davis method (27). The experts were requested to score each item on a scale of 1 to 4 (1 = “not appropriate,” 2 = “should be made appropriate,” 3 = “appropriate but needs minor modifications,” and 4 = “very appropriate”) in order to evaluate the suitability of the scale for its purpose and intelligibility of the items. After the examination of the scores given to the scale items by the experts, it is recommended that items with low compliance be completely removed from the scale or reviewed (28). In line with this recommendation, after examining the opinions of the experts, the scale items that were considered very appropriate were accepted without any changes, while those that were suggested to be corrected were revised again. On the basis of the item, the content validity index (CVI) score was above 0.80 and it was found to be 0.98 for the total scale. The scale was finalized without removing any item from the scale.

Pilot Implementation

At the last stage of cultural adaptation, the scale form was applied to a pilot group of 15 pregnant women who were not included in the study sample. Thus, the intelligibility of the scale items was confirmed.

Psychometric testing of the SEVB

Psychometric analysis phase consists of validity-reliability analysis.

Validity

Factor analysis was conducted to assess the construct validity of the scale. Before the factor analysis, Kaiser-Mayer-Olkin Measure of Sampling Adequacy (KMO) was used to evaluate compliance with CFA, and Bartlett’s Test of Sphericity (BTS) to determine the significance of the relationships between variables.

In order to assess the criterion-related validity of the scale, concurrent validity with CBSEI was examined. Thus, the correlation coefficient between the two scales was examined.

Reliability

The internal consistency of the scale was determined by Cronbach's α coefficient. The fact that the Cronbach's α coefficient, which is suggested to determine the internal consistency of Likert-type scales, is close to 1 indicates a sufficient level of reliability (29).

The item-total correlation coefficients were examined to examine the relationship between the total score of the test and the scores from the SEVB test items.

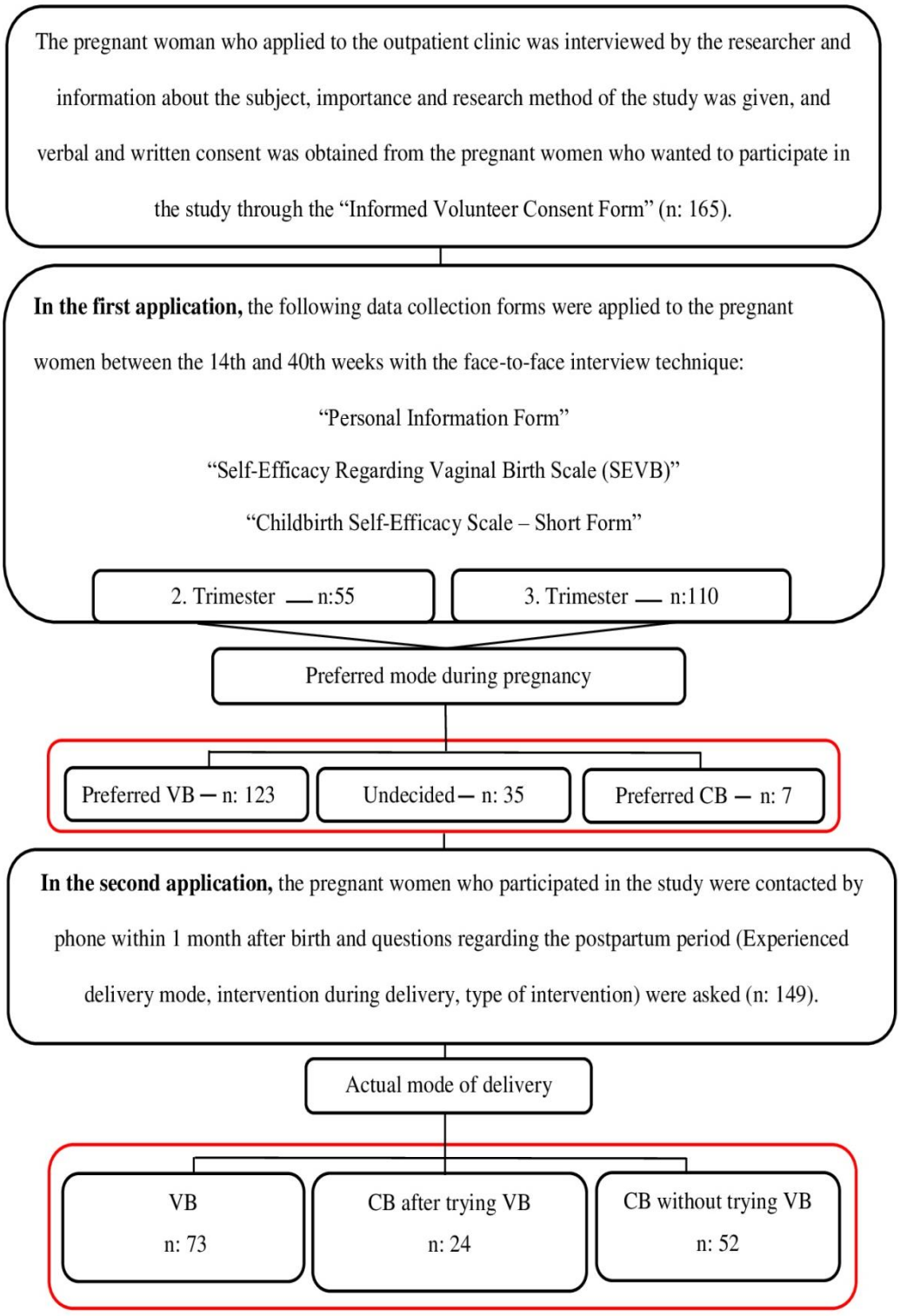
The invariance of the scale over time was evaluated using the test-retest correlation. The scale was reapplied with 15-day intervals to 15 pregnant women included in the study.

Ethical dimension of the research

Before starting the research, ethics committee approval from the Duzce University Non-Interventional Health Research Center ((Number/date: 124/19.02.2018) and institutional permission was obtained from the authorized persons of the institution where the research was conducted. Participants were required to read the "Informed Consent Form" and provide their written consent. To adapt the scale to Turkish culture, written permissions were obtained from Li-Yin Chien to use SEVB and from Prof Dr Kamile Kukulu to use CBSEI via email.

Statistical Analysis

Data analysis was performed using IBM SPSS Statistics 24 (30). Frequency for categorical variables and descriptive statistics for numerical variables are given. Descriptive statistics of the data are presented with "n (%)" and "mean±standard deviation" if the variable is normally distributed, otherwise "median (minimum-maximum)". The normality of the distribution was analyzed using the Kolmogorov-Smirnov test. In the evaluation of the data, t Test, One Way Variance Analysis, Mann Whitney U and Kruskal Wallis H were used for two independent samples. Confirmatory Factor Analysis (CFA) was used to test the validity and reliability of the SEVB. In determining the internal consistency of the scale, Cronbach's alpha reliability coefficient and intraclass correlation coefficient were examined. In order to test that there is no difference in test-retest values, t test was used for independent groups and statistically significant status was accepted as $p<0.05$. Concurrent validity was evaluated with Spearman’s correlation analysis.



Note. Flow diagram of the study samples by preferred and actual birth mode. CB = cesarean birth; VB = vaginal birth. Red circles indicate study samples at different time points.

Figure 1. Research flow chart

RESULTS

Participants' Characteristic

In the current study, 33.30% (n=55) of the participants were at the 14th-27th week (2nd trimester) of their pregnancies and 66.70% (n=110) were at the 27th-40th week (3rd trimester), and they were primiparous. The mean gestational week was 30.59±7.63. Overall, 88.50% (n=146) of pregnant women were under the age of 30 years. The mean age was 24.45±4.33 years. The education level of 37.60% (n=62) of women was university and above. A total of 19.40% (n=32) of the pregnant women received prenatal training from health professionals (5.50%), from pregnancy education books (6.10%), from online resources (6.10%) and from other resources (pregnancy training courses and school education) (1.80%). Most women 80.60% (n=133) did not receive prenatal training. Delivery options were 74.50% (n=123) vaginal delivery, 4.20% (n=7) cesarean delivery and undecided 21.30% (n=35). Of the pregnant women, 49% (n=73) delivered by vaginal delivery, 16.10% (n=24) delivered by cesarean after trying vaginal delivery and 34.90% (n=52) delivered by cesarean without trying vaginal delivery. A total of 59.70% (n=89) of the pregnant women who delivered vaginally and delivered by cesarean after trying vaginal delivery were intervened in the delivery process. Intervention types were 40.90% (n=61) induction, 40.90% (n=61) episiotomy, 28.90% (n=43) crystal maneuver, 16.10% (n=24) amniotomy, 15.40% (n=23) enema, 11.40% (n=17) prostaglandin, 2.70% (n=4) vacuum, and 1.30% (n=2) epidural anesthesia.

Validity analysis

The measurement value of KMO efficiency was 0.893 and p <0.001 after BTS test analysis. Item factor loads obtained as a result of CFA ranged from 0.346 to 0.873 (Table 1).

Table 1. Factor load values of the SEVB

Item	Factor Load
1. I am confident in having a smooth vaginal birth.	0.810
2. I have confidence in my pelvic anatomy and overall body build for a successful birth.	0.662
3. I know that I can supply adequate nutrition for my baby to undergo a vaginal birth.	0.346
4. I am confident in dealing with pain from uterine contractions during vaginal birth.	0.798
5. I can handle myself during vaginal birth.	0.873
6. I am confident in cooperating with medical personnel during vaginal birth.	0.550
7. When problems arise during labor, I have more than one way to counter them.	0.539
8. I am well-prepared for the challenges of vaginal birth.	0.872
9. Family support gives me strength to overcome the challenges of vaginal birth.	0.492

It was determined that the model was found to be statistically significant by evaluating the chi-square (χ^2) fit test and p-value according to the fit index values of the measurement model (Table 2). According to these results, it is seen that the scale had one factor structure.

Table 2. Confirmatory factor analysis of the SEVB: Model fit indices

	Calculated values	Reference values
χ^2=27.324 sd=26 p=0.392		
χ^2/sd	1.051	≤3 (4-5)
GFI	0.965	≥ 0.90 (0.89-0.85)
AGFI	0.939	≥ 0.90 (0.89-0.85)
IFI	0.998	≥ 0.95 (0.94-0.90)
TLI (NNFI)	0.997	≥ 0.95 (0.94-0.90)
CFI	0.998	≥ 0.97 (0.95)
RMSEA	0.018	≤ 0.05 (0.06-0.08)
SRMR	0.031	≤ 0.05 (0.06-0.08)

Note. χ^2 = chi-squared test; sd = standard deviation; p = level of significance; χ^2/sd = chi-squared index; GFI = goodness of fit index; AGFI = adjusted goodness of fit index; IFI = incremental fit index; TLI = non-normed fit index (i.e., Tucker Lewis index); CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.

The path diagram of the validated model is shown in Figure 2.

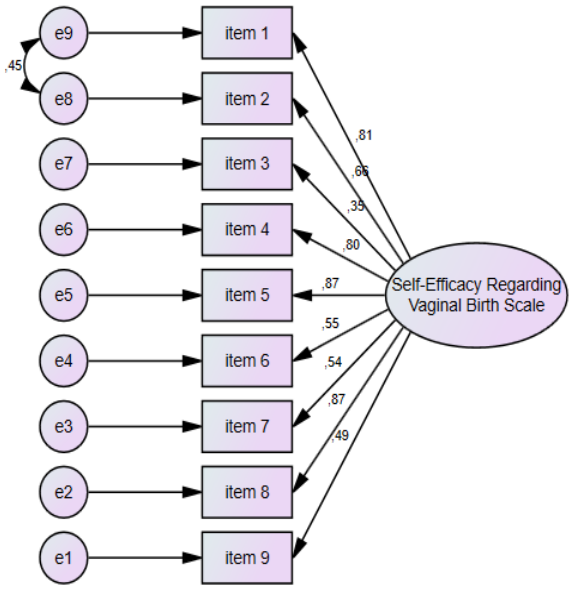


Figure 2. The path diagram of the validated model

In order to evaluate the criterion-dependency validity of the scale, simultaneous validity with CBSEI was examined. The mean score of pregnant women in the study from the SEVB was 61.49±17.68 and the mean score they received from CBSEI was 228.23±34.94. A statistically significant positive linear correlation of 0.66% was found between the scales (r=0.660, p <0.001).

Reliability analysis

Item-total correlations other than item 3 were found above 0.30. When any item of the scale was deleted, the Cronbach's alpha coefficient of the scale ranged between 0.835 and 0.887 (Table 3). The level of reliability of the SEVB, whose validity is provided with 9 items, is seen to be efficient (Cronbach's alpha>0.70) (Table 4).

Table 3. Item total correlation results of the SEVB

Item	Mean of the Scale If Item Deleted	Variance of the Scale If Item Deleted	Corrected Item-Total Correlation	Cronbac 's Alpha If Item Deleted
1. I am confident in having a smooth vaginal birth.	55.18	234.284	0.788	0.838
2. I have confidence in my pelvic anatomy and overall body build for a successful birth.	55.44	246.968	0.642	0.852
3. I know that I can supply adequate nutrition for my baby to undergo a vaginal birth.	52.90	295.295	0.167	0.887
4. I am confident in dealing with pain from uterine contractions during vaginal birth.	54.67	239.478	0.717	0.845
5. I can handle myself during vaginal birth.	54.81	232.816	0.798	0.837
6. I am confident in cooperating with medical personnel during vaginal birth.	53.64	259.743	0.525	0.863
7. When problems arise during labor, I have more than one way to counter them.	57.17	248.341	0.514	0.866
8. I am well-prepared for the challenges of vaginal birth.	55.26	227.523	0.809	0.835
9. Family support gives me strength to overcome the challenges of vaginal birth.	52.84	274.353	0.448	0.868

Table 4. Cronbach's alpha reliability coefficient of the SEVB

	Mean (SD)	Med ± (Min-Max)	Item	Cronbach's Alpha
Total SEVB Score	61.49±17.68	64.00±(11.00-88.00)	9	0.870
Second Trimester (14 to 27 weeks of pregnancy)	61.74±19.00	65.00±(15.00-86.00)	9	0.884
Third Trimester (14 to 27 weeks of pregnancy)	61.36±17.06	64.00±(11.00-88.00)	9	0.862

Note. SD = standard deviation; Med= median; Min = minimum; Max= maximum; SEVB=Self Efficacy Vaginal Birth Scale

For SEVB, Spearman Brown reliability coefficient was calculated as 0.86, and Guttman Split-Half reliability coefficient was calculated as 0.85. According to the findings obtained from two half-test reliability analysis of the scale, the first half (first 5 items) Cronbach's alpha coefficient was 0.81, the second half (last 4 items) Cronbach's alpha coefficient was 0.71 and the correlation between the two halves was 0.76.

The mean score of the pregnant women from the test and retest was found to be 58.20±14.88, 57.27±12.40, and ICC (intraclass correlation coefficient) value of 0.924 ($p < 0.05$).

DISCUSSION

Today, high cesarean delivery rate negatively affects the country's economy as well as individual, family and community health. This makes the concept of natural birth important. It is clearly stated in the literature that the woman's experience of vaginal delivery is directly related to her self-efficacy level (10,12,22,23). In our country, there is a tool that can measure the level of self-efficacy of pregnant women (22). Adapted to Turkish society, SEVB aims to measure the self-efficacy level of all pregnant women in the process from the beginning of the 2nd trimester pregnancy period to the birth. In addition, the scale's ease of application and evaluation is very important in obtaining reliable data.

In this section, the findings regarding the validity and reliability of the "Vaginal Birth Self-Efficacy Scale" were discussed under two headings.

Discussion of the findings on the validity of the SEVB

Validity is that a scale can accurately measure the desired property (31). In this study, content, structure and criterion related validity studies were performed to ensure the validity of SEVB.

Content validity was provided after studies on language validity of the scale. Content validity shows to what extent the measuring instrument covers the behaviors to be measured (32,33). According to the Davis technique, it is recommended that 3-20 experts from the relevant field should be consulted independently and CVI should be above 0.80 for each item (27,33). In the research, the

opinions of 5 faculty members who were experts in their fields were consulted. It was observed that the CVI of the scale varied between 0.80 and 1 and the total CVI of the scale was 0.98. Accordingly, it was determined that the content validity was confirmed to a good degree. In the study of Chu et al. (2017), CVI showed a good fit as 0.96 (23). The suitability of the data for factor analysis was evaluated with KMO and BTS. It is reported that the KMO value should be at least 0.50 and values between 0.80-0.90 are ideally sufficient (34). In the study, the KMO value was found to be 0.893. Similarly, in the study of Chu et al. (2017), the value was perfectly compatible with 0.94 (23). The fact that the significance value obtained from BTS is less than 0.05 indicates that the data show normal distribution and that the scale is suitable for factor analysis (35). BTS value was found to be 0.000 in the study. In the study of Chu et al. (2017), the data show a normal distribution (23).

Confirmatory Factor Analysis (CFA), it is aimed to find a few and significant variables by gathering those that are related to each other in the scale items. The literature states that item factor load values should be at least 0.30, values between 0.30-0.59 provide medium level, and values above 0.60 provide high level validity (36). SEVB item factor loads vary between 0.346 and 0.873. For this reason, the scale items were preserved without removing the item. In the study of Chu et al. (2017), it was observed that factor loads for scale items ranged between 0.72 and 0.90. This situation can be explained by the fact that, if working with larger sample groups, factor correlations with low correlation may receive higher value. As in the study of Chu et al. (2017), SEVB was found to have a single sub-dimensional structure consisting of 9 items (23).

In providing validity of criterion dependency, another similar scale, which has been used in the same field and whose validity has been proved by previous studies, should be used (33). The fact that the correlation coefficient between the scales is over 0.80 is sufficient for validity verification and close to 1 indicates that this verification is at a high level (31). In the study, it was found that there was a 0.66% statistically significant positive linear relationship between the scores obtained by the pregnant women from the SEVB and the scores obtained from the CBSEI ($r=0.660$, $p <0.001$).

Discussion of the findings on the reliability of the SEVB

Reliability is the consistency criterion of the measurement (29). To ensure the reliability of SEVB, two-half test reliability, item total correlation coefficient, Cronbach's alpha reliability and test-retest analysis were used.

Accordingly, two half-test reliability of SEVB is at an expected level and is in line with the literature (21). It was determined that the total correlation value of the items other than item 3 was between 0.448 and 0.809. It is observed that the level of serving each item to the general purpose of the scale is quite good (37). The correlation value of item 3 was determined as 0.167. This was consulted with Li-Yin Chien, who developed the scale. This item ,*I know that I need to have enough nutrition for my baby to be born vaginally*, is concerned with the fact that the baby should be quite strong in the fight against the birth canal in order to be born vaginally. Accordingly, it is believed that "the power of the baby comes only from the feeding of the mother". In Turkish society, nutrition during pregnancy is associated with the development of the baby in this process rather than preparing for vaginal birth. Since the Cronbach's alpha reliability coefficient obtained from the whole scale is high and the scale has a one-dimensional structure, no item was removed from the scale.

A Cronbach's alpha coefficient value below 0.39 indicates that internal consistency is not reliable, a value between 0.40 and 0.59 indicates low reliability, a value between 0.60 and 0.79 indicates sufficient reliability, and a value between 0.80 and 1.00 indicates high reliability (38). The Cronbach's alpha coefficient of the study was 0.870. In a study by Chu et al. (2017), the Cronbach's alpha coefficient was found 0.93 and 0.94 in the second and third trimesters, respectively (23).

The measuring instrument is applied to the same group at different times and the correlation between them is evaluated after the measurements. The high correlation coefficient reveals that the measuring instrument always measures with the same consistency and is reliable (32). The correlation coefficient should be between 0 and 1 and close to 1. Pearson Product Moment Correlation Coefficient is used to calculate the correlation between points (39). The ICC value of the study was found to be 0.924 ($p <0.05$). In the study of Chu et al. (2017), this value was found to be 0.73 (23).

Study Limitations

The fact that the study was conducted in a single center was considered as a limitation of the study.

CONCLUSION

The Turkish version of SEVB, which consists of 9 items in one dimension, is a valid and reliable measurement tool for measuring the vaginal birth self-efficacy level of all pregnant women from the beginning of the 2nd trimester pregnancy period to the birth. The fact that the level of self-efficacy regarding vaginal birth, which is not much accentuated in the Turkish culture, will be evaluated with a valid and reliable scale will contribute to shed light on the issue of strengthening pregnant women by determining their level of self-efficacy for birth. Thus, it will help prevent complications and problems that may occur during the perinatal period. In order to increase the generalizability of the scale, it is necessary to work with larger sample groups of different characteristics in different centers and to take part in new studies of different health disciplines. In addition, it is recommended that routine use in the field should be routinely applied due to the easy application of the scale, and all pregnant women with low birth self-efficacy should be identified and supported in preparation for delivery.

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