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Research article

Episiotomy Skills Self-Efficacy Scale (ESSES): Development and psychometric properties

Aytül Hadımlı, Aysun Eksioglu (Ekşioğlu)*, Nur Duman, Esin Çeber Turfan

Ege University Faculty of Health Sciences, Midwifery Department, 35100 Bornova, Izmir, Turkey

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ABSTRACT

Background: Episiotomy is a surgical procedure that increases midwifery students' anxiety levels and reduces their self-efficacy levels. However, there is no valid and reliable tool to assess the student's episiotomy experience-related self-efficacy levels.
Objectives: The study was aimed at developing the Episiotomy Skills Self-Efficacy Scale and investigating its psychometric properties.
Design: In the study, the descriptive, cross-sectional and methodological design was used.
Setting: The study was conducted at the midwifery department of a state university in western Turkey.
Participants: The study sample included 209 midwifery students selected using the convenience sampling method.
Methods: A comprehensive literature review and expert panel was conducted on episiotomy skills. Content validity was performed by 10 health professionals. Of them, one was an obstetrician and gynecologist, four were midwives and five were faculty members working in midwifery departments of different universities. The Episiotomy Skills Self-Efficacy Scale was administered to the 3rd and 4th grade students who had taken a course on childbirth. The inclusion criteria were as follows: having received episiotomy training, and having opened and closed an episiotomy on a model in the laboratory. Exploratory and confirmatory factor analysis was performed within the scope of validity. Reliability was evaluated with the Cronbach's alpha method and item-total correlations.
Results: A two-factor structure which explained 77.96 % of the total variance was obtained by factor analysis. Its "Preparation for and Implementation of Episiotomy" dimension includes 11 items, and "Episiotomy Repair and Control" dimension includes 8 items. Model fit indices were at an acceptable level. The Cronbach's alpha coefficient of the scale was 0.97.
Conclusions: The Episiotomy Skills Self-Efficacy Scale has sufficient psychometric validity and reliability. It is short and easily administered.

1. Introduction

Episiotomy is a controlled incision of the perineum to reduce the incidence of severe perineal tears (third and fourth degree) during delivery (Özkan and Bilgin, 2019; Barjon and Mahdy, 2022). In evidence-based studies, restrictive episiotomy is recommended instead of routine episiotomy. However, despite the high level of evidence, episiotomy is the most frequently performed procedure at birth in almost all countries of the world (Malvasi et al., 2021; Ye et al., 2022). In most of the European countries, in all vaginal deliveries, the rate of episiotomy ranges between 16 % and 38 % (Graham et al., 2005; Blondel et al., 2016; Kartal et al., 2017). This rate is higher in Middle Eastern and Asian countries because Asian ethnicity women have smaller and tighter perineum (Malvasi et al., 2021). Episiotomy rates have been reported as 51.20 % in Saudi Arabia, 66 %, in Oman, 63.4 % in India, 92.7 % in Romania, 94.5 % in Colombia, 73 % in Uganda, 80 % in China and close to 100 % in Taiwan (Graham et al., 2005; Al-Ghammari et al., 2016; Deyaso et al., 2022; Ye et al., 2022). In Turkey, while the rate of episiotomy is between 90 % and 99 % in primiparous who had vaginal delivery, it is between 50 % and 75 % in multiparous (Kartal et al., 2017). In midwifery education, it is stated that although episiotomy is an intervention and should not be routinely implemented, its rates are high

* Corresponding author.
E-mail addresses: aytul.pelik@ege.edu.tr (A. Hadımlı), aysun.basgun@ege.edu.tr (A. Eksioglu), nur.duman@ege.edu.tr (N. Duman), esin.ceber@ege.edu.tr (E.Ç. Turfan).

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in many countries. Deciding to implement this process is an important decision and students' acquiring this competence and skill before they graduate is of great importance (Amanak and Balkaya, 2013; Aslan, 2019; Erkek and Altınayak, 2021). In midwifery education, the subject of episiotomy is included in the childbirth course. Within the scope of this course, midwifery students receive training on defining episiotomy indications, applying local anesthesia, opening and repairing episiotomy (Midwifery National Core Education Program, 2016).

If the episiotomy procedure is not performed properly, women may develop psychological and physiological problems and their quality of life may be adversely affected in the postpartum period (Gün et al., 2016; Shmueli et al., 2017; Aslan, 2019). Therefore, episiotomy, a surgical procedure, leads to an increase in midwifery students' anxiety levels and a decrease in their self-efficacy levels (Demirel et al., 2020).

According to "Social Learning Theory" proposed by Albert Bandura, self-efficacy is "an individual's beliefs about his or her ability to perform significantly in relation to events that will affect his or her life" (Bandura, 2006; Karadağ et al., 2011). Self-efficacy belief can be regarded as an important parameter affecting a student's success and can be a reliable predictor of his or her clinical competence and skills (Mohamadirizi et al., 2015; Arseven, 2016). Low self-efficacy belief increases individuals' anxiety and stress levels when they do their work, and decreases their ability to solve problems in the face of problems. On the other hand, high self-efficacy belief indicates that individuals are more comfortable and productive when they are faced with difficulties (Pepi et al., 2006; Karadağ et al., 2011). There has been an increase in the number of recent studies conducted to find out how the relationship between a student's self-efficacy and his or her learning and success (Andrew et al., 2015; Mohamadirizi et al., 2015; Gudayu et al., 2015; Klassen and Klassen, 2018; Melchionda et al., 2019). In the literature, there are various studies in which different approaches are used to teach midwifery students how to perform episiotomy (Erkek and Altınayak, 2021; Guler et al., 2018; Demirel et al., 2020; Aslan, 2019). However, in the literature, there is a gap regarding studies in which whether students' episiotomy skills are adequate is measured. Thus, it is very important to develop a highly reliable and valid measurement tool which can comprehensively assess the needs of midwifery students in episiotomy practices and effectively guide birth education. Thus, we expect:

Hypothesis 1 (H1). The Episiotomy Skills Self-Efficacy Scale (ESSES) will demonstrate acceptable psychometric properties in terms of validity and reliability.

1.1. The aim of the study

This study was aimed at developing the Episiotomy Skills Self-Efficacy Scale and examining its psychometric properties.

2. Methods

2.1. Design

This cross-sectional and methodological study was conducted to develop the ESSES and to test its psychometric properties. The study consists of three stages: item development, scale development and scale validation. In the first stage, an item pool was created based on a comprehensive literature review. In the second stage, face and content validity steps were achieved. In the third stage, the scale was validated with the validity and reliability analysis based on the collected data.

2.2. Setting and sample

The present study was conducted with midwifery students at a university in the Aegean region of Western Turkey in May 2022 and June 2022. In scale development studies, in determining the sample size, different methods are used according to the reliability of the relationship and the number of items. As a rule, it is stated that the sample size should be five or ten fold the total number of the items in the scale (Büyüköztürk, 2017; Tavşancıl, 2019). Since the number of the items in the first stage of the scale was 27, it was aimed to reach a minimum of 135 people which was fivefold the total number of the items. However, considering the possibility of losses during the study, we decided to reach 20 % (N = 162) more people, but at the end, we included 209 people in the sample. The inclusion criteria were as follows: being 3rd and 4th grade students having taken a course on childbirth, having received episiotomy training, and having opened and closed an episiotomy on a model in the laboratory.

2.3. Instruments

2.3.1. Descriptive information form

The form consists of 12 items questioning the participants' sociodemographic characteristics such as age, year at school, type of high school they graduated from, income level, and episiotomy experiences.

2.3.2. Episiotomy Skills Self-Efficacy Scale (ESSES)

The ESSES is a 19-item tool used to assess episiotomy skills of participants and consists of the following two sub-dimensions: Preparation for and Implementation of Episiotomy sub-dimension which consists of 11 items and Episiotomy repair and control sub-dimension which consists of 8 items. Responses given to the items are rated on a four-point Likert-type scale ranging from 1 to for (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). No item in the scale is reverse scored. The minimum and maximum possible scores to be obtained from the scale are 19 and 76. The higher the score obtained from the ESSES is the higher the level of self-efficacy for episiotomy skill is.

2.4. Procedure

In the first stage of the present study, an item pool and a draft scale were created in line with the relevant literature in order to assess the episiotomy application skill (Marty and Verspyck, 2018; Guler et al., 2018; Beşen and Rathfisch, 2019; Sharma, 2020; Demirel et al., 2020; Barjon and Mahdy, 2022; Aytekin et al., 2021; Yılar and Öztürk, 2021). In the second stage, the 28-item draft form was presented to 10 healthcare professionals and academics experienced in episiotomy to obtain their opinions whether each item was expedient. Their opinions were subjected to content validity using the Davis method (Davis, 1992). Considering the suggestion in the literature that any item whose Content Validity Index (CVI) is below 0.80 should be removed from the scale, one item was removed from the scale because its CVI was 0.65 (Yurdugül and Bayrak, 2012). After the pre-final form of the questionnaire was produced, it was pilot tested with 10 students to find out whether it was understandable or not. The data obtained from the pilot test were not included in the analysis. In the third stage, the form containing the remaining 27 items was administered to the participants in the sample. Before data collection, the researchers explained the purpose of the study to the participants. Their written informed consent was obtained before they filled in the questionnaire and they were allowed to answer the questionnaire independently.

2.5. Statistical analysis

The study data were analyzed using the IBM SPSS (Statistical Package for the Social Sciences) 25.0 package program. Descriptive statistical analysis (numbers, percentages, arithmetic mean, standard deviation) were used while the data were analyzed. The Content Validity Index (CVI) was used to evaluate the opinions of the aforementioned experts regarding the scale, and the Cronbach's Alpha Coefficient was calculated for the internal consistency of the scale and its sub-dimensions. Bartlett's test was used to find out whether the data were suitable for factor analysis. Kaiser-Meyer-Olkin (KMO) test was used to determine whether

the sample was adequate. Principal component analysis and varimax rotation method were used to determine the factor structure.

Exploratory Factor Analysis (EFA) was used to examine the construct validity of the scale, and Confirmatory Factor Analysis (CFA) was performed with the IBM SPSS AMOS 22.0 program to test the confirmability of the construct resulting from the EFA.

2.6. Ethical issues

The present study carried out in accordance with the principles of the Declaration of Helsinki was approved by the Clinical Research Ethics Committee of a University Faculty of Medicine (Protocol Number: 22-6T/33). Institutional approval to collect data for the study was obtained from Faculty of Health Sciences Department of Midwifery. Information about the objective and scope of the study was provided to the midwifery students who participated in the study, and their written informed consent was obtained.

3. Results

3.1. Results regarding the participants' descriptive characteristics

The students ($n = 209$) who participated in the study were in the age group of 19–35 years (Mean = 21.9, SD = 1.30). Their mean age was 21.90 ± 1.30 years. Of them, 49.8 % were in the 3rd grade ($n = 104$), 50.2 % ($n = 105$) were in the 4th grade, and 78 % chose the midwifery profession of their own free will.

Data about the episiotomy experiences of the participating students within the scope of their clinical practice were given in Table 1. The mean frequency of opening episiotomy by them was 1.77 ± 0.42. They were asked how confident they were while they opened and repaired an episiotomy, on a scale ranging from 1 to 10. According to their responses, their mean scores were 6.00 ± 2.43 for the opening and 6.11 ± 2.48 for the repairing, which suggests that they had a moderate level of confidence.

3.2. Results related to the validity analysis of the Episiotomy Skills Self-Efficacy Scale - ESSES

3.2.1. Exploratory Factor Analysis (EFA)

The KMO value calculated to assess the adequacy of the sample size before factor analysis was 0.959, and the chi-square value obtained according to the Bartlett's sphericity test results was $\chi^2(210) = 7531.448$ ($p < 0.01$), which indicated that the data originated from a multivariate normal distribution. Accordingly, because the factor loading values of the scale were accepted as 0.40, in the factor analysis performed, a 2-factor structure with 27 items was attained, which explained 67.99 % of the total variance. Eight overlapping items (items 2, 3, 7, 9, 11, 13, 17, 21) whose factor loading values were so close that they were indistinguishable from each other were removed. In the repeated EFA 2, the two-factor structure with an eigenvalue above 1 was determined by considering the scree plot (Fig. 1).

The two-factor structure determined explained 77.96 % of the total variance of the variables. The "Preparation for and Implementation of Episiotomy" dimension included 11 items, and "Episiotomy Repair and Control" included 8 items (Table 2).

Table 1
Results on students' experiences of episiotomy in clinical practices.

Number of episiotomy openings (mean)	1.77 ± 0.42		
Level of self-confidence in performing an episiotomy	6.00 ± 2.43		
Level of self-confidence in repairing episiotomy	6.11 ± 2.48		
Episiotomy suturing situation	Yes	91	43.5
	No	118	56.5
Number of episiotomy stitches (mean)[a]	2.14 ± 4.70		

[a] Average of the students who had episiotomy.

3.2.2. Confirmatory Factor Analysis

Confirmatory Factor Analysis was performed over two subdimensions determined by EFA. Model fit test was applied by specifying standardized item loadings for each dimension. Indices of the scale show that all goodness-of-fit measures of the Model II met acceptable levels (GFI (0.866), AGFI (0.779), CFI (0.944), CMIN/df (2.912) and RMSEA (0.085)) (Table 3, Fig. 2).

The results of the first level multifactor confirmatory factor analysis of the scale were shown in Fig. 2. Accordingly, the lowest and highest factor loading values of the 19-item scale were 0.32 and 1.46 respectively.

3.3. Results regarding the reliability analysis of the scale

For the internal consistency criterion of the scale, the Cronbach's Alpha reliability coefficient was calculated and item-total score correlations were analyzed.

3.3.1. Internal consistency of ESSES form

In the present study, the total Cronbach's Alpha Reliability Coefficient was 0.97 for the overall ESSES, 0.96 for the "Preparation for and Implementation of Episiotomy" dimension and 0.96 for the "Episiotomy Repair and Control" dimension (Table 4).

3.3.2. Item analysis

The mean scores and standard deviations of the items included in the Episiotomy Skills Self-Efficacy Scale (ESSES), and the Cronbach's Alpha values when the item was deleted were given in Table 5. The item with the highest score was the Item 19: "I can record the data about the episiotomy procedure in the patient file" (Mean ± SD = 3.55 ± 0.57). The item with the lowest score was the Item 11: "I can repair the perineal skin with interrupted sutures or continuous aesthetic subcuticular sutures" (Mean ± SD = 3.10 ± 0.81). The item-total test correlation values of all the items varied between 0.697 and 0.861. No change was observed in the Cronbach's Alpha values of the scale when the item was deleted. From this point of view, it can be said that the scale is distinctive in terms of measuring the desired quality.

4. Discussion

Episiotomy is an obstetric surgical procedure that increases midwifery students' anxiety levels and decreases their self-efficacy levels. The competencies of healthcare professionals who perform episiotomy are important for women's health. Training on episiotomy is given to midwifery students on a model in the laboratory, both theoretically and practically. If patients' consent is obtained, students perform the episiotomy procedure in the clinic and improve their skills (Demirel et al., 2020). Many interventional studies have been conducted to improve students' episiotomy skills. Although the effectiveness of the education is considered as the output of the study, there are no tools students can use to assess their own competencies (Guler et al., 2018; Demirel et al., 2020; Erkek and Altınayak, 2021; Brereton et al., 2022). It is important to evaluate the competencies of the students based on their own perspectives. From this point of view, it was aimed to develop a measurement tool to evaluate the episiotomy skills of student midwives quantitatively.

4.1. Content validity

Validity is an important factor that enables the evaluation of a data collection tool to what extent it covers the components related to the concept or variable it is aimed to measure (Erefe, 2002). In the present study, content and construct validity were examined in order to test the validity of the ESSES (Çolak, 2007). In order to evaluate the content validity, opinions of those who were expert on the subject were collected using the Davis technique (Davis, 1992; Çam and Baysan-Arabacı,

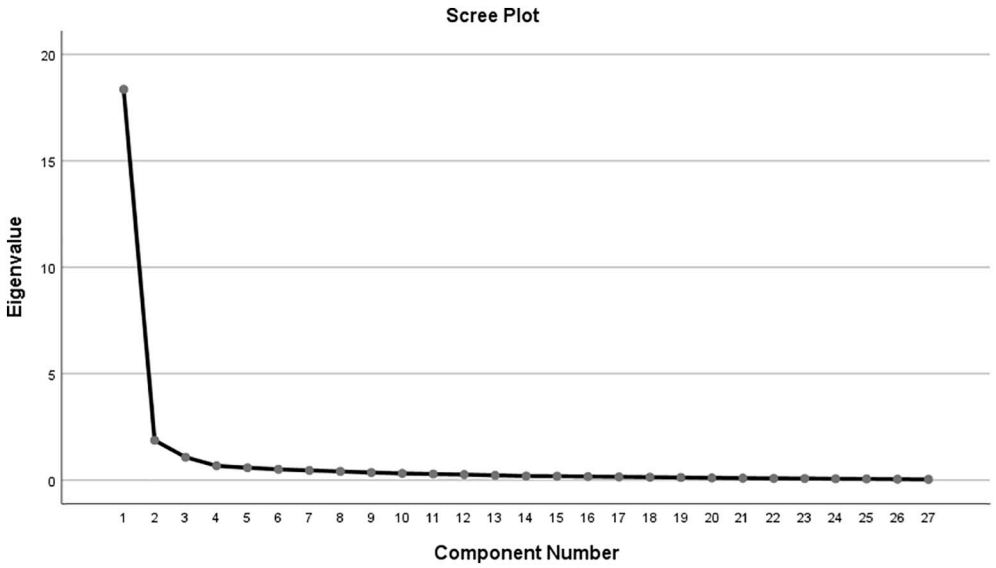

Fig. 1. Scree-plot graph of Episiotomy Skills Self-Efficacy Scale (ESSES).

Table 2
Explanatory factor analysis results of the Episiotomy Skills Self-Efficacy Scale (ESSES).

Items	Explained variance	Eigenvalue (Λ)	Factor load
F1			
Item 1	69.08	13.12	0.71
Item 2			0.82
Item 3			0.68
Item 4			0.78
Item 5			0.74
Item 6			0.61
Item 7			0.80
Item 8			0.71
Item 9			0.76
Item 10			0.84
Item 11			0.81
Item 12			0.71
Item 13			0.82
F2			
Item 14	8.88	1.68	0.75
Item 15			0.76
Item 16			0.82
Item 17			0.87
Item 18			0.86
Item 19			0.86
Item 20			0.88
Item 21			0.87

KMO = 0.953; χ^2 = 5082.840; Bartlett Test of Sphericity (p) = 0.00.

Table 3
Results of multi-factor GFIs for CFA before and after the modifications in.

	RMSEA	CFI	GFI	AGFI	CMIN/df
	<0.05 good; 0.05–0.10 moderate; >0.10 kötü	>0.95 great; >0.90 traditional; >0.80 sometimes permissible	>0.95	>0.80	<5 Sometimes allowed
Model I	0.14	0.65	0.78	0.58	5.13
Model II	**0.08**	**0.94**	**0.86**	**0.77**	**2.91**

Model II: Acceptable goodness-of-fit measures are shown in bold.

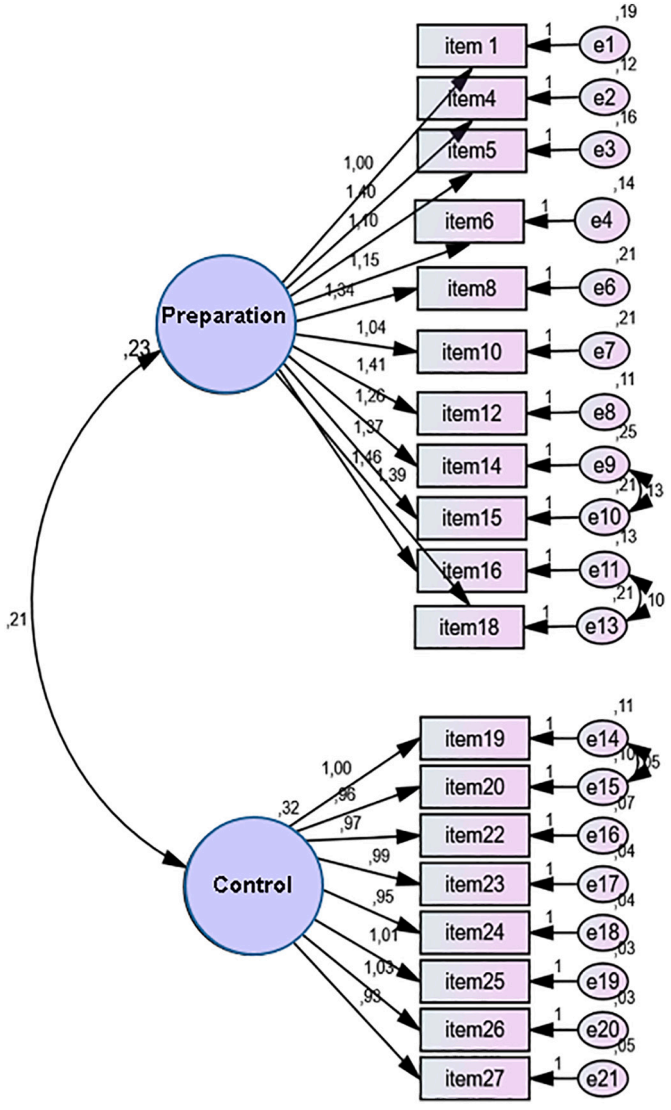

Fig. 2. First-level multi-factor confirmatory factor analysis results.

Table 4
Cronbach alpha values for the Episiotomy Skill Self-Efficacy Scale (ESSES).

Scale and sub-dimensions	Cronbach's alpha	Number of items
All items (ESSES)	0.97	19
I. Preparation for and implementation of episiotomy	0.95	11
II. Episiotomy repair and control	0.97	8

2010). In the literature, it is recommended that the CVI score should be 0.80 or higher if the content validity is assessed with the Davis technique (Yurdugul, 2005; Zamanzadeh et al., 2015). In the present study, the CVI scores of all the items in the scale were above 0.80. Thus, the ESSES can be said to be sufficient in terms of content validity. One item was removed from the scale by the aforementioned experts, and they reached a consensus on 27 items.

4.2. Construct validity

One of the steps in testing validity is construct validity. Construct validity indicates the ability of the instrument to measure the theoretical construct. In the Exploratory Factor Analysis, one of the stages of construct validity, it is necessary to evaluate the suitability of the sample size first. In the present study, the suitability of the sample size was evaluated with the Kaiser-Meyer Olkin (KMO) test. If the KMO value is >0.6, it is accepted that factor analysis can be performed (Tabachnick and Fidell, 2013; Erdoğan et al., 2014). In the present study, the KMO coefficient was 0.94 and the result of Bartlett's test was considered highly significant ($\chi^2 = 7531.448$; $p < 0.01$). Thus, the sample size was considered sufficient.

4.3. Factor analysis

Factor analysis brings together the variables that address the same purpose by using the factor loading values of each item in the scale (Büyüköztürk, 2017). In the EFA 1 application of the scale, a 2-factor structure with 27 items was reached. However, factor loadings of 8 items overlapped. In the literature, if there is a difference of 0.20 (Howard, 2016) or a difference of 0.10 (Büyüköztürk, 2017) between factor loadings, it is recommended that the item should be removed. In the present study, 8 overlapping items were removed from the scale, taking into account the difference of 0.10. With EFA 2, a 19-item 2-factor structure was obtained. The components that make up the structure of the factors were examined, and they were named "Preparation for and Implementation of Episiotomy" and "Episiotomy Repair and Control".

It is recommended to use CFA to test the validity of the structure obtained after EFA in scale development studies (Orçan, 2018). In the present study, the suitability of the factor structure determined by the exploratory factor analysis was evaluated with the confirmatory factor analysis (Erdoğan et al., 2014; Erkorkmaz et al., 2013). In our study, the model fit values of the expressions in the scale in the CFA analysis were not at an acceptable level; thus, modification indices were improved. At this stage, new covariances were created by determining the variables that reduced the fit. It was observed that the values of the model obtained after the modification were within acceptable limits (İlhan and

Table 5
Item analysis results of the Episiotomy Skills Self-Efficacy Scale (ESSES).

	No	Scale items	Items mean ± SD	Item total score correlation	Cronbach's alpha if item deleted
Preparation for and implementation of episiotomy	1	1. I can decide whether to open an episiotomy according to the progress of labor.	3.28 ± 0.65	0.697	0.973
	4	2. When the incoming part of the fetus touches the perineum, I can apply a local anesthetic to the perineal area where the incision will be made.	3.28 ± 0.76	0.815	0.972
	5	3. To open the episiotomy, I can wait until the incoming part of the fetus is crowned (until the incoming part is seen 3–4 cm from the perineum).	3.42 ± 0.61	0.768	0.972
	6	4. To protect the fetus, I can protect the incoming part by placing the index and middle finger of one hand between the incoming part and the vagina	3.39 ± 0.67	0,772	0.972
	8	5. At the moment of contraction, I can incise the area where I placed my two fingers in a single move by fixing the scissors.	3.12 ± 0.79	0,771	0.973
	10	6. After delivery, I check whether there are lacerations and tears outside the incision area.	3.36 ± 0.68	0,745	0.972
	12	7. I can reapply anesthetic to the incision site before starting the episiotomy repair.	3.28 ± 0.76	0,845	0.973
	14	8. I can find the apex of the incision in the vagina	3.15 ± 0.78	0,777	0.972
	15	9. I can place the first suture 1 cm above the apex.	3.17 ± 0.80	0,819	0.973
	16	10. I can stitch the vaginal tissue with the continuous suture technique up to the entrance of the vagina.	3.16 ± 0.79	0,861	0.971
	18	11. I can repair the perineal skin with interrupted sutures or continuous aesthetic subcuticular sutures.	3.10 ± 0.81	0,793	0.972
Episiotomy repair and control	19	12. After the incision repair is completed, I can check the area for bleeding and hematoma.	3.42 ± 0.66	0,846	0.972
	20	13. If there is no bleeding, I remove the sponge/tampon from the vagina.	3.43 ± 0.63	0,842	0.972
	22	14. I can clean the perineum with an antiseptic solution.	3.51 ± 0.61	0,838	0.972
	23	15. I can pay attention to aseptic rules while doing all the procedures.	3.53 ± 0.59	0,838	0.972
	24	16. I can inform the woman about episiotomy care and danger signs.	3.52 ± 0.58	0,828	0.972
	25	17. I can evaluate whether they are complete by counting the materials.	3.52 ± 0.68	0,860	0.972
	26	I can perform appropriate waste control according to the qualities of the materials used in the episiotomy process.	3.51 ± 0.61	0,841	0.972
	27	I can record the information about the episiotomy procedure in the patient file.	3.55 ± 0.57	0,797	0.973

Çetin, 2014). A value of 5 and below is accepted for CMIN/df, one of the criteria used to test the compatibility of the model with the data (Yaşlıoğlu, 2017). It is expected that the RMSEA value should not exceed 0.10 (Akyüz, 2018). CFI and GFI values greater than or equal to 0.90 indicate good fit. Although AGFI is between 0 and 1, it fits better as it gets closer to 1 (Hooper et al., 2008; Kline, 2011; Erkorkmaz et al., 2013; Yaşlıoğlu, 2017). The results showed that the two-factor model was acceptable.

4.4. Reliability using Cronbach's alpha

The reliability level of the scale was evaluated with the Cronbach's alpha coefficient for all the items and for each factor. The Alpha coefficient obtained in this context which was above 0.90 showed a high degree of reliability (Karagöz, 2016; Tappen, 2022). Within the scope of item analysis, item analysis based on correlations, and item discrimination power index were used.

Item-total correlation coefficients should be positive and >0.30 (Alpar, 2018; Erkorkmaz et al., 2013). In our study, all the 19 items showed a positive correlation above 0.60. Within this context, it was determined that the scale items had a high level of reliability (Büyüköztürk, 2017; Alpar, 2018). Thus, the internal consistency of ESSES was verified. This result shows that the ESSES is a reliable scale to measure episiotomy self-efficacy from the student's perspective.

As stated in the current literature on episiotomy, the episiotomy procedure includes the following stages: deciding when to open an episiotomy, making the necessary preparations, provision of care after the intervention and repair (Beşen and Rathfisch, 2019; Laine et al., 2022; Barjon and Mahdy, 2022). The scale factors determined in the present study were as follows: “preparation and implementation of episiotomy” and “Episiotomy control”. Based on these results, it can be said that the ESSES can assess students' episiotomy self-efficacy in line with the educational steps given to them. In addition, although the self-efficacy of student midwives in the birth process can be assessed in different ways, there is no scale used to assess a surgical process such as episiotomy (Demirel et al., 2020; Karakoc et al., 2020; Gudayu et al., 2015). The ESSES includes items in which students assess their episiotomy skills step by step. Within this context, implementation of the ESSES at different stages of midwifery education may make it possible for (enable) students to assess their episiotomy skills and to complete their missing skills.

5. Limitations

The present study has some limitations. The data obtained in the study were collected from students at one university in Turkey. Therefore, it may reduce the representativeness of the sample and limit the generalizability of the results. In addition, there were no scales that could compare skills or views on episiotomy in this study. Therefore, we could not make statistical comparisons.

6. Conclusion and recommendations

The ESSES consists of 19 items and the following two subdimensions: “Preparation for the episiotomy procedure (11 items)” and “Episiotomy repair and control (8 items)”. Responses given to the items are rated on a four-point Likert-type scale ranging from 1 to four (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). No item in the scale is reverse scored. The minimum and maximum possible scores to be obtained from the scale are 19 and 76, respectively. The higher the score obtained from the ESSES is the higher the level of self-efficacy for the episiotomy skill is. The results of the study demonstrated that the ESSES was an adequately valid and reliable tool. These results are important because it is the first study to measure students' proficiency in episiotomy with a scale developed for midwifery students. We recommend that validity and reliability studies of the ESSES for other languages should be conducted, and that its applicability for different health professionals should be investigated.

Ethical statement

This research was approved by T.R. Ege University Faculty of Medicine Clinical Research Ethics Committee (Protocol Number: 22-6T/33). Written and verbal informed consents were obtained from the students who participated in the study.

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CRediT authorship contribution statement

Aytül Hadımlı: Conceptualization, Methodology, Acquisition of the data, Analysis and interpretation of the data, Drafting of the manuscript, Critical revision of the manuscript.

Aysun Ekşioğlu: Conceptualization, Methodology, Acquisition of the data, Analysis and interpretation of the data, Drafting of the manuscript, Critical revision of the manuscript.

Nur Duman: Conceptualization, Methodology, Acquisition of the data, Analysis and interpretation of the data, Drafting of the manuscript, Critical revision of the manuscript.

Esin Çeber Turfan: Conceptualization, Methodology, Analysis and interpretation of the data, Drafting of the manuscript, Critical revision of the manuscript.

Declaration of competing interest

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