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The Effect of Chicken Model on Satisfaction, Self-confidence, and Anxiety in Teaching Episiotomy Repair: A Randomized Controlled Trial

Epizyotomi Onarımı Öğretiminde Tavuk Modelinin Memnuniyet, Özgüven ve Anksiyete Üzerine Etkisi: Randomize Kontrollü Çalışma

İlknur Münevver GÖNENÇ[a], Menekşe Nazlı AKER[a], Hacer ALAN DİKMEN[b]

[a]Ankara University Faculty of Nursing, Department of Midwifery, Ankara, Türkiye
[b]Selçuk University Faculty of Health Sciences, Department of Midwifery, Konya, Türkiye

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ÖZET Objective: Midwives' knowledge and skills in episiotomy application is extremely important. The aim is to determine the effect of episiotomy training using a chicken simulator on midwifery students' satisfaction, self-confidence, self-sufficiency, and anxiety levels. **Material and Methods:** This randomized control study was completed with 73 students, 38 in the chicken simulator group and 35 in the sponge simulator group. Data were collected using the Introductory Information Form, visual analog scale (VAS)-self-sufficiency, State Anxiety Inventory-S (STAI-S), Student Satisfaction with Learning and Self-confidence Scale (SCLS). **Results:** Comparing the VAS scores of the study groups on self-sufficiency in episiotomy repair after the training, information competence, intervention competence, determining and suturing the apex of the episiotomy, suturing the muscle, suturing the skin, and bringing the tissues together, in terms of adjusting the suture intervals, adjusting the suture tightness, applying intermittent sutures, applying continuous sutures, and completing the procedure in a short time, the competency levels of the participants in the chicken group were higher than those in the sponge group ($p<0.05$). The STAI-S scores were similar between the groups ($p>0.05$). Mean scores of the participants in the chicken simulator group for SCLS were higher than those in the sponge simulator group ($p<0.05$). **Conclusion:** The chicken model is effective in enhancing the perceived competence, self-confidence, and satisfaction of midwifery students regarding episiotomy. Therefore, its usage is recommended. In the light of these results, considering that it is cheap, easily available, easy to prepare, and can model both muscle and skin sutures, the use of the whole chicken leg as a material in episiotomy training can be recommended.

Anahtar Kelimeler: Episiotomy; simulation; anxiety; self-confidence; satisfaction

ABSTRACT Amaç: Ebelerin epizyotomi uygulamasındaki bilgi ve becerileri son derece önemlidir. Amaç, tavuk simülatörü kullanılarak epizyotomi eğitiminin ebelik öğrencilerinin memnuniyeti, öz güveni, öz yeterliliği ve kaygı düzeyleri üzerindeki etkisini belirlemektir. **Gereç ve Yöntemler:** Bu randomize kontrollü çalışma, 38'i tavuk simülatörü grubunda ve 35'i sünger simülatörü grubunda olmak üzere 73 öğrenci ile tamamlandı. Veriler, Giriş Bilgi Formu, görsel analog skala [visual analog scale (VAS)]-öz yeterlilik, Durumluk Kaygı Envanteri-S [State Anxiety Inventory-S (STAI-S)], Öğrenme ve Öz Güven Ölçeği [Learning and Self-confidence Scale (SCLS)] kullanılarak toplandı. **Bulgular:** Çalışma gruplarının eğitim sonrası epizyotomi onarımında öz yeterlilik, bilgi yeterliliği, müdahale yeterliliği, epizyotomi tepesini belirleme ve kası dikme, cildi dikme, dokuları bir araya getirme, dikiş aralıklarını ayarlama, dikiş sıkılığını ayarlama, aralıklı dikiş atma, sürekli dikiş atma ve epizyotomiyi kısa sürede tamamlama açısından VAS puanları karşılaştırıldığında, tavuk grubundaki katılımcıların yeterlilik düzeyleri sünger grubundaki katılımcılardan daha yüksek bulunmuştur ($p<0,05$). STAI-S puanları gruplar arasında benzerdi ($p>0,05$). Tavuk simülatörü grubundaki katılımcıların SCLS için ortalama puanları sünger simülatörü grubundakilerden daha yüksekti ($p<0,05$). **Sonuç:** Tavuk modeli, ebelik öğrencilerinin epizyotomi ile ilgili algılanan yeterliliklerini, özgüvenlerini ve memnuniyetlerini artırmada etkilidir. Bu nedenle kullanımı önerilir. Bu sonuçlar ışığında, ucuz, kolay bulunabilen, hazırlanması kolay ve hem kas hem de deri dikişlerini modelleyebildiği düşünüldüğünde, epizyotomi eğitiminde bir materyal olarak bütün tavuk bacağının kullanılması önerilebilir.

Keywords: Epizyotomi; simülasyon; kaygı; özgüven; memnuniyet

Correspondence: Hacer ALAN DİKMEN
Selçuk University Faculty of Health Sciences, Department of Midwifery, Konya, Türkiye
E-mail: dikmenha42@gmail.com

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Episiotomy is a medical procedure involving a surgical incision in the perineum, designed to facilitate a smoother, swifter, and safer delivery of the baby during the latter part of the second stage of labor.[1,2] Decision of healthcare professionals to make an episiotomy at the right time with an appropriate clinical assessment, opening and repairing the episiotomy with the appropriate technique will prevent uncontrolled perineal damage and prevent the development of early and late complications in the mother.[3] Therefore, it is of utmost importance that healthcare professionals have knowledge and skills in episiotomy application.[4]

Typically, episiotomies are within the purview of midwives, underscoring the paramount significance of high-quality episiotomy training within the field of midwifery.[4] One of the commonly used training techniques in episiotomy practice is simulation. Simulation provides the opportunity to learn surgical skills without pressure and risk of working on real patients to teach complex surgical technical procedures and anatomy.[5] Simulation surgical modeling is gaining in its popularity and these models improve students' surgical skills, knowledge base and confidence.[6] Student satisfaction is also a variable with clear positive results from the use of simulation. A learning environment that encourages students' satisfaction increases their motivation to study and leads to expected learning outcomes.[7,8] Furthermore, self-confidence is an important variable in students' learning in clinical practice. Evidence indicates that low self-confidence correlates with higher levels of anxiety, more delays in the execution of expected actions, and more errors.[4,9,10] It has an impact on students' self-confidence, clinical skills and ability to respond to patients' needs. Multiple instances of simulated scenarios enhance the self-assurance of students. In a study conducted by Yılar Erkek and Öztürk Altınayak, it was reported that episiotomy suture simulation increased students' episiotomy skill performance.[4]

Various materials are used as models for simulation purposes in episiotomy training.[11] One of the materials commonly used in episiotomy training is sponge. Sponge is a cheap, effective and readily available material that is easy to prepare for application. However, the texture of the sponge does not accurately mimic human tissue.[12] Animal tissue can also be used in episiotomy training as it resembles human tissue. As animal tissue, pig feet, chicken breast, beef steak and beef tongue can be used as models.[7] The materials used are very important in developing students' knowledge and skills. Model choice is based on instructor preference, cost and local regulations regarding the availability of materials.[6] The material used should be cheap, realistic and easily available to the student. The whole chicken leg is thought to fulfill these characteristics. However, no studies using this model have been found in the literature. Assessment of the efficiency of the materials used as models in episiotomy is important for correct and effective material selection. Therefore, in this study, the effects of using the sponge model and the chicken model, which are frequently used in the episiotomy repair training of midwifery students, on students' satisfaction, self-confidence, self-sufficiency and anxiety levels were compared. The aim of this study is to determine the effect of episiotomy training provided by using a chicken simulator on midwifery students' satisfaction, self-confidence, self-sufficiency and anxiety levels.

Hypothesis

$H_0$1 In episiotomy restoration training, no difference was found between the Self-confidence in learning of the experimental group (the group using chicken simulator) and the score of the control group (the group using sponge simulator).

$H_0$2 No difference was found between the self-confidence in learning score of the experimental group (group using chicken simulator) and the control group (group using sponge simulator) in episiotomy repair training.

$H_0$3 No difference was found between the anxiety score of the experimental group (the group using chicken simulator) and the control group (the group using sponge simulator) in episiotomy repair training.

MATERIAL AND METHODS

DESIGN

The research is a single center, parallel group, stratified block randomized controlled experimental study.

All steps of the study were conducted in accordance with the Consolidated Standards of Reporting Trials (Figure 1).

POPULATION AND SAMPLE OF THE RESEARCH

The study took place within the midwifery department of an Ankara-based university from September through December of 2022. The study included students who were familiar with the physiology of labor, who had not received any formal education on episiotomy and its repair, and who had not performed episiotomy before (on a model or on a real patient). After inclusion in the research, the students who did not complete the theoretical and practical part of the episiotomy training, did not perform the clinical application of episiotomy and incompletely completed the data collection forms were excluded from the study.

On the relevant dates, 464 students were reached. Among these students, 257 were excluded because they were not yet familiar with the physiology of labor and 118 were excluded because they had received formal education on episiotomy and repair. Therefore, there were 89 students who met the research criteria. In the research, no sample selection

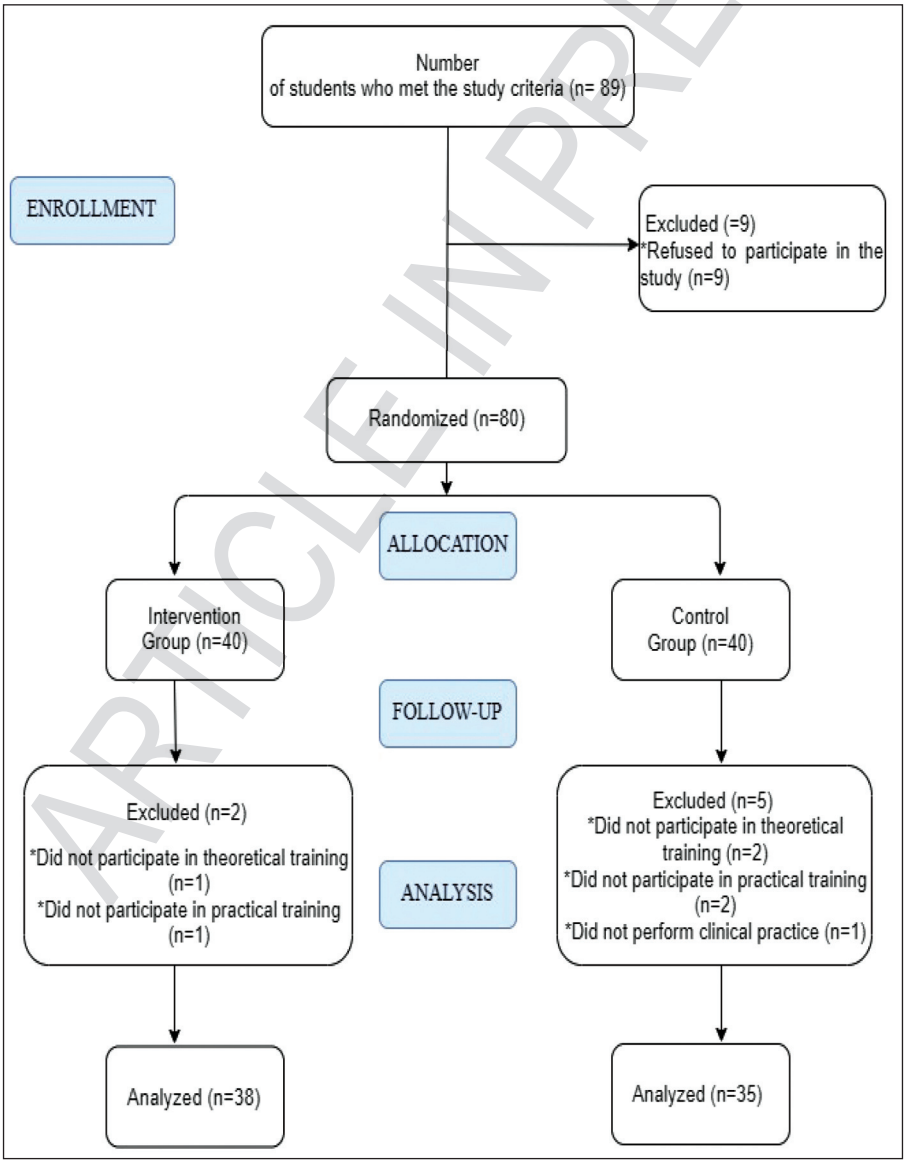

FIGURE 1: Research phases according to consolidated standards of reporting

was made and all students who met the research criteria were included in the study. Among the students who met the research criteria, 9 did not want to participate in the study. Therefore, 80 students were included in the randomization. To ensure similarity between the groups, block randomization was used for assignment to the groups. The students were ranked in descending order based on their school numbers. Blocks were determined through the website www.randomizer.org. With block randomization, 40 students were assigned to the experimental group and 40 students to the control group. Among the students in the experimental group, 1 student in the experimental group and 2 students in the control group did not participate in theoretical training, 1 student in the experimental group and 2 students in the control group did not participate in practical training, and 1 student in the control group did not perform clinical practice. Hence, the study was completed with 73 students, 38 in the experimental group and 35 in the control group (Figure 1).

After conducting a post hoc power analysis at the study's conclusion, it was determined that a sample size of 73 students provided adequate statistical power (99%) to detect differences in student satisfaction in learning scores. The analysis was conducted using a significance level (α) of 0.05 and an effect size (d) of 1.27, comparing the posttest mean scores between the experimental

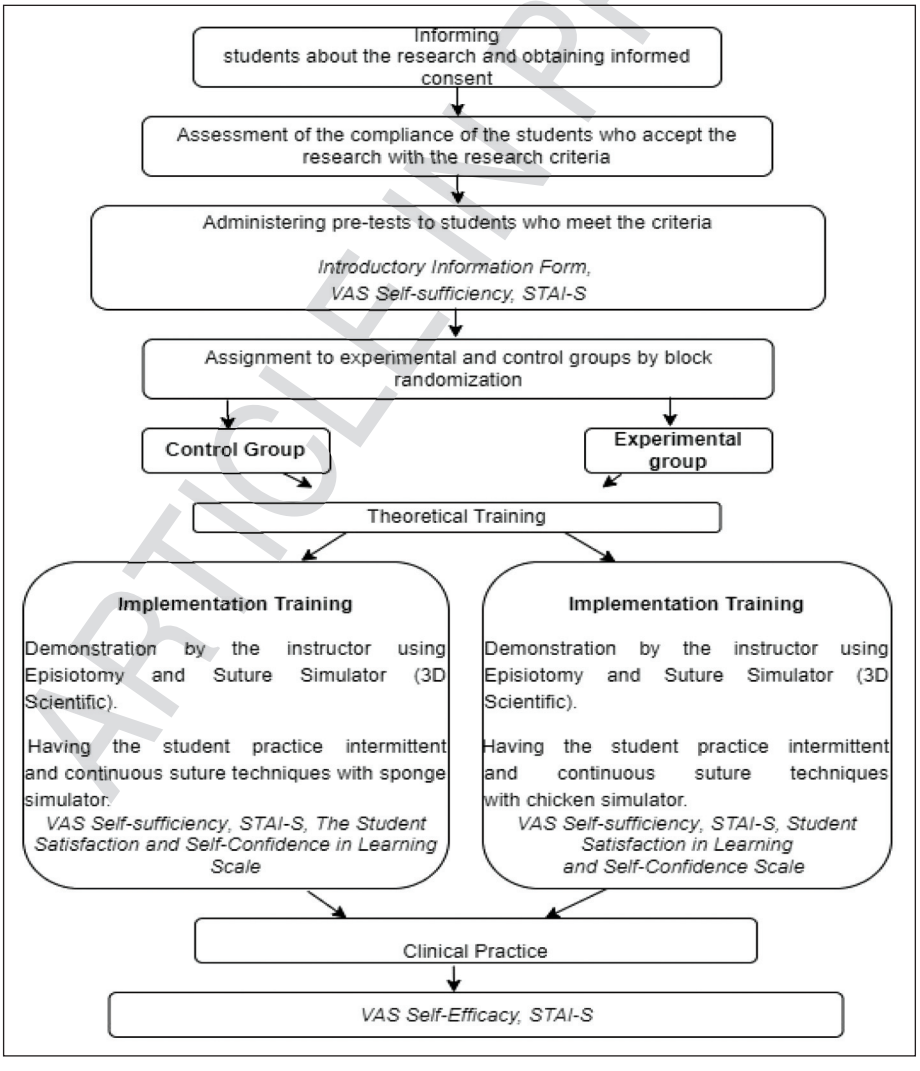

FIGURE 2: Research flow chart

group (4.55±.47) and the control group (3.95±.69) through 2 independent groups t-tests (G*Power 3.1.9.4 version).

Procedure

This investigation was carried out with two distinct sets of participants: the experimental and the control groups. In the experimental group, a complete chicken leg served as the simulation model, while in the control group, a sponge was employed as the simulation medium. The implementation procedure of the study is given in Figure 2.

Theoretical Training

All students in the study received standardized theoretical training. Theoretical training was given in four sessions lasting 50 minutes each. The training content is presented in Figure 3. Participants were all trained in theoretical training at the same time. The theoretical training was given in a didactic manner. During the training, power points were used, and the training was supported with relevant visuals. Questions of the group were answered at the end of the training. Training materials were shared with the students.

Sessions	Time
1st session	
• Perineal trauma definition • Risk factors for perineal trauma • Grading of perineal trauma • Anterioperineal trauma • Posteriorperineal trauma • Spontaneous perineal trauma • Episiotomy • Indications for episiotomy • Risks of episiotomy • Episiotomy types	50 minutes
2nd session	
• Evaluation of perineal trauma • Systematic perineal assessment • Visual examination • Vaginal examination • Rectal examination	50 minutes
3rd session	
• Episiotomy Repair • Suture material decision making process • Use of analgesia and anesthesia • Repair technique • Repair of the vagina, repair of the muscles, closure of the skin	50 minutes
4th session	
• Midwife follow-up after episiotomy repair and maintenance	50 minutes

FIGURE 3: Theoretical training programme

Practical Training

Experimental (Chicken) Group: After the theoretical training phase concluded, students within the experimental group were segmented into smaller clusters, typically consisting of 6-7 individuals. In each group, the suturing procedure was demonstrated one by one using the Episiotomy and Suture Simulator (3B Scientific) by an instructor who was among the investigators and had expertise in episiotomy. For each student in the group, a simulator made of whole chicken leg and skin was prepared. Each student applied intermittent and continuous suturing techniques on the incision made on the whole chicken leg (Figure 4).

Control (Sponge) Group: Similarly, once the theoretical training was finished, students within the control group were also subdivided into groups of 6-7 students. In each group, the suturing procedure was demonstrated one by one using the Episiotomy and Suture Simulator (3B Scientific) by an instructor who was among the investigators and had expertise in episiotomy. A 15 cmx20 cm sponge simulator was prepared for each student in the group. Every student practiced intermittent and continuous suturing techniques on the sponge (Figure 4).

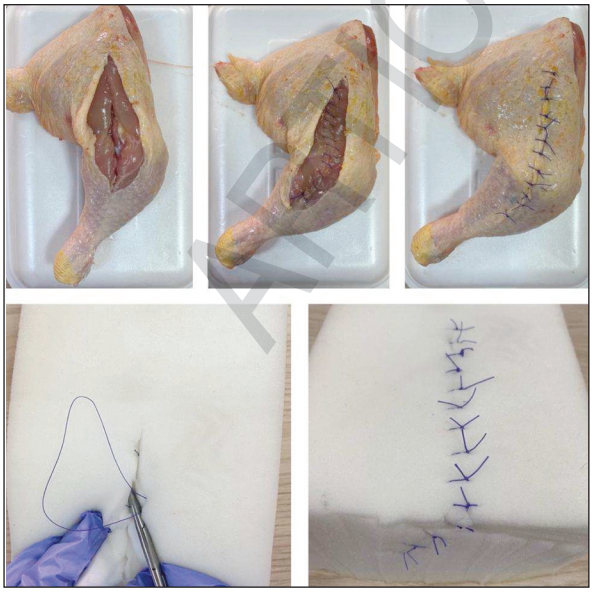

FIGURE 4: A representative image of the whole chicken leg and sponge episiotomy models

Clinical Practice

After the completion of theoretical and practical trainings, each student in the group practiced episiotomy in the clinical setting.

DATA COLLECTION FORMS

Introductory Information Form: The introductory information form included four questions (age, graduated high school, presence of health personnel in the family, and previous observation of episiotomy and repair).

Self-Sufficiency: Visual Analog Scale (VAS) assessed by adequate vision. The students were asked to assess their self-sufficiency in terms of knowledge competence, intervention competence, material preparation, using the porte guide, distinguishing the degree of perineal trauma, determining and suturing the apex of the episiotomy, suturing the muscle, suturing the skin, bringing the tissues together, adjusting the suture intervals, adjusting the suture tightness, applying intermittent sutures, applying continuous sutures and completing the procedure in a short time. For each item, students rated their sense of self-sufficiency on a scale of 0 (very inadequate) to 10 (very adequate).

Whether the students felt competent in terms of episiotomy application was evaluated three times for each parameter: before the training, after the training and immediately after the clinical practice.

State Anxiety Inventory-S: The State Anxiety Inventory-S (STAI-S) was developed by Spielberger and colleagues in 1970 to determine the level of anxiety experienced by the individual at that moment.[13] Turkish reliability and validity studies of the inventory were conducted by Öner and Le Compte. A self-assessment type scale consisting of 20 items and short statements. The inventory yields a possible score range of 20 to 80, with higher scores signaling elevated levels of anxiety. The reliability coefficient of the STAI-S is between 0.94-0.96.[14] In our study, Cronbach's alpha value of the scale was calculated as 0.917 for the first measurement.

In this present research, the anxiety levels of participants within both the experimental and control groups were assessed on three occasions: prior to the

training, following the training, and immediately after the clinical practice.

Student Satisfaction and Self-confidence in Learning Scale: The scale consisting of 13 items developed by Jeffries and Rizzolo to measure student satisfaction in simulation learning and confidence in learning.[15] The adaptation, validity and reliability study of the scale into Turkish was conducted by Unver et al. The 13th article was removed from the Turkish version of the scale and the total number of items decreased to 12. Scale consists of "Satisfaction with The Simulation Activity" (5 items) and "Self-confidence in Learning" (7 items) sub-dimensions. The higher the score on the scale, the higher the student satisfaction and self-confidence in learning. The sum of the sub-dimensions of the scale does not yield a total score. Cronbach's alpha value of the scale adapted into Turkish was 0.85 for satisfaction in learning and 0.77 for self-confidence in learning, and 0.865 for satisfaction in learning and 0.823 for self-confidence in learning were calculated in this study.[16]

In this present research, the satisfaction and self-confidence of participants within both the experimental and control groups were assessed on 3 occasions: prior to the training, following the training, and immediately after the clinical practice

DATA ANALYSIS

Statistical analysis was conducted using the SPSS Windows 24.0 software package, with a significance level set at $p<0.05$. Skewness and Kurtosis values fell within the range of ±2, indicating evidence of a normal distribution.[17] The chi-square statistic was employed to examine associations among categorical variables, while the independent samples t-test was utilized to compare 2 independent groups. Pearson correlation analysis was used to compare 2 quantitative data.

ETHICAL APPROVALS

The study was approved by the Selçuk University Faculty of Health Sciences Non-Interventional Clinical Research Ethics Committee (date: March 31, 2022; no: 2022/289). The study was performed in accordance with the ethical standards of the Declaration of Helsinki and its later amendments or comparable ethical standards (IRB=X).

At the beginning, each student was informed about the study and written informed consent was obtained. In the consent form, students were provided with assurances that their educational life would not be negatively affected if they refused to participate in the study, that they would not be given an academic grade as a result of participating in this study, and that they could decide to participate in the study entirely according to their own specific will.

During clinical training, each woman who underwent episiotomy was informed about the study and verbal consent was obtained. Since the chicken simulation was effective, students from the control group were asked to practice on the chicken simulation after the end of the study.

RESULTS

The groups exhibited statistical similarity in terms of their descriptive attributes ($p>0.05$) (Table 1). Before the training, there was no statistically significant difference in the VAS scores of the study groups in terms of VAS-self-sufficiency scores related to episiotomy repair ($p>0.05$). Comparing the VAS scores of the study groups on self-sufficiency in episiotomy repair after the training, information competence, intervention competence, determining and suturing the apex of the episiotomy, suturing the muscle, suturing the skin, and bringing the tissues together, in terms of adjusting the suture intervals, adjusting the suture tightness, applying intermittent sutures, applying continuous sutures, and completing the procedure in a short time, the competency levels of the participants in the chicken group were higher than those in the sponge group ($p<0.05$). The VAS-self-sufficiency scores of the study groups immediately after episiotomy and repair in the clinic were compared. In terms of suturing the muscle, suturing the skin, bringing the tissues together, adjusting the suture intervals, adjusting the suture tightness, applying intermittent sutures, applying continuous sutures, and completing the procedure in a short time, the competency levels of the participants in the chicken group were higher than those in the sponge group ($p<0.05$) (Table 2).

The mean STAI-S scores of the study groups prior to the training, following the training and im-

TABLE 1: Distribution of participants' descriptive characteristics (n=73)

Sociodemographic and obstetric characteristics	Sponge group (n=35) X̄±SD	Chicken group (n=38) X̄±SD	Total X̄±SD	Analysis t[a]	p value
Age	21.31±2.19	21.16±1.13	21.23±1.71	0.388	0.699
	n (%)	n (%)	n (%)	χ^{2b}	p
Graduated high school					
Health vocational high school	6 (17.1)	3 (7.9)	9 (12.3)	1.44	0.229
Regular high school/Anatolian high school	29 (82.9)	35 (92.1)	64 (87.7)		
Income level					
Low	11 (32.4)	5 (13.2)	16 (22.2)		
Middle	19 (55.9)	26 (68.4)	45 (62.5)	3.95	0.139
High	4 (11.8)	7 (18.4)	11 (15.3)		
Presence of health workers in the family					
Yes	8 (22.9)	5 (13.2)	13 (17.8)	1.17	0.0279
No	27 (77.1)	33 (86.8)	60 (82.2)		
Previous observation of episiotomy and repair					
Observed	30 (85.7)	29 (76.3)	59 (80.8)	1.04	0.30[8]
Not observed	5 (14.3)	9 (23.7)	14 (19.2)		

[a]Independent t-test; bchi-square. SD: standard deviation; Min: Minimum; Max: Maximum

TABLE 2: Comparison of VAS self-sufficiency scores of the study groups regarding episiotomy repair (n=73)

Variables	Pre-training				Post Training				Post Clinical Practice			
	Sponge group (n=35)	Chicken group (n=38)	Analysis		Sponge group (n=35)	Chicken group (n=38)	Analysis		Sponge group (n=35)	Chicken group (n=38)	Analysis	
	X̄±SD	X̄±SD	t[a]	p value	X̄±SD	X̄±SD	t[a]	p value	X̄±SD	X̄±SD	t[a]	p value
Knowledge competence	2.83±2.05	2.26±1.74	1.275	0.206	6.54±1.79	7.66±.97	-3.275	0.002*	7.03±1.74	7.47±1.31	-1.241	0.219
Response competence	1.46±1.65	1.05±1.69	1.032	0.305	5.17±1.87	6.34±1.55	-2.923	0.005*	6.23±2.01	6.97±1.65	-1.733	0.087
Material preparation	3.86±2.97	2.79±2.57	1.645	0.104	7.46±2.08	8.26±1.31	-1.965	0.054	8.54±1.90	8.45±1.94	0.212	0.833
Using the porteguette	2.00±2.28	1.58±1.67	0.895	0.374	7.77±1.80	8.03±1.60	-0.640	0.524	8.54±1.50	8.16±1.48	1.102	0.274
Differentiating the degree of perineal trauma	1.31±1.92	0.82±1.25	1.302	0.198	6.20±2.44	6.11±2.20	0.175	0.862	6.97±1.92	6.97±1.67	-0.005	0.996
Identifying and suturing the apex of the episiotomy	.83±1.45	0.47±1.03	1.215	0.229	6.63±2.00	7.66±1.49	-2.474	0.016*	7.11±1.81	7.55±1.90	-1.007	0.317
Suturing the muscle	0.71±1.15	0.47±1.06	0.930	0.356	5.71±2.53	7.79±1.32	-4.344	0.000**	5.83±2.16	6.97±1.97	-2.370	0.021*
Suturing the skin	1.00±1.52	0.63±1.36	1.093	0.278	6.80±2.46	7.97±1.52	-2.430	0.018*	7.11±1.92	7.97±1.70	-2.027	0.046*
Mutual interlacing of tissues	1.09±1.54	0.82±1.47	0.766	0.446	6.74±2.24	8.00±1.29	-2.903	0.005*	6.97±1.76	7.95±1.63	-2.464	0.016*
Ability to adjust suture spacing	1.09±1.52	0.74±1.33	1.045	0.299	5.83±1.86	7.16±1.35	-3.479	0.001*	6.86±1.94	7.87±1.73	-2.355	0.021*
Ability to adjust suture tightness	1.03±1.47	0.74±1.13	0.956	0.342	5.94±2.01	6.97±1.57	-2.451	0.017*	6.94±1.92	7.92±1.68	-2.317	0.023*
Ability to apply intermittent sutures	0.86±1.33	0.58±1.13	0.965	0.338	6.26±2.20	7.82±1.37	-3.595	0.001*	6.91±1.69	7.87±1.66	-2.432	0.018*
Ability to apply continuous sutures	0.89±1.41	0.37±0.82	1.936	0.057	6.06±2.20	7.76±1.42	-3.904	0.000**	6.57±1.67	7.50±1.84	-2.251	0.027*
Complete the process in a short time	0.89±1.57	0.45±0.76	1.500	0.140	4.40±2.27	6.26±1.94	-3.783	0.000**	5.43±1.85	6.34±1.91	-2.073	0.042*

[a]Independent t-test; *p<0.05; **p<0.001. SD: Standard deviation

mediately after clinical practice were similar in the 2 groups (p>0.05). The mean scores of the participants in the chicken group for satisfaction with the simulation activity and self-confidence in learning were higher than those in the sponge group (p<0.05) (Table 3).

TABLE 3: Comparison of STAI-S, students' satisfaction and Self-Confidence Scale scores of the study groups (n=73)

Variables	Sponge group (n=35) $\bar{X}$±SD	Chicken group (n=38) $\bar{X}$±SD	Analysis t[a]	p value
STAI-S1	36.29±9.26	39.50±9.98	-1.423	0.159
STAI-S2	34.77±10.90	33.53±8.76	0.540	0.591
STAI-S3	33.71±7.93	36.68±9.27	-1.465	0.147
Satisfaction with the simulation activity	3.95±0.69	4.55±0.47	-4.313	0.000**
Self-confidence in learning	4.08±0.55	4.32±0.44	-2.031	0.046*

[a]Independent t-test; [1]Before training; [2]After training; [3]Immediately after the clinical practice; *p<0.05; **p<0.001. SD: standard deviation; STAI-S: State Anxiety Inventory-S

There is a weak positive correlation between STAI-S scores before, after and after clinical practice (p<0.05). There is a weak positive correlation between STAI-S scores following the training and immediately after clinical practice (p<0.05). There is a weak negative correlation between the post-training STAI-S score and satisfaction with the simulation activity and self-confidence in learning (p<0.05). Students' satisfaction with the simulation activity and self-confidence in learning have a moderate positive relationship (p<0.05) (Table 4).

DISCUSSION

The study conducted to research the effect of episiotomy training given using chicken and sponge simulators on the satisfaction, self-confidence, self-sufficiency and anxiety levels of midwifery students on episiotomy application, compared the self-sufficiency of the sponge and chicken groups after the training and in the clinical setting, it was determined that the chicken group students found themselves more adequate in suturing procedures both after the training and in clinical practice. This result may suggest that episiotomy training with chicken feels closer to the real tissue than sponge, especially in suturing procedures. In a study comparing calf tongue and sponge in episiotomy training, similar to this study, it was found that the skills of the students who received training with calf tongue were better than the sponge group.[10] In a similar study comparing sponge and chicken breast, it was reported that sponge was the material that students had the most difficulty during the application, and chicken breast was the material with the highest score in expert evaluations according to episiotomy suturing criteria.[18] Accordingly, chicken model can be said to be a more effective material than sponge in developing skills in episiotomy training.

In this study, students in the chicken group had significantly higher levels of satisfaction with present learning than those in the sponge group. This finding rejects hypothesis $H_0$1. In parallel with the study in the literature, it is reported that in studies where animal tissues such as calf tongue were used instead of sponge, self-sufficiency and self-confidence levels affecting students' satisfaction levels were high.[7,10] No study was found to examine the effect of using the whole chicken leg in episiotomy training on students' satisfaction levels. As a result of this study, we can say that the use of the whole chicken leg in episiotomy training causes higher satisfaction in students. The reason for this may be related to the fact that the whole chicken leg gives students more perception of reality than the sponge. In addition, as found in Aslan's study, students' satisfaction levels may have decreased because it is more difficult to work with sponge in episiotomy training than chicken

TABLE 4: Correlation between scale scores (n=73)

Variables	1	2	3	4	5
1. STAI-S1	1				
2. STAI-S2	0.420**	1			
3. STAI-S3	0.322**	0.298*	1		
4. Satisfaction with the simulation activity	0.132	-0.236*	-0.013	1	
5. Self-confidence in learning	-0.036	-0.467**	-0.168	0.656**	1

[1]Before training; [2]After training; **p<0.001; [3]Immediately after the clinical practice; *p<0.05 (Pearson correlation analyses). STAI-S: State Anxiety Inventory-S

breast.[18] In future studies, it may be recommended to compare the satisfaction levels of students with the whole chicken leg, beef tongue and sponge. Thus, students working with the material they are most satisfied with may increase their skills in episiotomy applications more.

In the study, students in the chicken group had significantly higher levels of self-confidence in learning than those in the sponge group. This result rejects hypothesis $H_0$2. In parallel with this study, Guler et al. compared calf tongue and sponge in episiotomy training and reported that the self-confidence levels of students in the calf tongue group were higher.[10] In similar studies, the use of Danish language was found to increase self-sufficiency and self-confidence in students.[7,9] In a study comparing sponge, episiotomy model, chicken breast and calf tongue in episiotomy training, students had the least difficulty with chicken breast in material repair, while the highest level of self-confidence was found to be calf tongue, episiotomy model, chicken breast and sponge, respectively.[18] The creation of a beef tongue model demands considerable resources in both cost and time.[12] Accordingly, even though the beef tongue increased the self-confidence levels of the students in episiotomy training compared to other materials, it can be considered that the whole chicken leg is a suitable material in episiotomy training because it is cheaper than the calf tongue, it can be found and supplied more easily everywhere than the calf tongue, it can be prepared more easily, and it can model both muscle and skin sutures.

In this study, the mean anxiety scores of chicken and sponge groups were similar in all measurements and no difference was found. This finding supports hypothesis $H_0$3. In a systematic review, it was reported that students who received episiotomy training with calf tongue had lower anxiety levels.[7] Another study comparing episiotomy simulation model and sponge did not find a difference between the anxiety levels of the students in parallel with the study.[4] According to these results, more clinical studies are needed to determine which material decreases students' anxiety levels in episiotomy applications.

In this study, there was a weak negative relationship between post-training anxiety and satisfaction with current learning and self-confidence in learning. Accordingly, it can be said that higher levels of anxiety negatively affect students' satisfaction and self-confidence levels. In studies, it is stated that the stress and anxiety experienced by students in clinical practice cause difficulty in transferring learned knowledge to practice, fear of making mistakes and professional inadequacy.[4,11,19] Therefore, students' knowledge and skills should be increased, their anxiety should be decreased, and their satisfaction and self-confidence levels should be increased with a large number of pre-clinical simulation applications during the education process.

In this study, there was a moderate positive relationship between satisfaction with current learning and self-confidence in learning. According to this, students' self-confidence and satisfaction levels affect each other in episiotomy practices.

LIMITATIONS

Since the research was conducted in the midwifery department of only one university, the findings cannot be generalized to society. The study was designed as a single-blind randomized controlled study. The fact that it is the first study to examine and report the effect of episiotomy training using a chicken simulator on the satisfaction, self-confidence, self-efficacy, and anxiety levels of midwifery students shows the unique value of the study.

CONCLUSION

In this study, the chicken group was found to be more competent in episiotomy repair and to have higher levels of satisfaction and self-confidence than the group using sponge. In the light of these results, considering that it is cheap, easily available, easy to prepare, and can model both muscle and skin sutures, the use of the whole chicken leg as a material in episiotomy training can be recommended. Studies comparing different training materials can be planned to reduce anxiety levels of students in episiotomy application.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *İlknur Münevver Gönenç;* ***Design:*** *İlknur Münevver Gönenç, Menekşe Nazlı Aker;* ***Control/Supervision:*** *İlknur Münevver Gönenç, Hacer Alan Dikmen;* ***Data Collection and/or Processing:*** *Menekşe Nazlı Aker;* ***Analysis and/or Interpretation:*** *Menekşe Nazlı Aker;* ***Literature Review:*** *İlknur Münevver Gönenç, Hacer Alan Dikmen;* ***Writing the Article:*** *İlknur Münevver Gönenç, Hacer Alan Dikmen, Menekşe Nazlı Aker;* ***Critical Review:*** *İlknur Münevver Gönenç, Hacer Alan Dikmen;* ***References and Fundings:*** *İlknur Münevver Gönenç, Hacer Alan Dikmen, Menekşe Nazlı Aker;* ***Materials:*** *İlknur Münevver Gönenç, Hacer Alan Dikmen, Menekşe Nazlı Aker.*

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