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Are Turkish Midwifery Students Well-Prepared for the Profession? Assessing Their Self-Confidence Levels and Effective Factors

Türk Ebelik Öğrencileri Mesleğe İyi Hazırlanıyor mu? Özgüven Düzeyleri ve İlişkili Faktörlerin Değerlendirilmesi

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ABSTRACT

Objective: To determine the self-confidence levels of midwifery students in line with the International Confederation of Midwives (ICM) competencies they are expected to possess before graduation and to explore effective factors.

Methods: Descriptive and cross-sectional online survey design was used among quantitative research methods. The online survey link was spread through social media. From March to June 2020, 763 midwifery students completed a survey on demographic characteristics and rated their confidence for essential midwifery skills listed by ICM.

Results: Among the subscales, the highest average belonged to postpartum care (3.32 ± 0.66) and the lowest average to intrapartum care (2.94 ± 0.59). The students reported having less self-confidence in obstetrics emergencies, risky delivery, and neonatal care. The difference between descriptive characteristics and the ICM competencies subscales was found to be statistically significant (p<.05; for each). The groups with the highest arithmetic average creating statistically significant differences were students aged 22 years, those attending foundation universities, those with work experience, those that had attended 50 or more births, and those that had engaged in eight or more clinical practices.

Conclusion: Overall, the research findings emphasize the need for significant improvements in midwifery education and highlight the importance of practical experience in enhancing students' self-confidence.

Keywords: Competence, education, midwifery student, profession, self-confidence

ÖZ

Amaç: Ebelik öğrencilerinin mezuniyet öncesinde sahip olmaları beklenen Uluslararası Ebeler Konfederasyonu (ICM) yeterlilikleri doğrultusunda özgüven düzeylerini belirlemek ve etkileyen faktörleri araştırmaktır.

Yöntemler: Nicel araştırma yöntemlerinden tanımlayıcı ve kesitsel çevrimiçi anket tasarımı kullanılmıştır. Çevrimiçi anket bağlantısı sosyal medya aracılığıyla yayıldı. Mart ayından Haziran 2020'ye kadar 763 ebelik öğrencisi demografik anketi ve ICM tarafından listelenen temel ebelik becerilerine olan özgüvenlerini bildirdikleri anketi tamamladı.

Bulgular: Alt boyutlar arasında en yüksek ortalama doğum sonu bakıma (3,32 ± 0,66), en düşük ortalama ise intrapartum bakıma (2,94 ± 0,59) aitti. Öğrenciler doğumla ilgili acil durumlar, riskli doğum ve yenidoğan bakımı konularında kendilerine daha az güven duyduklarını bildirdiler. Tanımlayıcı özellikler ile ICM yeterlilikleri alt boyutları arasındaki fark istatistiksel olarak anlamlı bulunmuştur (her biri için p<,05). İstatistiksel olarak anlamlı fark yaratan aritmetik ortalamanın en yüksek olduğu gruplar ise 22 yaş öğrencileri, vakıf üniversitelerinde okuyanlar, iş tecrübesi olanlar, 50 ve daha fazla doğuma katılmış olanlar, 8 ve daha fazla klinik uygulama yapanlar oldu.

Sonuç: Genel olarak, araştırma sonuçları ebelik eğitiminde önemli iyileştirmeler yapılması gerektiğini ve öğrencilerin kendine güvenlerini artırmak için pratik deneyimlerin önemini vurgulamaktadır.

Anahtar Kelimeler: Eğitim, ebelik öğrencisi, meslek, özgüven, yeterlilikler

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Introduction

Midwives constitute a crucial part of the healthcare workforce, playing a key role in safeguarding and enhancing maternal and newborn health, as well as public health (Aktaş et al., 2020; Ejder Apay et al., 2012). Research from countries with high-quality midwifery services has shown lower rates of maternal and perinatal mortality and morbidity, as well as reduced instances of prematurity, low birthweight, and cesarean deliveries (Ejder Apay et al., 2012). The presence of a skilled midwife during childbirth is essential for improving the health outcomes of both women and newborns and can be life-saving in the event of complications (Sharma et al., 2015).

The World Health Organization (WHO) plays a pivotal role in addressing the first, third, and fifth Sustainable Development Goals, which focus on eradicating poverty, reducing maternal and neonatal mortality rates, preventing deaths among children under five, ensuring access to quality reproductive health services, promoting gender equality, and eliminating violence against women (Baykal Akmeşe and Yücel, 2023). According to WHO estimates, midwifery practices could prevent up to 83% of maternal and neonatal deaths and stillbirths (World Health Organization, 2015). Maternal, infant, and child mortality rates are key indicators of a country's development level. Nations with midwives who receive high-quality, modern education tend to have higher development levels (Yılmaz and Aksoy, 2018). This is particularly significant for Türkiye, which currently lags behind developed countries in health indicators (Ejder Apay et al., 2012). WHO recommends various strategies to strengthen the midwifery profession in pursuit of the goal of "health for all in the 21st century" (World Health Organization, 2015). At the 42nd World Health Assembly, it was emphasized that achieving this goal requires the active involvement of midwives and nurses and that all countries should develop and implement action plans to enhance these professions. Attaining these objectives demands effective, high-quality midwifery services, which can be significantly improved by enhancing the quality of midwifery education (Ejder Apay et al., 2012; Firoozehchian et al., 2022).

To ensure that midwifery students receive high-quality education, it is crucial to stay updated on international developments in midwifery education and integrate these advancements into the education systems of developing countries (Aktaş et al., 2020). The International Confederation of Midwives (ICM) has established standards for midwifery education, advocating for a direct-entry program lasting three years or at least 18 months of training following a post-nursing/healthcare provider program. ICM promotes teaching methods that emphasize adult learning principles and an evidence-based, multidisciplinary approach aligned with required competencies (ICM, 2013).

In Türkiye, midwifery education is conducted through a four-year bachelor's program. Turkish midwifery training programs have been updated to comply with the 80/155/EEC Council directives of the European Union and the Munich Declaration (Karaçam, 2016). To standardize undergraduate midwifery education and establish a national/international framework, the Midwifery National Core Education Program (MNCEP) was introduced in 2016. MNCEP is a comprehensive framework encompassing 11 main areas, including EU criteria, the Bologna Harmonization Process, ICM competencies, and core competencies (EUÇEP, 2016). Following undergraduate education, master's and doctoral degrees in midwifery were also introduced in 2003 and 2013, respectively (Yılmaz and Aksoy, 2018). As a result of these directives, it is believed that graduates from midwifery programs possess adequate knowledge and experience (Karaçam, 2016; Ejder Apay et al., 2012).

However, there are concerns that the level of knowledge expected from graduate midwives is sometimes insufficient for various reasons. While the number of midwives in Türkiye is comparable to that of other countries, increasing their number alone is not seen as beneficial. Instead, the qualifications of midwives and the organization of the profession are of utmost importance (Köken Durgun et al., 2018). Due to a focus on treatment services and employment issues, many midwives have started to shift away from their independent roles and primarily practice nursing services (Yıldırım et al., 2014). A significant issue within the midwifery profession is the absence of a specific midwifery law; current regulations only cover personal rights, education, duties, authority, and responsibilities (Aktaş et al., 2020). Literature identifies problems in midwifery education, such as inadequate physical conditions for academic staff and departments, faculty members lacking midwifery expertise, insufficient mentorship in clinical practice, universities failing to meet standard laboratory conditions, issues in clinical practice, and a lack of scientific research (Aktaş et al., 2020; Karaçam, 2016; Yılmaz and Aksoy, 2018). This study aims to evaluate the confidence levels of midwifery students in relation to the competencies expected of them before graduation and to identify the factors influencing their confidence levels.

Methods

Research Method and Design: The study used a descriptive online survey design, one of the quantitative research methods. The questionnaire design is useful when

investigating issues related to attitudes, beliefs, and knowledge, and the descriptive design was considered to be suitable for the current study since it did not involve the examination of a reason or non-working relationship (Al Qadire, 2014). After obtaining ethics committee approval, a copy of the questionnaire was converted into an online survey using one of the free survey websites. The online survey link was disseminated to midwifery students through messaging app groups with the assistance of midwifery faculty members. The survey link directed participants to complete the online questionnaire on the survey website. Permissions were arranged to ensure that each participant could complete the survey only once. Data were collected between March and June 2020. After the completion of the survey and data entry, the survey was removed from the website. To mitigate the risk of data loss, the researcher exported the data for documentation and preservation.

Sample: The population of the study consisted of 2,669 students attending midwifery programs in 43 universities in the first semester of 2016/2017 (Yüksek Öğretim Kurumu, 2016). It is expected that these students would graduate in the spring semester of 2020/2021. Given that only final-year and graduating midwifery students are considered fully competent in ICM competencies, the sample was exclusively comprised of final-year and graduating midwifery students. The online survey was completed by 763 final-year midwifery students. It was assumed that this was because participation was voluntary. At this sample number and 0.05 significance level, the Chi-square test power analysis result was found to be 0.877 for the study using PASS (Power Analysis and Sample Size) software.

Measurement Tools: The online survey consisted of nine demographic characteristics and 85 skills from four areas out of the total seven competency areas listed by ICM: antenatal, intrapartum, postpartum and neonatal care.

Demographic Characteristics Survey: This survey was prepared by the researchers in line with the literature to inquire about the students' age, type of university (state-foundation), university entrance score, number of births attended, midwifery education, etc. (Karaman and Okumuş, 2015; Bäck et al., 2017; Sharma et al., 2018; Sharma et al., 2019).

Midwifery ICM Competencies Survey: This survey was first administered by Dr. Bharati Sharma administered to midwifery students in the Gujarat region of India in the 2013-2014 academic year. The version adapted from English to Turkish was examined by ten senior midwifery academicians. The content and language of the ICM survey were preserved as much as possible. Confidence was assessed on a four-point Likert scale: 1, **"**I do not have skill"; 2, "I have little skill but need a lot of practice"; 3, "I have some skill but need some more practice"; and 4, "I am confident". The survey consisted of the four competency areas of ICM: antenatal care (17 skills), intrapartum care (37 skills), postpartum care (13 skills), and neonatal care (17 skills). Each competency area is scored from a minimum of 1 to a maximum of 4 points. As the scores in each sub-dimension increase, students' levels of self-confidence correspondingly rise. These are the core competencies established according to ICM and mean that a midwife must be able to perform them independently (Sharma et al., 2019; Bäck et al., 2017; Sharma et al., 2015).

Statistical Analysis: While evaluating the findings obtained from the study, the Statistical Package for the Social Sciences v. 24.0 was used. Responses to the ICM Competency Survey were categorized into two groups: high self-confidence (scores of 3 and 4) and low self-confidence (scores of 1 and 2). The levels of high and low self-confidence were represented with both numerical counts and percentages. During the analyses, in addition to descriptive statistical methods (frequency, percentage, arithmetic mean, and standard deviation), skewness and kurtosis values were required to be between +1.5 and -1.5 in order to examine the normal distribution (Tabachnick and Fidell, 2013). Furthermore, in order to determine the difference between the groups, the Independent-Samples t-test, Mann-Whitney U test, Kruskal-Wallis test, and Analysis of Variance (ANOVA) were used. The results were evaluated at the 95% confidence interval and $p < 0.05$ significance level. The Cronbach alpha coefficient was calculated for the reliability of the total scale and subscales. The hypotheses of the study were as follows:

1. What are the levels of self-confidence among students regarding their ICM midwifery competencies?

2. What are the levels of self-confidence among students concerning specific ICM midwifery competency items?

3. What factors influence the self-confidence levels of students with respect to ICM midwifery competencies?

Ethical Approval: Ethical approval was obtained from the Non-Drug and Non-Medical Device Research Ethics Committee of KTO Karatay University with the decision dated 28/01/2020 and numbered 2020/013. Participation was voluntary.

Results

Of the students, 40.89% were 22 years old and 88.50% attended a state university. The highest rate of students attended universities in the Central Anatolia Region (25.16%), and of the universities with a midwifery department, 91.61% had a medical faculty. The majority of

the students (93.97%) did not have work experience, and the number of births attended by the students ranged from 0 to 9 (38.79%). The rate of students with seven clinical practices (academic terms) during their midwifery education was determined as 49.54%.

When the students' mean sub-subscale scores in the ICM competencies were examined, the area with the highest average was determined as postpartum care (3.32 ± 0.66), followed by antenatal care (3.23 ± 0.55), while the students were least confidence in intrapartum care (2.94 ± 0.59). The internal consistency coefficients (Cronbach's alpha) of the responses given by the students to the ICM competencies questionnaire were found to be high (Table 1).

In the antenatal care subscale, the students' reported to have the highest self-confidence in the item, "I can calculate the estimated date of birth" (n = 672, 88.0%) and lowest self-confidence in "I can manage first-line medical and pregnancy complications requiring high/advanced interventions based on evidence-based national/local guidelines prior to referral" (n = 602, 78.9%). The students had confidence in 14 of the 17 items on antenatal care at a rate of higher than 50% (Table 2).

In the intrapartum care subscale, the students reported to be most confident in the item, "I can provide a safe environment to support mother and newborn attachment (first interaction). (n = 640, 83.9%) and least confident in "I can perform aortic compression" (n = 682, 89.4%). It was observed that the students' self-confidence levels decreased in risky birth and postpartum risky situations. The students had low self-confidence in 20 of the 37 items in the intrapartum care subscale (Table 3).

In the postpartum care subscale, the students had the highest confidence in the item, "I can educate the family and mother on the importance of maintaining hygiene and recognizing signs of infection" (n = 609, 79.8%) and lowest confidence in "I can provide emergency treatment of late postpartum hemorrhage and initiate referral if necessary" (n = 559, 73.3%). The students' self-confidence levels in postpartum care were generally very high (Table 4).

In the neonatal care subscale, the students reported to be most confident in the item, "I can position the newborn to start breastfeeding and promote breastfeeding as soon as possible after birth" (n = 624, 81.8%) and least confident in "I can initiate emergency measures in case of respiratory distress (neonatal resuscitation)" (n = 561, 73.5%). It was determined that the students' self-confidence levels in newborn care were generally very low, with less than 50% confidence being reported in 10 of the 17 items in this subscale (Table 5).

Table 1.
Students' Mean Scores in the Total Subscales of the ICM Competencies Scale and Cronbach's Alpha Coefficients

ICM Competencies Scale score range (1-4)	Min	Max	$\bar{X}$ ± SD	Cronbach's alpha
Subscales				
Antenatal care	1.00	4.00	3.23±0.55	0.880
Intrapartum care	1.00	4.00	2.94±0.59	0.947
Postpartum care	1.00	4.00	3.32±0.66	0.913
Neonatal care	1.00	4.00	3.02±0.68	0.920
Total score	1.00	4.00	3.13±0.56	0.974

$\bar{X}$: arithmetic mean, SD: standard deviation

Table 6 presents the differences in the mean subscale scores of the ICM competencies according to the descriptive characteristics of the students. The differences between all the subscales and groups were statistically significant ($p < 0.05$; for each). For all subscales, the groups with the highest arithmetic average creating statistically significant differences were students aged 22 years, those attending foundation universities, those attending universities in the Central Anatolia Region, those with work experience, those that had attended 50 or more births, and those that had engaged in eight or more clinical practices (Table 6).

Discussion

This study aimed to determine the self-confidence levels of midwifery students in relation to the competencies they are expected to have before graduation and to explore the factors affecting these levels. The main findings revealed that midwifery students had more confidence in antenatal and postpartum care, but less confidence in intrapartum and neonatal care. Specifically, the students reported lacking competencies in obstetric emergencies, high-risk deliveries, and neonatal care. Various factors were observed to influence the students' self-confidence in their professional competencies. These findings indicate that students may have inadequate self-confidence in certain areas upon graduation, numerous factors impact their self-confidence levels, and there is a need to develop recommendations to enhance these confidence levels.

Table 2.
Students' Self-Confidence Levels in the Antenatal Care Subscale of the ICM Competencies Scale

Antenatal Care	Low confidence (n-%)	High confidence (n-%)
I can calculate the estimated date of birth.	91 (12.0)	672 (88.0)
I can listen to the fetal heart rate.	109 (14.3)	654 (85.7)
I can provide health education to adolescents, women and families about the normal pregnancy process, signs and symptoms of danger, and when/how to contact a midwife.	213 (27.9)	550 (72.1)
I can take an antenatal history including the beginning of pregnancy.	228 (29.9)	535 (70.1)
I can educate mothers and families to prepare them for birth.	257 (33.7)	506 (66.3)
I can interpret fetal heart rate findings.	273 (35.8)	490 (64.2)
I can explain physical examination findings to mothers.	279 (36.5)	484 (63.5)
I can assess maternal nutrition.	284 (37.2)	479 (62.8)
I can teach and/or show the mother how to alleviate common discomforts related to pregnancy	302 (39.6)	461 (60.4)
I can determine fundal height, lie, position and presentation through an abdominal assessment.	304 (39.8)	459 (60.2)
I can provide basic preparation and guidance for labor, birth, and newborn care.	335 (43.9)	428 (56.1)
I can describe pregnancy complications (e.g., pre-eclampsia)	335 (43.9)	428 (56.1)
I can document the findings of each visit with appropriate records.	343 (45.0)	420 (55.0)
I can give appropriate advice on nutritional requirements during pregnancy and its relationship with fetal growth.	348 (45.6)	415 (54.4)
I can describe medical complications (e.g., diabetes and anemia) that may occur during pregnancy.	401 (52.6)	362 (47.4)
I can assess fetal growth using manual measurements.	556 (72.9)	207 (27.1)
I can manage first-line medical and pregnancy complications requiring high/advanced interventions based on evidence-based national/local guidelines prior to referral.	602 (78.9)	161 (21.1)

While the students' self-confidence levels were above 50% in relation to most items on antenatal care, they reported less than 50% confidence in some items in the related subscale, which were related to the assessment of fetal growth through manual measurements, diagnosis of medical complications during pregnancy, and referral procedures in risky pregnancy cases in light of guidelines. Sharma et al., (2015), administering the same scale, determined that approximately half of the students had a self-confidence level below 50% in items under the four areas of midwifery competencies, and they reported lower confidence in identifying and managing complications before referral in antenatal and intrapartum care. Mirzakhani and Shorap (2015) reported that midwifery graduates exhibited higher levels of confidence in managing low-risk conditions compared to their confidence in managing high-risk conditions. Students can improve their pregnancy monitoring skills in primary healthcare institutions. However, as women mostly prefer female obstetricians for prenatal care, midwifery students do not have enough opportunities to follow up pregnant women. To solve this problem, there is a need to adopt other methods that will promote the interaction of midwifery students with pregnant women during their training.

More than 50% of the students report lower levels of confidence in intrapartum care. It was observed that during the intrapartum period, the students felt inadequate in terms of labor progression, episiotomy, risky births, postpartum follow-up, and risky situations. Sharma et al., (2015) reported that approximately 30-40% of the students expressed low confidence in performing basic skills such as vaginal examinations, and counting and evaluating uterine contractions, and more than half had low confidence in the identification and management of intrapartum complications. In a study conducted in Sweden, Bäck et al., (2017) reported that students experienced less confidence in relation to events with which they had less experience, such as episiotomy. This can be explained by the rarity of obstetric emergencies, shoulder dystocia, management of prolapsed cord, and management of fetal distress. However, it is crucial to be prepared for such situations. If students do not encounter risky situations at all, only theoretical learning will not sufficiently prepare them for such emergencies. Therefore, there is a need for mechanisms that will simulate these situations. The deficiencies in the students' ability to follow up vaginal birth, other than risky situations, may be the reason for the difficulties they experience in practice.

Table 3.
Students' Self-Confidence Levels in the Intrapartum Care Subscale of the ICM Competencies Scale

Intrapartum Care	Low confidence (n-%)	High confidence (n-%)
I can provide a safe environment to support mother and newborn attachment (first interaction).	123 (16.1)	640 (83.9)
I can assist the support person during labor and delivery	128 (16.7)	635 (83.3)
I can record maternal vital signs and take a pregnancy history during labor.	156 (20.4)	607 (79.6)
I can provide physical and psychological support for the woman and the family and encourage normal birth.	161 (21.1)	602 (78.9)
I can clamp and cut the umbilical cord.	175 (22.9)	588 (77.1)
I can perform fundal massage to stimulate postpartum uterine tone and uterine contraction.	199 (26.1)	564 (73.9)
I can provide an opportunity for women in labor to express their needs and preferences.	232 (30.4)	531 (69.6)
I can make necessary preparations for birth (equipment, delivery room, etc.)	243 (31.8)	520 (68.2)
I can provide bladder care, including urinary catheterization when necessary.	252 (33.0)	511 (67.0)
I can ensure adequate hydration, nutrition and non-pharmacological comfort measures in labor/birth.	271 (35.5)	492 (64.5)
I can examine and decide whether the placenta and membranes are complete.	285 (37.4)	478 (62.6)
I can monitor the progress of labor using a partograph or similar tool for recording.	299 (39.2)	464 (60.8)
I can keep proper records of diagnosis and care.	333 (43.6)	430 (56.4)
I can calculate the timing of uterine contractions.	356 (46.7)	407 (53.3)
I can assess the effectiveness of uterine contractions.	365 (47.9)	398 (52.1)
I can administer drugs or prescription medicines according to national protocols and guidelines.	366 (48.0)	397 (52.0)
I can use apply uterotonic agents within a minute after birth to actively manage the third stage of labor.	379 (49.6)	384 (50.4)
I can stimulate or increase uterine contractions using non-pharmacological agents/precautions.	411 (53.9)	352 (46.1)
I can estimate and record maternal blood loss.	447 (58.6)	316 (41.4)
I can inspect the vagina and cervix for lacerations.	467 (61.2)	296 (38.8)
I can perform a full/accurate pelvic examination for dilation, descent, presenting part, position, status of membranes and pelvis for vaginal delivery.	474 (62.1)	289 (37.9)
I can manage postpartum hemorrhage and bleeding using appropriate techniques and uterotonic agents.	489 (64.1)	274 (35.9)
I can manually remove the placenta.	504 (66.0)	259 (34.0)
I can identify cervical lacerations and provide first-line care.	506 (66.3)	257 (33.7)
I can identify shock.	510 (66.9)	253 (33.1)
I can initiate shock management (intravenous access, oxygen, heat, position).	523 (68.5)	240 (31.5)
I can apply local anesthesia to the perineum for episiotomy or perineal repair.	524 (68.7)	239 (31.3)
I can identify abnormal labor patterns and initiate appropriate and timely response and/or referral.	559 (73.3)	204 (26.7)
I can repair first- and second-degree vaginal lacerations or episiotomy.	560 (73.4)	203 (26.6)
I can perform appropriate hand maneuvers during vertex deliveries	564 (73.8)	200 (26.2)
I can manage fetal distress.	578 (75.7)	185 (24.3)
I can perform an episiotomy.	580 (76.0)	183 (24.0)
I can manage prolapsed cord while awaiting transfer and/or medical attention.	585 (76.7)	178 (23.3)
I can manage a cord wrapped around the baby's neck at birth	609 (79.8)	154 (20.2)
I can manage shoulder dystocia.	664 (87.0)	99 (13.0)
I can perform appropriate hand maneuvers during face and breech deliveries	671 (87.9)	92 (12.1)
I can perform aortic compression.	682 (89.4)	81 (10.6)

Especially problems experienced in delivery rooms, lack of mentorship, and lack of self-confidence can lead to professional incompetency. It is considered that problems experienced by midwifery students during clinical practices should be addressed by policy makers.

In the field of postpartum care, the students reported more than 50% confidence in most of the items, but believed they were not as competent in identifying risky situations and referral procedures, which is consistent with previous results. Bäck et al., (2017) reported that students had self-confidence in postpartum care, which can be attributed to their higher practical experience in relation to these skills and spending more time with mothers after birth. This idea is supported by the students participating in the study feeling inadequate about postpartum risks.

It was observed that the students' self-confidence levels were low in relation to competencies required in the field of newborn care. The self-confidence rates decreased, especially in cases of risky neonatal care and neonatal complications. Similarly, Sharma et al., (2015) also reported a low level of confidence in overcoming neonatal complications and providing basic neonatal care. Managing risky newborns and complications in newborns are common areas for students to feel inadequate since they do not allow enough opportunities to practice their skills. However, more simulation training can be useful to develop such skills. Öztürk et al. (2023) found that simulation-based training significantly improved knowledge, skills, self-confidence, and competency scores in patient intervention, resulting in higher scores across these measures. Having less experience and confidence in these areas can lead to inadequacies in their professional lives. Confidence and competence in midwifery are evolving processes influenced by both external (environmental) and internal (personal) factors. Over time, these aspects develop continuously. In midwifery, confidence is a crucial component of the transition from being a student to becoming a professional midwife (Mudokwenyu-Rawdon et al., 2020). Confidence is a feeling that will allow midwives to be independent while maintaining normalcy during the birth and considered as important for all people working in the midwifery field. There are many factors that affect students' confidence (Bäck et al., 2017). In the current study, the students who were 22 years old, those studying at foundation universities, those attending universities located in the Central Anatolia Region, those attending universities with a faculty of medicine, those with field experience, those that had attended 50 or more births, and those engaging in eight or more clinical practices during their education were found to have higher mean self-confidence scores in antenatal, intrapartum, postpartum and neonatal care. Bäck et al., (2017) reported that young midwifery students felt more confident. In the current study, the students in the 21 years group had the lowest scale scores while those aged 22 years had the highest scores. Despite being contradictory to the literature, we consider that low confidence of young students is an expected result. We determined that the students graduating from foundation universities had a higher average than those graduating from state universities. There is no study in the literature evaluating the university preferences of midwifery students. Education is a service and universities are institutions that provide this service. Thus, students can be considered as customers receiving education service, which makes it important to evaluate the quality of and satisfaction with this service. Education and training services provided should be able to meet essential requirements, such as instructors, library, computers, classroom conditions, food, accommodation and security, as well as sports, artistic or cultural needs (Tayyar and Dilşeker, 2012).

Table 4.
Students' Self-Confidence Levels in the Postpartum Care Subscale of the ICM Competencie Scale

Postpartum Care	Low confidence (n-%)	High confidence (n-%)
I can educate the family and mother on the importance of maintaining hygiene and recognizing signs of infection.	154 (20.2)	609 (79.8)
I can educate the family and mother concerning postpartum rest and exercise.	162 (21.2)	601 (78.8)
I can initiate and support breastfeeding for the first time and breastfeeding babies requiring special care.	166 (21.8)	597 (78.2)
I can educate the mother about newborn care and self-care, including the signs/symptoms of possible complications.	202 (26.5)	561 (73.5)
I can provide family planning counseling and services as part of postnatal care.	205 (26.9)	558 (73.1)
I can keep proper records of postnatal care and complications.	217 (28.4)	546 (71.6)
I can take a specific history including details of pregnancy, labor and birth.	220 (28.8)	543 (71.2)
I can educate the woman and her partner concerning how to maintain postpartum sexual activity.	236 (30.9)	527 (69.1)
I can provide information and support to women/families that have experienced a loss (maternal death, stillbirth, pregnancy loss, neonatal death, and congenital abnormalities).	303 (39.7)	460 (60.3)
I can assess the healing of lacerations and/or episiotomy.	347 (45.5)	416 (54.5)
I can palpate the uterus and inspect bleeding, shock index, and blood pressure.	372 (48.7)	391 (51.3)
I can provide appropriate and timely first-line care for all identified complications and initiate referral for further treatment.	393 (51.5)	370 (48.5)
I can provide emergency treatment of postpartum hemorrhage and init referral if necessary.	559 (73.3)	204 (26.7)

The difference in the self-confidence levels of the students attending state and foundation universities in the current study may have resulted from the methods that these universities are using to meet students' needs. There may be more opportunities at foundation universities that allow students to engage in midwifery practices in laboratories and contracted hospitals. At the same time, the greater availability of social facilities in foundation universities may lead students to be more self-confident.

In this study, the students attending universities with a medical faculty had higher self-confidence. Similarly, Bäck et al., (2017) reported that midwifery students studying at universities with a medical faculty were more confident in performing aortic compression and managing serious obstetric complications such as postpartum hemorrhage and shoulder dystocia. Universities with a medical faculty allow midwifery students to engage in more practice related to risky situations and cases. As a result, these students feel more confident in relation to their competencies. Another reason may be the use of multidisciplinary training methods in such universities. In the current study, only a small number of students having working experience resulted in a difference in ICM competencies. Contrary to our findings, Bäck et al., (2017) reported that although participant midwifery students had at least one-year clinical practice, their work experience did not increase their confidence in terms of midwifery skills. Midwifery is a unique profession with a distinctly different focus compared to nursing. In Türkiye, midwifery education is provided not only at undergraduate level but also at high school level followed by undergraduate education received during employment.

Midwifery and nursing students that graduate from high school can improve their skills both by working and continuing their education at undergraduate level. Contrary to the literature, this situation may have contributed to the students' development and led to an increase in their self-confidence in the current study.

As the number of births attended by the students increased, their self-confidence in antenatal, intrapartum, postpartum and neonatal care also increased. Sharma et al., (2019) reported that 50% of midwifery students had attended 0-15 births, 30% 16-30 births, and 18% more than 30 births. In another study administering the same scale, Sharma et al., (2018) reported that attending more than 30 births affected the students' self-confidence in the intrapartum and neonatal care subscales, and self-confidence levels in antenatal, intrapartum, postpartum and neonatal care of births were observed to be improved with the increasing number of births attended.

Table 5.
Students' Self-Confidence Levels in the Neonatal Care Subscale of the ICM competencies Scale

Neonatal Care Subscale	Low confidence (n-%)	High confidence (n-%)
I can position the newborn to start breastfeeding and promote breastfeeding as soon as possible after birth.	139 (18.2)	624 (81.8)
I can maintain and promote the newborn's normal body temperature by covering (blanket, cap), environmental control, and encouraging skin-to-skin contact.	152 (19.9)	611 (80.1)
I can provide routine neonatal care according to local guidelines and protocols (e.g., identification, eye care, screening tests, vitamin K administration).	285 (36.0)	488 (64.0)
I can document the diagnosis and care of the newborn with records.	290 (37.6)	476 (62.4)
I can educate parents about the normal growth and development of a newborn and young child and how to meet their daily needs.	300 (39.3)	463 (60.7)
I can perform the initial assessment of the newborn (e.g., APGAR scoring).	303 (39.7)	460 (60.3)
I can help parents access public resources/facilities.	326 (42.7)	437 (57.3)
I can provide emergency care for the newborn, including umbilical cord clamping and cutting, drying, clearing the airways, and normalizing breathing.	385 (50.5)	378 (49.5)
I can support and educate parents that have given birth to more than one baby (e.g., twins and triplets)	385 (50.5)	378 (49.5)
I can support parents during transport/transfer of the newborn or during times of separation (neonatal intensive care admission).	443 (58.1)	320 (41.9)
I can perform a physical examination of the newborn in terms of congenital defects.	506 (66.3)	257 (33.7)
I can refer the risky newborn to emergency care.	506 (66.3)	257 (33.7)
I can initiate emergency measures for hypothermia.	514 (67.4)	249 (32.6)
I can identify and guide complications of low birth weight.	531 (69.6)	232 (30.4)
I can initiate emergency measures for hypoglycemia.	543 (71.2)	220 (28.8)
I can provide appropriate care for a low-birth-weight baby, including kangaroo care.	548 (71.8)	215 (28.2)
I can initiate emergency measures in case of respiratory distress (neonatal resuscitation).	561 (73.5)	202 (26.5)

Table 6.
Differences Between Students' Descriptive Characteristics and Subscale Scores Regarding Their Self-Confidence in ICM Competencies According to Their Demographic Characteristics

			ICM competencies Subscales				
Descriptive characteristics	**n**	**%**	**Antenatal Care/p X̄ ± SD**	**Intrapartum Care/p X̄ ± SD**	**Postpartum Care/p X̄ ± SD**	**Neonatal Care/p X̄ ± SD**	**Total Care/p X̄ ± SD**
Age, years			**F: 9.940 p = 0.000**	**F: 14.545 p = 0.000**	**F: 8.362 p = 0.000**	**F: 11.048 p = 0.000**	**F: 13.271 p = 0.000**
21	230	30.14	3.08 ± 0.60	2.75 ± 0.66	3.16 ± 0.75	2.81 ± 0.78	2.95 ± 0.64
22	312	40.89	3.34 ± 0.50	3.08 ± 0.55	3.44 ± 0.60	3.14 ± 0.60	3.25 ± 0.50
23	167	21.89	3.24 ± 0.52	2.94 ± 0.50	3.31 ± 0.60	3.07 ± 0.60	3.14± 0.48
24 and above	54	7.08	3.23 ± 0.54	2.86 ± 0.58	3.31 ± 0.66	3.07 ± 0.61	3.12 ± 0.52
Type of university			**t: -4.836 *p* =.000**	**t: -4.102 *p* =.000**	**Z: -4.190 *p* =.000**	**t: -4 202 *p* =.000**	**t: -4.512 *p* =.000**
State	675	88.50	3.20 ± 0.54	2.90 ± 0.58	3.29 ± 0.66	2.98 ± 0.66	3.09 ± 0.55
Foundation	88	11.50	3.49 ± 0.54	3.18 ± 0.61	3.53 ± 0.62	3.30 ± 0.70	3.38 ± 0.55
Region where the university is located			**F: 4.222 *p* =.000**	**F: 10.874 *p* =.000**	**F: 6.570 *p* =.000**	**F: 8.011 *p* =.000**	**F: 8.584 *p* =.000**
Marmara	160	20.97	3.25 ± 0.55	2.99 ± 0.56	3.33 ± 0.67	3.00 ± 0.68	3.14 ± 0.55
Central Anatolia	192	25.16	3.32 ± 0.55	3.09 ± 0.51	3.45 ± 0.61	3.19 ± 0.64	3.26 ± 0.52
Southeast Anatolia	35	4.59	2.98 ± 0.55	2.55 ± 0.59	2.84 ± 0.86	2.68 ± 0.74	2.76 ± 0.60
Aegean	134	17.56	3.28 ± 0.49	2.97 ± 0.59	3.41 ± 0.57	3.14 ± 0.61	3.20 ± 0.50
Mediterranean	95	12.45	3.25 ± 0.43	3.02 ± 0.46	3.33 ± 0.57	3.05 ± 0.57	3.16 ± 0.44
Black Sea	74	9.70	3.18 ± 0.60	2.75 ± 0.69	3.23 ± 0.74	2.75 ± 0.75	2.98 ± 0.64
East Anatolia	73	9.57	3.03 ± 0.65	2.61 ± 0.69	3.09 ± 0.71	2.79 ± 0.71	2.88 ± 0.63
Does the university have a medical faculty?			t: 1.577 *p* =.115	**t: 2.334 *p* =.020**	**t: 2.771 *p* =.006**	**t: 2.090 *p* =.037**	**t: 2.469 *p* =.014**
Yes	699	91.61	3.24 ± 0.54	2.95 ± 0.59	3.34 ± 0.65	3.04 ± 0.67	3.14 ± 0.55
No	64	8.39	3.13 ± 0.58	2.77 ± 0.58	3.10 ± 0.74	2.85 ± 0.72	2.96 ± 0.58
Employment status (number of years employed, X̄±SD=2.58±1.44)			**t: 2.804 *p* =.005**	**t: 3.781 *p* =.000**	**t: 2.433 *p* =.015**	**t: 3.338 *p* =.001**	**t: 3.437 *p* =.001**
Employed	46	6.03	3.45 ± 0.54	3.25 ± 0.53	3.55 ± 0.59	3.34 ± 0.54	3.40 ± 0.47
Unemployed	717	93.97	3.22 ± 0.55	2.92 ± 0.59	3.30 ± 0.66	3.00 ± 0.68	3.11 ± 0.56
Number of attended births (X̄±SD=21.87±34.63)			**X^2: 89.328 *p* =.000**	**X^2: 117.292 *p* =.000**	**X^2: 79.234 *p* =.000**	**F: 17.172 *p* =.000**	**X^2: 106.140 *p* =.000**
0-9	296	38.79	3.01 ± 0.58	2.64 ± 0.63	3.07 ± 0.73	2.76 ± 0.72	2.87 ± 0.60
10-19	106	13.89	3.26 ± 0.51	2.98 ± 0.48	3.35 ± 0.64	3.10 ± 0.58	3.17 ± 0.47
20-29	83	10.88	3.39 ± 0.40	3.15 ± 0.50	3.44 ± 0.54	3.17 ± 0.57	3.29 ± 0.43
30-39	48	6.29	3.28 ± 0.49	3.06 ± 0.43	3.39 ± 0.55	3.12 ± 0.55	3.21 ± 0.44
40-49	181	23.72	3.42 ± 0.47	3.17 ± 0.49	3.55 ± 0.53	3.25 ± 0.61	3.35 ± 0.46
50 and above	49	6.43	3.49 ± 0.48	3.24 ± 0.45	3.60 ± 0.49	3.23 ± 0.58	3.39 ± 0.43
Total number of clinical practices in the semesters (X̄±SD=6.33±1.69)			**F: 13.789 *p* =.000**	**F: 16.165 *p* =.000**	**F: 12.028 *p* =.000**	**F: 11.928 *p* =.000**	**F: 16.639 *p* =.000**
3 and below	60	7.86	2.80 ± 0.71	2.40 ± 0.77	2.77 ± 0.88	2.49 ± 0.92	2.61 ± 0.74
4	58	7.60	3.14 ± 0.53	2.82 ± 0.59	3.21 ± 0.76	2.91 ± 0.75	3.02 ± 0.60
5	53	6.95	3.03 ± 0.54	2.76 ± 0.61	3.19 ± 0.64	2.86 ± 0.60	2.96 ± 0.53
6	96	12.58	3.23 ± 0.57	2.92 ± 0.61	3.37 ± 0.62	2.97 ± 0.68	3.12 ± 0.56
7	378	49.54	3.29 ± 0.50	3.01 ± 0.53	3.37 ± 0.60	3.10 ± 0.62	3.19 ± 0.50
8 and above	118	15.47	3.41 ± 0.46	3.12 ± 0.49	3.49 ±0.55	3.21 ±0.55	3.31 ± 0.44

X̄:arithmetic mean, SD: standard deviation, t: independent-samples t-test, Z: Mann-Whitney U test, X2: Kruskal-Wallis test, F: Analysis of variance, *p*<.05

In contrast, Bäck et al., (2017) showed that although all midwifery students had mandatorily attended 50 births, their self-confidence was not sufficient. The authors agreed with the view that performing labor increased skills, but they also emphasized the importance of continuity of care. Although it is mandatory for midwifery students to attend at least 40 births according to the current legislation in Türkiye (Yükseköğretim Kurulu Başkanlığı, 2008), the low number of births attended may cause students to feel inadequate in this area. Issuing midwife license without adequate clinical practice can lead to insecurities on the part of both the mother and the midwife when the latter is managing the delivery process on his/her own (Sharma et al., 2019). The relationship with a mentor, continuity, and feedback, and the presence of a willing mentor are fundamental components for students. Students require mentors who

practice evidence-based approaches (Folkvord and Risa, 2023). In this respect, it is necessary to eliminate difficulties experienced in the practical areas and addressing related obstacles by providing sufficient mentor support.

It has been shown that trained, experienced, motivated and licensed midwives working effectively with their medical and public health colleagues result in a decrease in maternal and neonatal mortality, as well as an improvement in the quality of care (Renfrew et al., 2014). Clinical environment is effective in increasing or decreasing students' motivation (Saeedi and Parvizy, 2019). Acquiring the ability to integrate theory with practice during clinical midwifery training is essential (Firoozehchian et al., 2022). In the current study, it was seen that as the number of clinical practices increased, the students' self-confidence also increased. In a methodological study examining the features of an ideal midwife, Nicholls and Webb, (2006) stated that clinical practices increased the experience of students, and therefore that practice-theory connection should be strengthened and an apprentice-style education should be implemented. Another study has demonstrated a relationship between the acquisition of clinical skills and increased confidence in performing those skills (Mirzakhani and Shorab, 2015). Confidence and competence develop from clinical activities. Professional development depends on internal factors such as self-efficacy and curiosity to learn, as well as external factors including encouraging, supportive colleagues and warm, supportive, non-threatening environments (Bäck et al., 2017). It seems impossible to carry out midwifery education without clinical practice. Removal of obstacles to students' related practices and implementations must be supported by a sufficient number of competent mentors.

Limitations

This study has certain limitations. First, the survey did not measure the students' confidence levels in spiritual care. However, in the midwifery profession, it is essential to provide informative, advocating, and protective care for women, which is as important as performing basic competencies. Second, the self-confidence levels of students may have improved within a few months after the study commenced. Third, as this study evaluated midwifery education within the country's borders, there might be differences compared to assessments conducted internationally. Lastly, even participating in clinical practice as a student may lower the self-confidence of midwifery students. Identifying the inadequacies of students will greatly contribute to midwifery education, so the administration of the scale should be repeated in future studies.

Conclusion and Recommendations

Our results showed that the midwifery students were very confident in antenatal and postpartum care while they had less confidence in intrapartum and neonatal care. In particular, the students stated that they lacked competencies in obstetric emergencies, risky delivery, and neonatal care. Many subfactors were found to affect the midwifery students' level of self-confidence. Clinical practice and hands-on experiences are crucial in midwifery education and play a critical role in enhancing students' confidence levels. Research findings can provide valuable insights into the strengths and weaknesses of midwifery students, as well as offer significant clues for the improvement of educational programs.

The deficiencies in midwifery education deeply affect the society, mother, and baby. One of the reasons for high cesarean section rates may be the deficiencies in midwifery education. As a solution proposal, simulation trainings should be organized to eliminate obstacles that prevent students from actively engaging in comprehensive and sufficient clinical practices and to help them learn how to manage risky situations. Since midwifery is one of the most important professions to be transferred to future generations, there is a need to eliminate inadequacies in education, expand internship programs, enhance mentorship support, take necessary measures, and conduct further research.

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Genişletilmiş Özet

Ebeler, anne ve yenidoğan sağlığının korunması ve geliştirilmesi ile toplum sağlığında kilit rol oynayan en önemli sağlık insan gücünden biridir. Doğumda yetenekli ebenin bulunması, kadınların ve yenidoğanın sağlığını geliştirmek ve hayatını kurtarmak için çok önemlidir. Dünya Sağlık Örgüt'ü (DSÖ), ebelik uygulamalarının, anne ve yenidoğan ölümlerinin ve ölü doğumların %83'ünü önleyebileceğini tahmin etmektedir. DSÖ, "21. yüzyılda herkes için sağlık" hedefini takip ederek ebelik mesleğini güçlendirmek için çeşitli stratejiler önermektedir. Ebelik öğrencilerinin yüksek kaliteli eğitim almasını sağlamak için, ebelik eğitimindeki uluslararası gelişmelerden haberdar olmak ve bu gelişmeleri gelişmekte olan ülkelerin eğitim sistemlerine entegre etmek çok önemlidir. Türkiye'de ebelik eğitimi, dört yıllık lisans programı düzeyinde verilmektedir. Türk ebelik eğitim programları, Avrupa Birliği'nin 80/155/EEC Konsey direktifleri ve Münih Deklarasyonu'na uyacak şekilde güncellenmiştir. Ancak, çeşitli nedenlerle lisansüstü ebelerden beklenen bilgi düzeyinin bazen yetersiz olduğu yönünde endişeler bulunmaktadır. Ülkemizde bulunan ebe sayısı diğer ülkeler ile eş değerde olsa da, yalnızca ebe sayısının artması faydalı bir durum olarak görülmemektedir. Bunun yerine, ebelerin nitelikleri ve mesleğin örgütlenmesi son derece önemlidir. Ebelik mesleği içindeki önemli diğer bir sorun, özel bir ebelik yasasının olmamasıdır; mevcut düzenlemeler yalnızca kişisel haklar, eğitim, görev, yetki ve sorumlulukları kapsamaktadır. Çalışmada; ebelik öğrencilerinin mezun olmadan hemen önce, sahip olmaları gereken yeterlilikler doğrultusunda özgüven düzeylerinin tespit edilmesi ve etkileyen faktörlerin açıklanması amaçlanmıştır.

Çalışmada nicel araştırma yöntemlerinden biri olan tanımlayıcı çevrimiçi anket tasarımı kullanılmıştır. Etik kurul onayı alındıktan sonra anketin bir kopyası ücretsiz anket web sitelerinden birini kullanarak çevrimiçi ankete dönüştürülmüştür. Çevrimiçi anket bağlantısı, ebelik öğretim üyelerinin yardımıyla, mesajlaşma uygulaması aracılığıyla ebelik öğrenci gruplarına dağıtılmıştır. Veriler Mart ve Haziran 2020 arasında toplanmıştır. Çalışmanın evrenini 2016/2017 yılı Güz Dönemi'nde Ebelik Bölümüne kayıt olan, 2020/2021 Bahar döneminde mezun olacak, 43 üniversiteye yerleşmiş, 2669 öğrenci oluşturmaktadır. Çevrimiçi anket 763 son sınıf ebelik öğrencisi tarafından tamamlanmıştır. Bu örneklem sayısı ve 0,05 anlamlılık düzeyinde, PASS (Güç Analizi ve Örneklem Büyüklüğü) yazılımı kullanılarak yapılan çalışma için Ki-kare testi güç analizi sonucunun 0,877 olduğu bulunmuştur. Online anket formumuz 9 adet demografik özellikler ve ICM'nin dört yeterlilik alanı altındaki becerileri içeren 85 adet yetkinliği içermektedir. Bu anket ilk olarak Dr. Bharati Sharma tarafından 2013-2014 akademik yılında Hindistan'ın Gujarat bölgesindeki ebelik öğrencilerine uygulanmıştır. Güven, dört puanlık bir Likert ölçeğinde değerlendirilmiştir: 1, "Becerim yok"; 2, "Az becerim var ama çok fazla pratiğe ihtiyacım var"; 3, "Biraz becerim var ama biraz daha pratiğe ihtiyacım var"; ve 4, "Kendime güveniyorum". ICM Yeterlilik Anketi'ne verilen yanıtlar iki gruba ayrılmıştır: Yüksek öz güven (3 ve 4 puan) ve Düşük öz güven (1 ve 2 puan). Yüksek ve düşük öz güven düzeyleri hem kişi sayısı hem de yüzdelerle ifade edilmiştir. Çalışma verileri değerlendirilirken tanımlayıcı istatistiksel metotların (Frekans, Yüzde, Aritmetik Ortalama, Standart sapma) yanı sıra normal dağılımın incelenmesi için Skewness ve Kurtosis değerlerinin +1,5 ve -1,5 arasında bulunması şartı aranmıştır. Çalışmanın hipotezleri " Öğrencilerin ICM ebelik yeterliliklerine ilişkin öz güven düzeyleri nelerdir?", "Öğrencilerin öz güven düzeylerini etkileyen faktörler nelerdir?". Çalışmanın ana bulguları; ebelik öğrencilerinin antenatal ve postpartum bakım konusunda kendilerine güvendiklerini, intrapartum ve yenidoğan bakımları konusunda ise daha az güven duygusu yaşadıklarını göstermektedir. Özellikle öğrenciler obstetrik aciller, riskli doğum ve yenidoğan bakım konularında eksik olduklarını belirtmektedirler. Güven duygusunu etkileyen pek çok faktör olduğu görülmektedir. Öğrencilerin %50'sinden daha fazlası, intrapartum bakım konularında düşük güven seviyeleri bildirmiştir. İntrapartum dönem boyunca; doğum ilerleyişi, epizyotomi, riskli doğumlar, postpartum takip ve riskli durumlar konularında yetersiz hissettikleri görülmektedir. Postpartum bakım alanında öğrenciler, maddelerin çoğuna %50'nin üzerinde güven bildirirken diğer sonuçlar ile uyumlu şekilde riskli durumların tespiti ve sevk işlemleri konularında yetersizlik görülmektedir. Özellikle riskli yenidoğan bakımı ve yenidoğan komplikasyonları durumlarında kendine güven oranları oldukça düşmektedir. Çalışmada antenatal, intrapartum, postpartum ve yenidoğan bakım alanlarında 22 yaş grubunda, vakıf üniversitelerinde, İç Anadolu bölgesinde bulunan, Tıp Fakültesine sahip üniversitelerde okuyan, sahada çalışan, 50 ve üstü doğum yaptıran ve öğrenimi boyunca sekiz ve üstü klinik uygulamaya çıkan öğrencilerde ölçek puan ortalamaları yüksek bulunduğundan bu öğrencilerin kendine güven durumlarının yüksek olduğu ve gruplar arası farkın istatistiksel olarak anlamlı olduğu bulunmuştur.

Ebelik eğitimindeki eksiklikler toplumu, anneyi ve bebeği derinden etkilemektedir. Yüksek sezaryen oranlarının nedenlerinden biri ebelik eğitimindeki eksiklikler olabilir. Çözüm önerisi olarak, öğrencilerin kapsamlı ve yeterli klinik uygulamalara aktif olarak katılmalarını engelleyen engelleri ortadan kaldırmak ve riskli durumlarla nasıl başa çıkacaklarını öğrenmelerine yardımcı olmak için simülasyon eğitimleri düzenlenmelidir. Ebelik, gelecek nesillere aktarılması gereken en önemli mesleklerden biri olduğundan, eğitimdeki yetersizliklerin giderilmesi, gerekli önlemlerin alınması ve daha fazla araştırma yapılması gerekmektedir.