Assessment of breastfeeding self-efficacy and effectiveness: A comparison of primiparous and multiparous mothers

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Abstract

Breastfeeding self-efficacy is influenced by the mother's previous experiences, examples from other mothers, the social environment and the psychological state of the mother. The aim of this descriptive cross-sectional study was to comparatively evaluate the breastfeeding self-efficacy of primiparous and multiparous mothers and the factors affecting it. The study sample consisted of 280 mothers who gave vaginal birth in a state hospital between 16 February and 4 May 2019. The study data were collected using a personal information form and the Breastfeeding Self-Efficacy Scale. In this study, the mean score of the BMI of primiparous mothers was 55.05 ± 8.40 (Min:36 Max:70), while the mean score of multiparous mothers was 62.53 ± 6.22 (Min:42 Max:70), and the difference between them was found to be significant (p<0.05). However, the difference between the planned pregnancy and the status of receiving prenatal care was also significant (p<0.05). Therefore, it may be recommended that health professionals should prioritise personalised breastfeeding education and counselling for primiparous mothers to increase their self-efficacy immediately after birth. (*Afr J Reprod Health* 2025; 29 [3]: 94-102).

Keywords: Postpartum period; parity; breastfeeding; self-efficacy

Résumé

L'auto-efficacité en matière d'allaitement est influencée par les expériences antérieures de la mère, les exemples d'autres mères, l'environnement social et l'état psychologique de la mère. L'objectif de cette étude descriptive et transversale était d'évaluer comparativement l'auto-efficacité en matière d'allaitement des mères primipares et multipares ainsi que les facteurs qui l'affectent. L'échantillon de l'étude était composé de 280 mères ayant accouché par voie vaginale dans un hôpital public entre le 16 février et le 4 mai 2019. Les données ont été collectées à l'aide d'un formulaire d'information personnel et de l'échelle d'auto-efficacité en matière d'allaitement. Dans cette étude, le score moyen de l'IMC des mères primipares était de $55,05\pm8,40$ (Min:36 Max:70), tandis que celui des mères multipares était de $62,53\pm6,22$ (Min:42 Max:70), et la différence entre eux s'est avérée significative (p<0,05). De plus, la différence entre la grossesse planifiée et le statut de suivi prénatal était également significative (p<0,05). Par conséquent, il est recommandé que les professionnels de santé accordent la priorité à une éducation et un accompagnement personnalisés en matière d'allaitement pour les mères primipares afin d'améliorer leur auto-efficacité immédiatement après l'accouchement. (*Afr J Reprod Health* 2025; 29 [3]: 94-102).

Mots-clés: Période post-partum; parité; allaitement; auto-efficacité

Introduction

Breast milk not only satisfies the physiological and psychological needs of the baby during the first six months after delivery, but also is a digestible, ready, and natural nutrition including all liquid and nutritional elements that are necessary for the growth and development of the newborn^{1,2}.

Therefore, the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) (2019) recommend that babies should not have any additional food, even including water, for the first six months after delivery apart from breast milk, and breastfeeding should continue with proper supplemental foods until the baby turns two years old.^{3,4} UNICEF (2018) data indicate that the most babies 0 to 5 months old that are fed with only breast milk are in East and South Africa (56%), the least are in East Asia and the Pacific (29%), and the general mean percentage is 42%.⁴ According to UNICEF 2023 data, the prevalence of continuing breastfeeding between 12-23 months of age is 59%.⁵

Turkey Demographic and Health Survey (TDHS) 2013 data indicated that only 30% of the babies younger than six months were fed with

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breast milk while TDHS 2018 data indicate this rate has increased to 41%.⁶ TDHS (2018) data show that breastfeeding is common in Turkey; however, it is still not at the desired level. 98% of the babies are breastfed at some time and 71% of the babies start breastfeeding within one hour after delivery. However, 14% of them are not breastfed within the first 24 hours after delivery.

The percentage of babies provided with breast milk for the first two months of their lives is 59% while the percentage of 4-5-month-old babies provided with only breast milk is 14%.⁷

There are many compelling factors for initiating and maintaining breastfeeding⁸ One of the most significant factors affecting breastfeeding duration and breastfeeding success is the mother's perceived breastfeeding self-efficacy. In 1999, Dennis and Faux developed the "Theory of Breastfeeding Self-Efficacy" According to Dennis and Faux, a mother's perceived breastfeeding efficacy is related to the mother's breastfeeding choice⁹ the effort she will make for breastfeeding, and her belief in her ability to cope with any difficulties occurring during the breastfeeding process.¹⁰ Breastfeeding self-efficacy is affected by the previous experiences of the mother, examples she has seen from other mothers, social surroundings, and the psychological state of the mother.¹⁰ Previous studies have indicated that a mother's breastfeeding status is affected by their breastfeeding self-efficacy, and there is a positive relationship between breastfeeding self-efficacy and breastfeeding success.¹¹⁻¹⁶ Other factors affecting the breastfeeding self-efficacy are age, education, and socioeconomic status of the mother, the mother's wish to breastfeed, the education the mother received about breastfeeding, delivery type, parity, the time of first breastfeeding, spousal support, using a pacifier and baby bottle, and problems related to the breast.¹⁷⁻²⁹

Not having experience breastfeeding and having negative emotions such as anxiety and stress regarding breastfeeding negatively affect a mother's perceived breastfeeding self-efficacy.¹⁰ Previous studies have found that primiparous mothers (mothers giving birth for the first time) have more negative emotions such as anxiety or concern (the thought that she will need help during breastfeeding, she will have difficulty breastfeeding, concern that her milk will not be sufficient, her nipple will ache or be in pain, her milk will go dry early, etc.) compared to multiparous mothers (mothers having multiple births) since they do not have any experience.^{26,28} Primiparous and multiparous mothers' breastfeeding self-efficacy perceptions will be affected by various factors.

Midwives and gynecology nurse play a significant role in mothers breastfeeding their babies with self-confidence and correct technique. Therefore, it is important to know and evaluate the self-efficacy status of primiparous and multiparous mothers and the factors affecting their self-efficacy. Therefore, it is thought that this study will contribute to the literature and guide midwives and obstetric nursing practices by comparing and evaluating the breastfeeding self-efficacy of primiparous and multiparous mothers and the factors affecting them.

Methods

Study design and participants

This descriptive cross-sectional study was conducted in one center. This study was conducted with primiparous and multiparous mothers who delivered vaginally and were hospitalized in the puerperal service in a public hospital. The study population included primiparous and multiparous mothers who delivered vaginally and were hospitalized in the puerperal service in a public hospital between February and May 2019. Inclusion criteria of this descriptive cross-sectional study were having a vaginal delivery, being primiparous or multiparous, voluntarily participating in the study, and knowing and speaking Turkish.

The number of mothers to be included in the study sample was calculated by power analysis to determine the relationship between the study variables.

To be able to say that the mean 5.5 unit difference between primiparous mothers' breastfeeding self-efficacy mean scores and multiparous mothers' breastfeeding self-efficacy

mean scores was statistically significant, a study with 140 women in each group for a type 1 error of 5% and power of 80% was deemed suitable^{30,31}.

Data collection

Study data were collected using the Personal Information Form and Breastfeeding Self-Efficacy Scale.

Personal information form

This form was developed as a result of the literature review on the subject.^{15,16,24} The personal information form consists of three sections. The first section included eight questions about the descriptive characteristics of the mothers, the second section included 11 questions to determine the characteristics of the mothers regarding pregnancy and birth history, and the third section included 11 questions to determine the characteristics of mothers the regarding breastfeeding status. It consists of 30 questions in total. This form was sent to three specialists working in the field of breastfeeding and applied after obtaining expert approval.

Breastfeeding self-efficacy scale

The BSES-SF is a 14-item self-administered instrument derived from the original 33-item BSES that measures breastfeeding confidence. The Cronbach's alpha value of the short form is 0.94^{12} . Turkish validity of the scale was conducted by Alus et al. in 2010.¹¹ The BSES short form with 14 items uses a 5 Likert type scale (1= "Not at all confident" and 5= "Always confident") and all items are positive. The lowest score is 14 and the highest score is 70 for this scale. A higher score indicates higher breastfeeding self-efficacy. This scale is a unique tool to determine the mothers at risk of quitting breastfeeding early. The short form of the scale is easier to perform and correctly evaluates self-efficacy. The Cronbach's alpha value coefficient was 0.85 in the present study.

Data analysis

Data evaluation was made using www.e-picos.com (New York) software and MedCalc statistics

package program. Data analysis was made via mean and standard deviation, minimum and maximum values of the characteristics for the continuous values in the scales; frequency and percentage values was used for categorical variables. The normality of the data distribution was examined using the Kolmogorov- Smirnov test. Student's ttest was used to compare the mean scores of two groups and One-Way ANOVA test was used for more than two groups. When a difference was detected with ANOVA, Tukey was used as a Post Hoc test. Cronbach's alpha value was determined for evaluating the reliability. Pearson's correlation coefficient was used for the evaluation of the relationship between age and breastfeeding selfefficacy scale scores. A statistical significance level of the data was set at p < 0.05.

Ethical considerations

Data collection tools were administered to the mothers having a vaginal delivery and hospitalized in the puerperal service of the hospital via the face-to-face interview method by the researcher. Before the administration of data collection tools, ethical committee approval and institution permission were obtained from Mersin University Clinical Researches Ethical Committee with the date of 19/12/2018 and numbered 2018/496

Results

Descriptive statistics

The mean age of primiparous mothers was 24.1 ± 4.5 years (min:19 max:40) and the mean age of multiparous mothers was 28.5 ± 4.8 years (min:20 max:45). It was determined that 51.4% of primiparous mothers and 66.4% of multiparous mothers were primary school graduates. It was found that 88.6% of the primiparous mothers and almost all of the multiparous mothers (93.6%) were not employed in an income-generating job.

It was determined that the income of 70% of primiparous mothers and 83.6% of multiparous mothers was less than their expenses. When the family structures of the mothers were analyzed, it was found that 71.4% of primiparous mothers and 72.9% of multiparous mothers had nuclear family structure.

Table 1: Mean breastfeeding self-efficacy scale (BSES) scores of primiparous and multiparous mothers

| BSES | n | $\overline{X} \pm SD$ | Min | Max | р |
|---------------------|-----|-----------------------|-----|-----|-----------|
| Primiparous Mothers | 140 | 55.05 ± 8.40 | 36 | 70 | < 0.0001* |
| Multiparous Mothers | 140 | 62.53±6.22 | 42 | 70 | |

*Student's t

Table 2: Breastfeeding self-efficacy scale scores of primiparous and multiparous mothers according to mothers' sociodemographic characteristics (n=280)

| Sociodemoghraphic Characteristic | Primiparous Mothers (n:140) | | Mult (n:14 | iparous Mothers 0) | Statistical value |
|-------------------------------------|-----------------------------|------------------|---------------|-----------------------|-------------------|
| | n | X ±SD | n | <i>X</i> ±SD | р |
| Age (years) | | | | | |
| 19-24 | 87 | 55.71±7.76 | 32 | 61.09±6.43 | <0.0001* |
| 25-30 | 41 | 53.14±9.61 | 63 | 63.47±5.73 | <0.0001* |
| 31+ | 12 | 56.75±8.0 | 45 | 62.24±6.65 | 0.02* |
| р | 0.21* | :* | 0.2** | ; | |
| Education level | | | | | |
| Literate | 11 | 57.0±6.55 | 20 | 64.25±5.61 | 0.003* |
| Primary school graduate | 72 | 55.0±8.48 | 93 | 62.31±6.25 | <0.0001* |
| High school graduate | 38 | 52.36±8.86 | 22 | 61.45±6.52 | <0.0001* |
| Undergraduate | 17 | 59.94±6.05 | 5 | 64.6±7.19 | 0.16* |
| р | (| 0.03** | | 0.42** | |
| Working | | | | | |
| Yes | 16 | 59.18±7.72 | 9 | 63.44±6.69 | 0.18* |
| No | 124 | 54.51±8.36 | 131 | 62.47±6.21 | <0.0001* |
| р | 0.04* | : | 0.65* | : | |
| Family Type | | | | | |
| Nuclear Family | 100 | 54.18 ± 8.78 | 102 | 62.2±6.11 | <0.0001* |
| Extended Family | 40 | 57.22 ± 6.98 | 38 | 63.42±6.51 | <0.0001* |
| р | (| 0.05* | | 0.31* | |
| Level of Income | | | | | |
| Income < Expenditure | 98 | 55.22±8.34 | 117 | 62.42±6.32 | <0.0001* |
| Income = Expenditure | 42 | 54.64±8.63 | 21 | 62.61±5.86 | < 0.0001* |
| Income>Expenditure | - | 55.05 ± 8.4 | 2 | 68.0 ± 2.82 | < 0.0001* |
| p | | 0.71** | | 0.46** | |

Description of breastfeeding self-efficacy

In this study, the mean BSES score of primiparous mothers was (55.05 ± 8.40) , while the mean score of multiparous mothers was (62.53 ± 6.22) and the difference between them was found to be significant (p<0.05) (Table 1).

Factors influencing breastfeeding selfefficacy

A significant difference was found between the mean BSES scores of multiparous and primiparous mothers according to the age groups of the mothers participating in the study (p<0.05) When the

educational status of the mothers was examined, it was found that the mean BSES score of primiparous mothers who graduated from primary school was (55.00 ± 8.48), while the mean score of multiparous mothers was (62.31 ± 6.25) and there was a statistically significant difference between them (p<0.05). When the employment status of the mothers was analyzed, the mean score of primiparous mothers who were not working was (54.51 ± 8.36), while the mean score of multiparous mothers who were not working was (62.47 ± 6.21) and there was a statistically significant difference between them (p<0.05). In the study, the mean BSES score of primiparous mothers with nuclear

Table 3: Breastfeeding Self-Efficacy Scale Scores of Primiparous and Multiparous Mothers According to Mothers'

 Obstetric Characteristics (n=280)

| Breastfeeding Self-Efficacy | Scale | | | | |
|-----------------------------|-----------------------------|-----------------------|-----------------------------|-----------------------|-------------------|
| Obstetric Characteristic | Primiparous Mothers (n:140) | | Multiparous Mothers (n:140) | | Statistical value |
| | n | $\overline{X} \pm SD$ | n | $\overline{X} \pm SD$ | р |
| Last Pregnancy | | | | | |
| Planned | 109 | 55.04±8.37 | 92 | 62.75±6.09 | < 0.0001* |
| Unplanned | 31 | 55.06 ± 8.62 | 48 | 62.12±6.53 | < 0.0001* |
| p | 0.99* | | 0.57* | | |
| Last Pregnancy's Regular | Health | Checkups | | | |
| Yes | 127 | 55.06±8.55 | 121 | 62.64±6.21 | < 0.0001* |
| No | 13 | 54.92±7.05 | 19 | 61.84±6.42 | 0.007* |
| р | 0.95* | | 0.6* | | |
| Health Issue during the La | ast Preg | nancy | | | |
| Yes | 32 | 55±7.43 | 24 | 61.12±6.03 | 0.002* |
| No | 108 | 55±7.43 | 116 | 62.82±6.25 | <0.0001* |
| р | 0.97* | | 0.22* | | |

*Student's t, **ANOVA

family structure was (54.18 \pm 8.78), while the mean score of multiparous mothers was (62.2 \pm 6.11) and a statistically significant difference was found between them (p<0.05). When the income level was analyzed, it was seen that the mean BSES score of primiparous mothers whose income was less than their expenses was (55.22 \pm 8.34), while the mean score of multiparous mothers was (62.42 \pm 6.32), and there was a statistically significant difference between them (p<0.05) (Table 2).

While the mean BSES score of primiparous mothers whose pregnancy was planned was (55.04±8.37), the mean score of multiparous mothers was (62.75±6.09), which was higher and there was a significant difference between them (p<0.05). It was determined that the mean BSES score of primiparous mothers who attended regular health check-ups during pregnancy was (55.06 ± 8.55) , while the mean score of multiparous mothers was (62.64±6.21) and there was a statistically significant difference between them (p<0.05)(Table 3).

In the study, the mean BSES score of primiparous mothers who held their babies for the first time in the delivery room was (54.79 ± 8.21) , while the mean score of multiparous mothers was (63.04 ± 6.1) and there was a significant difference between them (p<0.05). The mean score of primiparous mothers who breastfed their babies immediately after birth was (57.28 ± 7.38) , while the

mean score of multiparous mothers was (64.96 ± 3.82), which was higher and there was a statistically significant difference between them (p<0.05). On the other hand, the mean score of primiparous mothers who fed their babies with breast milk/colostrum for the first time was (55.53 ± 8.37), while the mean score of multiparous mothers was (62.61 ± 6.24), which was higher and there was a significant difference between them (p<0.05)

Discussion

In the postpartum period, one of the most important factors affecting breastfeeding duration and breastfeeding success is the mother perception of breastfeeding self-efficacy. Mothers with high breastfeeding self-efficacy increase their efforts when they fail in breastfeeding and thus transform breastfeeding into a positive behavior.^{10,32} It is thought that mothers; breastfeeding self-efficacy perceptions are affected by parity and are related.^{22,32}

This study found primiparous mothers' mean scores from BSES were 55.05 ± 8.40 while the multiparous mothers' mean scores were 62.53 ± 6.22 (Table 1). In similar studies, found that total BSES mean scores of multiparous mothers are higher than that of primiparous mothers supporting the results of the present study. According to this result,

previous positive breastfeeding experiences of multiparous mothers may be related to increasing breastfeeding self-efficacy.^{10,11,15-17,19-27,32} Studies show that breastfeeding self-efficacy perceptions of primiparous and multiparous mothers are affected by many factors such as age, education and socioeconomic status of the mother, desire to breastfeeding, supplementary feeding, perception of breast milk insufficiency, use of pacifiers and bottles, and breast-related problems.^{19-21,33}

In this study, the mean BSES scores of primiparous mothers were significantly lower than multiparous mothers in all age groups (Table 2, p < 0.05). There is no study in the literature in which the mean BSES scores of primiparous and multiparous mothers were compared according to age groups. The reason for the higher mean BSES scores of multiparous mothers in this study may be their previous experience in breastfeeding. Education level is an important factor in the acquisition of breastfeeding behavior¹¹. In this study, a significant difference was found between the educational level of primiparous mothers and their mean BSES scores (Table 2, p<0.05). Maleki-Saghooni et al. reported that well-educated primiparous mothers had higher mean BSE scores.³⁴ Their study has similar results with this study. Contrary to the findings of this study, Turan & Bozkurt³² did not find a significant difference between the educational level of primiparous mothers and their mean BSES scores. This result may be due to the fact that primiparous mothers with a higher level of education desire to breastfeed information and acquire sources about breastfeeding. In this study, it was found that the mean BSES scores of multiparous mothers in the literate, primary school graduate and high school graduate groups were significantly higher than those of primiparous mothers (p < 0.05). This may be due to the fact that breastfeeding experience is an important factor in increasing breastfeeding selfefficacy.

This result is an indication that educational status and breastfeeding experiences are effective. The studies conducted support our research results.^{11,22,32} In the study, it was found that the mean score of multiparous mothers who were not working was higher and significant than the mean

score of primiparous mothers (Table 2, p < 0.05). This result shows that multiparous mothers without the study factor have higher breastfeeding self-efficacy than primiparous mothers. Therefore, it can be said that previous breastfeeding experience has a positive effect on current breastfeeding self-efficacy.

This study found that mean BSES scores of multiparous mothers were significantly higher compared to those of primiparous mothers based on their level of income (Table 2, p<0.05). This is because primiparous mothers did not have any breastfeeding experience.

As the level of income of multiparous mothers increased, their breastfeeding behaviors may be positively affected, and breastfeeding selfefficacies increase. Aluş *et al.* (2009) In a study conducted with primiparous and multiparous mothers, it was reported that breastfeeding selfefficacy increased as the income status of mothers increased¹¹ This result is an expected result supporting our study is the result. This study found the mean BSES scores of the multiparous mothers with a planned and unplanned pregnancy, who received regular health checkups or not, and with and without health issues were statistically higher than the scores of the primiparous mothers (Table 3, p<0.05).

Breastfeeding not only is the best way of nourishment for the healthy growth and development of babies but also is a way of behavior regarding the self-efficacy of the mother. Previous studies indicate that breastfeeding is related to breastfeeding self-efficacy and the factors determining breastfeeding self-efficacy are related to parity.^{17,20,23,27}

This study found that mean BSES scores of primiparous mothers living with extended family were significantly higher compared to that of primiparous mothers living with a nuclear family (Table 2, p<0.05). Contrary to the findings of this study, Ngo *et al.* 2019 found the breastfeeding self-efficacy of mothers living with extended family are lower than those living with a nuclear family, however, no significant difference was found between family type and breastfeeding self-efficacy.²³

The finding of the present study found that primiparous mothers living with extended family

had higher mean BSES scores since they received help from their experienced family elders or they observed them and learned breastfeeding behavior.

This study found that mean BSES scores of multiparous mothers living with a nuclear family were higher compared to that of primiparous mothers living with a nuclear family (Table 2, p<0.05). The reason for this result may because primiparous mothers living in nuclear families do not know how to cope with the problems they encounter during breastfeeding and do not receive any social help in breastfeeding and housework.

This study found that mean BSES scores of multiparous mothers were significantly higher compared to those of primiparous mothers based on their level of income (Table 2, p<0.05). This is because primiparous mothers did not have any breastfeeding experience. As the level of income of multiparous mothers increased, their breastfeeding behaviors may be positively affected, and breastfeeding self-efficacies increase.

Mothers who breastfeed their baby right after delivery, started to breastfeed in the delivery room, and had the experience of breastfeeding had significantly higher mean BSES scores (Table 3, p<0.05). Previous studies indicate that a previous positive experience of breastfeeding is related to the starting and duration of breastfeeding in subsequent deliveries.^{25,34-36} The literature is in parallel with the results of the present study. This result may be because of the readiness of multiparous mothers with positive breastfeeding experience or nurses and midwives' encouraging mothers to breastfeed immediately after delivery.

Mean BSES scores of multiparous mothers who first fed their baby with breast milk/colostrum had significantly higher mean scores compared to those of primiparous mothers. This is because multiparous mothers had positive experiences in breastfeeding. Mean BSES scores of multiparous mothers who breastfed their baby during the first thirty minutes after delivery had significantly higher mean scores compared to those of primiparous mothers. This is because multiparous mothers adapted to the postpartum process and breastfeeding easier compared to primiparous mothers.

Mean BSES scores of multiparous mothers who received information about breastfeeding had

significantly higher mean scores compared to those primiparous mothers. This is because of multiparous mothers had positive breastfeeding experience, and multiparous mothers who had negative breastfeeding experience increased their self-efficacy with the training they received. A significant difference was found between the mean self-efficacy scores of primiparous and multiparous mothers who received training regarding breastfeeding from midwives/nurses (p<0.05). The mean BSES score of primiparous mothers was while that of multiparous mothers was. This is because multiparous mothers strengthened their breastfeeding behaviors with the training they received.

Conclusions

A significant difference was found between the mean breastfeeding self-efficacy score and parity in the postpartum period, and it may be recommended that evidence-based studies should be conducted to increase breastfeeding self-efficacy, with nurses prioritising education and counselling roles on these issues.

Limitations of the study

Our study has several limitations. Breastfeeding self-efficacy is a multifaceted concept and can be influenced by many factors (e.g. age, education level, duration of breastfeeding after delivery, etc.). Women are discharged at least 24 hours after normal delivery and 48 hours after cesarean section. Research data were collected during these periods. Assessment of breastfeeding self-efficacy after 24-48 hours can be considered as a limitation of this study. The study was conducted in a single center. Therefore, it may not be generalized to the whole country

Contribution of authors

MK, and TGE conceptualized and designed the study; MK collected data; TGE and MK prepared the manuscript; MK performed statistics; MK interpreted the analyses. All authors read and approved the manuscript.

All the authors contributed to the study as follows: the first and second authors worked on the study conception and design, data collection, analysis and

interpretation of dating of the manuscript. The second author worked on the critical revision of the manuscript.

Availability of data and materials

The data that support the findings of this study are available on re-quest from the corresponding author. The data are not publicly avail-able due to privacy or ethical restrictions

Ethics approval and consent to participate

The study was approved by the Turkish Ethics Committee (No. 496, on the 19/12/2018).

Conflict of interests

No competing financial interests exist. The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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