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# A correlational study of breastfeeding duration among Saudi mothers: The role of self-efficacy, intention, and social support

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### Abstract

**Background:** Breastfeeding is an essential source of nutrition for infants and offers numerous benefits for both the mother and child. Despite the consensus on its advantages, limited research in Saudi Arabia has explored the factors influencing breastfeeding duration.

**Objective:** This study aimed to examine the relationships between breastfeeding self-efficacy, intention, social support, and breastfeeding duration.

**Methods:** The study employed a correlational research design, and data were collected from three armed forces hospitals in Taif, Saudi Arabia, from December 2020 to February 2021. The samples comprised 356 conveniently selected breastfeeding mothers, assessed using the Breastfeeding Personal Efficacy Beliefs Inventory, Modified Infant Feeding Intention Scale, and Exclusive Breastfeeding Social Support Scale. Simple linear regressions were conducted for data analysis.

**Results:** Breastfeeding duration was divided into two groups. Group 1 consisted of mothers still breastfeeding at the time of data collection, while Group 2 comprised those who had discontinued breastfeeding. Of the total samples, 51.6% (n = 184) of mothers were classified under Group 1, while the remaining 48.4% (n = 172) were allocated to Group 2. Specifically, 78.3% of mothers had stopped breastfeeding by the time their infants were six months old, and 93.3% intended to introduce formula feeding at three months. In Group 1, the results revealed that self-efficacy ( $\beta = 0.625$ , p < 0.001), intention ( $\beta = 0.643$ , p < 0.001), and social support ( $\beta = 0.612$ , p < 0.001) were positively associated with breastfeeding duration. Similarly, in Group 2, a strong positive correlation was observed between self-efficacy ( $\beta = 0.72$ , p < 0.001), intention ( $\beta = 0.73$ , p < 0.001), social support ( $\beta = 0.699$ , p < 0.001), and breastfeeding duration. These three factors jointly explained 40% of the variance in breastfeeding duration in Group 1 (adjusted R<sup>2</sup> = 0.4) and 50% in Group 2 (adjusted R<sup>2</sup> = 0.5).

**Conclusion:** Breastfeeding intention was found to have a more significant impact on breastfeeding duration than self-efficacy and social support. These results can inform nurses and midwives in supporting breastfeeding mothers by providing them with the necessary information and increasing their awareness of breastfeeding-related factors.

# Keywords

breastfeeding; self-efficacy; intention; social support; breastfeeding duration; mothers; Saudi Arabia; nurses; midwifery

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# Background

Breastfeeding is described as a gift from a mother to her infant (Goebel, 2018), providing a substantial source of safe, complete, and appropriate infant food and promoting child survival and well-being effectively (UNICEF, 2018). In addition, breast milk provides adequate nutrients and minerals, boosts newborn immunity, improves cognitive and psychological development, and protects the child from developing diabetes mellitus (Nguyen et al., 2021; Sankaran, 2012).

In 2018, a Spanish study found that healthcare costs were 400–500€ lower in exclusively breastfed (EBF) newborns compared to formula-fed newborns (Santacruz-Salas et al.,

2019). Previous studies have also shown that breastfeeding lowers the risk of ovarian cancer by 30% and breast cancer by 5% (UNICEF, 2018). The World Health Organization (WHO) recommends that mothers should breastfeed their infants exclusively for the first six months, followed by complementary feeding with breast milk for up to 2 years (Goebel, 2018). The WHO has defined EBF as the practice of feeding an infant with breast milk only, with no other substances, including water, except for any medically necessary vitamins or mineral supplements, or drugs (Al-Nuaimi et al., 2017).

Despite the widely accepted benefits of breastfeeding, there has been a noticeable decline in breastfeeding rates in both the Kingdom of Saudi Arabia (KSA) and globally (Al-Nuaimi et al., 2017). For example, recent studies conducted in the KSA between 2017 and 2019 revealed that while the rate of breastfeeding initiation was high in the previous decade, the duration of exclusive breastfeeding (EBF) was relatively short (Ahmed & Salih, 2019; Alyousefi et al., 2017; Hegazi et al., 2019; Raheel & Tharkar, 2018). For example, Raheel and Tharkar (2018) conducted a cross-sectional study in Riyadh and Dammam, which showed that 75% of participating mothers were able to initiate breastfeeding, but only 37% were able to continue for the recommended six months. In addition, Hegazi et al. (2019) reported that only 30.9% of mothers in the western region of Rabigh initiated breastfeeding, and only 27.6% of them continued to do so.

Murad et al. (2021) conducted a phenomenological study investigating factors affecting breastfeeding practice in the KSA. The researchers found that social support, specifically from the mothers of postpartum women, was a key factor in initiating breastfeeding within the first 40 days of the postpartum period. In contrast, negative comments from others, such as "I feel so sad for your baby," which mothers interpreted as suggesting that their baby was not receiving adequate nutrients from breastfeeding, discouraged continued breastfeeding after the postpartum period.

Both maternal and infantile factors contribute to unsuccessful breastfeeding. Factors that can reduce breastfeeding duration include inadequate breast milk, maternal dissatisfaction, and psychological factors. In addition, maternal age, educational level, occupation, socioeconomic status, parity, and birth type are also correlated with breastfeeding duration. Infantile factors such as the newborn's health status and age are essential to breastfeeding success (Awaliyah et al., 2019).

To promote successful breastfeeding, early identification of mothers at risk of premature termination of breastfeeding is crucial (Kronborg & Foverskov, 2020). Healthcare professionals, including nurses, should address psychosocial factors such as maternal intention to breastfeed, self-efficacy, and social support to prevent early cessation of breastfeeding. These factors are modifiable, and healthcare professionals can leverage them to achieve positive breastfeeding outcomes.

Breastfeeding self-efficacy (BFSE) is the most effective and modifiable factor associated with EBF duration (Brandão et al., 2018). According to Bandura's social cognitive theory, self-efficacy is a dynamic cognitive process that assesses people's beliefs and ability to conduct healthy behavior (Tuthill et al., 2016). Factors such as the husband's support, society's attitudes and understanding, and the role of health professionals in educating the mother can influence a mother's intention to breastfeed and modify their breastfeeding goals (Al-Sagarat et al., 2017).

The key to enduring social relationships is social support, which consists of four categories: (a) emotional support (such as love, care, trust, and empathy); (b) instrumental support (such as assistance and direct help for the person in need); (c) informational support (such as counseling, advice, and necessary information to solve problems); and (d) positive feedback. All forms of social support are essential to maintaining sustainable breastfeeding intention and selfefficacy, which will positively affect breastfeeding duration (Pujól von Seehausen et al., 2020). BFSE, either alone or in combination with other factors, is correlated with the duration of EBF in the antenatal and postnatal periods (Awaliyah et al., 2019; Chaves et al., 2019; Nilsson et al., 2020). In addition, other factors, including support resources (partner, family, and workplace), influence breastfeeding. These influences on breastfeeding intent affect breastfeeding duration and may lead to early breastfeeding cessation (Al-Sagarat et al., 2017; Asiodu et al., 2017; Marks & Yardley, 2004; Nelson et al., 2018; Wallenborn et al., 2017).

Sufficient social support is essential for the success and duration of breastfeeding practices (Maleki-Saghooni et al., 2020; Rosuzeita et al., 2018; Van Dellen et al., 2019; Wallenborn et al., 2019). Unfortunately, few studies in the Kingdom of Saudi Arabia (KSA), particularly in Taif, have attempted to identify the factors affecting breastfeeding duration. Furthermore, no scholar has conducted investigations in Taif to determine the effect of BFSE, intention, and social support on breastfeeding duration. Therefore, our study aimed to examine the relationship among postpartum BFSE, intention, and social support on breastfeeding duration.

Our research will provide the necessary information to mitigate possible early breastfeeding cessation and avoid adverse effects of early breastfeeding cessation on mothers and children. Our research will also expand scholarly knowledge on breastfeeding, bridge existing knowledge gaps, and reveal areas for further studies. Finally, our results will justify using evidence-based practice to improve breastfeeding duration.

It is also noted that our study utilizes the social cognitive theory of Bandura (1977) to understand maternal BFSE. The conceptual framework of the study also employs Bandura's theory of self-efficacy to improve breastfeeding duration, as described by Chan et al. (2016). The framework was adapted to investigate how social support and self-efficacy levels influence a mother's intention to continue breastfeeding during the postpartum period until their child reaches two years of age. The study's results could inform practice by identifying mothers at risk of early cessation of breastfeeding and introducing necessary interventions.

## Methods

### Study Design

This study employed a descriptive correlational design conducted in Taif, Saudi Arabia. Data were collected from pediatric and well-baby clinics in three armed forces hospitals: Al-Hada Armed Forces Hospital, Prince Mansour Military Hospital for Community Medicine, and Prince Sultan Hospital.

### Participants/Samples

Convenience sampling was used to select the study participants. The inclusion criteria of the samples were Saudi mothers who were at least 18 years old, had either recently practiced or discontinued breastfeeding, had a healthy child age two years or younger, and were residents of Taif. Exclusion criteria were mothers with illnesses that prevented them from breastfeeding, postpartum depression diagnoses, or babies with health problems that prevented the mother from breastfeeding. To determine the appropriate sample size, G\*Power 3.1 was utilized. The suggested sample size was

based on a slope H1 of 0.15, an  $\alpha$  error of 0.05, and a power of 0.95, chosen to decrease the possibility of error (Cohen, 1992). A required group size of 472 was estimated after adding 10% to compensate for missing data.

### Instruments

Our study utilized three scales and sociodemographic questions to gauge the variables. The sociodemographic questions encompassed (a) social information such as marital status, occupational status, educational status, maternal age, and monthly income; (b) reproductive history; and (c) breastfeeding history and duration. The duration of breastfeeding was categorized into two groups: Group 1 comprised mothers who were still breastfeeding their children at the time of data collection, and Group 2 comprised mothers who had ceased breastfeeding. The researchers obtained permission to use and translate all scales in the study.

Breastfeeding Personal Efficacy Beliefs Inventory (BPEBI). The BPEBI scale assesses a mother's confidence in all aspects of breastfeeding, including (a) managing the duration of breastfeeding, (b) receiving encouragement during the process, (c) managing breastfeeding in different environments, and (d) handling potential breastfeeding challenges (Cleveland & McCrone, 2005). The responses to the items are categorized into three levels, which are "cannot do," "moderately certain I can," and "certainly can do." The scores on the scale range from 0% to 100%, and a higher score indicates greater self-efficacy (Tuthill et al., 2016). The scale was translated from English to Arabic using a backtranslation technique to ensure cultural appropriateness. Additionally, a professor and three doctoral-nursing faculty experts in maternity and child health reviewed the translated scales to ensure their accuracy, adequacy, content, and face validity. Finally, the reliability of the scale was tested through a pilot study involving 50 mothers, and the Arabic version of the scale demonstrated appropriate levels of reliability and validity (Cronbach's alpha = 0.78).

Modified Infant Feeding Intention Scale (MIFIS). The MIFIS scale primarily focuses on exclusive breastfeeding, which involves no introduction of any fluids or food to the newborn before they reach six months of age. The scale comprises five questions assessing the mother's intention to breastfeed exclusively. The mother responds to each question by selecting one of five options: very much agree, somewhat agree, unsure, somewhat disagree, and very much disagree (Al-Sagarat et al., 2017). The original infant feeding intention scale, developed by Nommsen-Rivers and Dewey (2009), aimed to estimate the intention to feed infants, particularly pregnant women's intention to exclusively breastfeed (Tuthill et al., 2016). In a study involving Jordanian mothers, Al-Sagarat et al. (2017) translated and modified the MIFIS scale to make it suitable for the Arabic culture. The scale demonstrated acceptable reliability with a Cronbach's alpha of 0.675.

**Exclusive Breast-Feeding Social Support (EBFSS).** The EBFSS scale was used to measure the social support that a mother receives during breastfeeding. It comprised three primary domains: emotional support, informal support, and instrumental support (Boateng et al., 2018). The Hughes breastfeeding support scale, initially developed by Hughes (1984), inspired the scale's origin to evaluate the various types of support given to lactating mothers. Boateng et al. (2018) modified the EBFSS scale, reducing it from 30 to 16 items, which were then validated with postpartum women. In addition, the scale was translated from English to Arabic using a back-translation technique to guarantee cultural suitability. Subsequently, the translated scales underwent review by a professor and three doctoral-nursing faculty experts in maternity and child health to ensure accuracy, adequacy, content validity, and face validity. Furthermore, a pilot study comprising 50 mothers was conducted, resulting in an appropriate level of validity and reliability (Cronbach's alpha = 0.86).

### **Data Collection**

Data were collected from December 2020 to February 2021 by the researchers on a daily basis from the female waiting areas of pediatric and well-baby clinics. The participants were invited to participate in the study, and informed consent was obtained before the primary researcher handed out the questionnaires. Before distribution, the primary researcher provided an overview of the study's title, objectives, and eligibility criteria, along with ensuring participants of the confidentiality of their information, their right to withdraw from the research until data completion, and the low-risk nature of the study. Participants were also given the researcher's contact information, including the telephone extension of the nursing office and the researcher's organizational email address.

### **Data Analysis**

Data were analyzed using Statistical Package for Social Sciences software, version 25. Descriptive statistics were calculated for the sample variables, including means, standard deviations, and frequencies. Simple linear regression (through the origin) was used to identify and describe the relationships between variables. This method was deemed more appropriate to achieve the research aim.

### **Ethical Considerations**

The study received ethical approval from multiple sources, including the Nursing Research Ethics Committee at King Abdulaziz University in Jeddah (NREC Serial No: Ref No1M.20), the Research Ethics Committee of the Armed Forces Hospital Research Centre, and the Scientific Research Ethics Committee (REC.2020-492). Additionally, ethical security approval was obtained in Taif to access participants in three-armed forces hospitals. The participants were also provided informed consent, which they were required to sign before participating in the study.

### Results

### **Characteristics of the Participants**

Out of all the participants, only 356 responses were included in the analysis due to missing data from 14 participants. More than half of the participants (n = 190, 53.4%) had one to three pregnancies, and 190 (53.4%) had one to three deliveries. Additionally, the mothers were asked about their previous experience with breastfeeding. Most (n = 300, 84.3%) had previous experience with breastfeeding, whereas some (n =55, 15.4%) had never breastfed before. The detail can be seen in **Table 1**.

### **Table 1** Participants' characteristics (N = 356)

Characteristics	f	%
Age		
19–25 years	49	13.8
26–31 years	107	30.2
32–38 years	136	38.4
39–45 years	62	17.5
Marital Status		
Married	354	99.4
Divorced	2	0.6
Occupational Status		
Employee	38	10.8
Housewife	298	84.4
Student	17	4.8
Monthly Income by Saudi Riyal		
More than 10,000	67	19.0
5,000–10,000	252	71.4
Less than 5,000	34	9.6
Education Level		
Elementary School	53	15.0
Intermediate School	37	10.5
High School	89	25.1
University or Higher	171	48.3
Other	4	1.1

# breastfeeding their children at the time of data collection (M = 4.1, SD = 0.17), whereas Group 2 mothers had ceased to do so (M = 6.83, SD = 0.19). At the time of data collection, almost half of the participants were still breastfeeding (n = 184, 51.6%), whereas the rest (n = 172, 48.4%) had stopped breastfeeding, and two participants did not answer the question. Breastfeeding duration was measured in months (Table 2).

### Table 2 Breastfeeding duration

Duration	f (%)	Mean	SD	Мах	Min
Group 1	184	4.1	0.17	23	3 days
	(51.6%)	months		months	
Group 2	172	6.83	0.19	18	7 days
	(48.4%)	months		months	

### BFSE, Intention, and Social Support Among Mothers

**Table 3** demonstrates that the data were normally distributed, with scale scores falling within the normal range of -3 to 3 for skewness and -8 to 8 for kurtosis. The total scores on the BPEBI ranged from 0% to 100%, with 100% representing the highest level of self-efficacy achievable (Rosuzeita et al., 2018). The overall BPEBI score was high (M = 66.20, SD = 6.79).

### **Breastfeeding Duration**

To study the duration of breastfeeding, the participants were classified into two groups: Group 1 mothers were still

Table 3	Breastfeeding	self-efficacy.	intention.	and social	support
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Scale	Mean	SD	Skewness	Kurtosis	Мах	Min	Range
BPEBI	66.20	6.79	-0.75	0.50	79.0	40.0	39.0
MIFIS	11.69	3.23	0.19	-0.48	25.0	8.0	17.0
EBFSS	42.59	6.00	-1.41	1.48	48.0	20.0	28.0

The scores on the MIFIS scale ranged from 0 to 16, with 0 indicating no intention to breastfeed the newborn and 16 indicating the strongest intention to breastfeed. The average total score on the MIFIS scale was moderate (M = 11.69, SD  $\pm$  3.23). Most participants reported receiving sufficient social support (M = 42.59, SD = 6.00). The mean score for instrumental support was 7.74 (SD = 2.15, range = 3–9), indicating adequate instrumental support. The mean score for informational support was 13.29 (SD = 3.41, range = 5–15), also showing adequate informational support. The mean score on the emotional support scale was 21.58 (SD = 4.87, range = 8–24), indicating that the mean score on this scale was also adequate.

Relationships Between Self-Efficacy, Intention, Social Support, and Breastfeeding Duration

### Relationships among variables in Group 1

All variables fulfilled the assumptions for linear regression, including normal distribution, linear relationships, and no multicollinearity. The results in **Table 4** indicated a positive correlation between higher levels of BFSE, intention, social support, and longer breastfeeding duration. The adjusted R<sup>2</sup> value of 0.4 (p <0.001) suggests that the three independent variables accounted for 40% of the variation in breastfeeding duration. Furthermore, in Group 1 mothers, there was a moderate positive association between the intention to breastfeed and the duration of breastfeeding, indicating that mothers who breastfed their children beyond six months intended to have a longer breastfeeding duration.

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Table 4 Relationshit	DS Delween DFSE.	intention. Social	Support, and pr	easueeoino ouralior	

Independent Variables	Standardized Coefficient	Unsta Coe	ndardized fficients	R²	Adjusted R <sup>2</sup>	SE	t	F	<i>p</i> -value
	β	В	SE						
BFSE	0.63	0.07	0.01	0.4	0.4	5.6	10.3	104.4	<0.001
Intention	0.64	0.28	0.03	0.4	0.4	5.5	10.73	115.2	<0.001
Social Support	0.61	0.10	0.01	0.4	0.4	5.7	9.89	97.8	<0.001

### Relationships among variables in Group 2

Linear regression assumptions, including normal distribution, linear relationships, and no multicollinearity, were met by all

variables. Table 5 presents the results of simple linear regression, indicating a strong positive association between BFSE, intention, and social support with breastfeeding

duration among mothers who stopped breastfeeding (Group 2). The adjusted  $R^2$  value for the three variables (0.5, p < 0.001)

suggests that these independent variables explained 50% of the variation in breastfeeding duration.

Table 5 Relationships between BFSE, intention, social support, and breastfeeding duration (Group 2)

Independent Variables	Standardized Coefficient	Unstandardized Coefficients		Unstandardized Coefficients		R²	Adjusted R <sup>2</sup>	SE	t	F	<i>p</i> -value
-	β	В	SE								
BFSE	0.72	0.053	0.004	0.5	0.5	3.43	13.3	177.61	<0.001		
Intention	0.73	0.21	0.02	0.5	0.5	3.38	13.64	186.09	<0.001		
Social Support	0.69	0.10	0.01	0.5	0.5	3.53	12.54	157.3	<0.001		

### Discussions

Our study found that longer breastfeeding duration was associated with higher self-efficacy, intention, and social support levels. Among these factors, the intention was found to have the strongest influence on breastfeeding duration, although self-efficacy and social support were found to enhance mothers' intention for extended breastfeeding. It is worth noting that the BFSE levels among the breastfeeding mothers in our study were moderate, with a mean score of 66.20 (SD 6.799), which was lower than the scores reported in previous studies on Iranian mothers (M = 130.89, SD = 13.60; M = 138.7, SD = 11.93) (Maleki-Saghooni et al., 2020; Mirghafourvand et al., 2018).

According to the BFSE theory, previous breastfeeding experience is a crucial factor in BFSE, with mothers with prior experience having higher levels of BFSE than those without experience (Chan et al., 2016). In this study, the majority of the participants had previous breastfeeding experience, and the quality of their prior experience influenced their BFSE (Chan et al., 2016). Furthermore, Nilsson et al. (2020) also found that negative previous breastfeeding experiences were associated with lower levels of BFSE.

Additionally, our study aimed to assess mothers' intentions regarding breastfeeding. The results showed that participants had moderate intentions to breastfeed, with a mean score of 11.69 out of 16 points on the MIFIS. More than half of the mothers planned to engage in EBF, higher than the rates observed in previous studies (AI-Sagarat et al., 2017; Asiodu et al., 2017). Asiodu et al. (2017) found that only half of the African American mothers in their study intended to engage in EBF, while AI-Sagarat et al. (2017) found that most Jordanian mothers did not intend to engage in EBF.

The results of our study are in line with a cohort study conducted in Lebanon, which showed that 41% of mothers who intended to breastfeed for less than six months introduced formula feeding in the first month after birth, while only 27% of those who intended to breastfeed for more than six months did so (RR = 1.5, 95% CI 1.1–2.1, p <0.01) (Chan et al., 2016). Amir et al. (2019) suggested that mothers who introduced formula feeding before the age of 6 months did not do so because of their children's needs but rather due to their own perceptions. Although this study did not examine mothers' perceptions regarding breast milk, previous research indicates that mothers with insufficient breast milk prefer mixed breastfeeding as it provides their children with the necessary nutrients while allowing them to continue breastfeeding (Murray, 2022). Therefore, future studies could consider investigating mothers' perceptions of breast milk during breastfeeding.

The results of our study indicate that mothers received sufficient social support during breastfeeding (M = 42.59, SD = 6.00) as measured by the EBFSS scale, which assesses three dimensions of support: instrumental, informational, and emotional (Boateng et al., 2018). This finding is consistent with a study conducted in Iran in 2018, which also found high levels of social support among breastfeeding mothers (M = 67.36, SD = 5.52) (Maleki-Saghooni et al., 2020). It is possible that the high level of social support observed in our study and the previous study may be related to the fact that a majority of our participants (84.4%) were housewives, similar to the participants in the previous study (90.7%) ((Amir et al., 2019; Hamid et al., 2017). This suggests that working mothers may face challenges accessing social support for breastfeeding, as noted in previous studies (Amir et al., 2019; Hamid et al., 2017).

Our study identified a moderate positive correlation between self-efficacy, intention, social support, and longer breastfeeding duration in Groups 1 and 2. In Group 1, the maternal intention was the strongest factor influencing longer breastfeeding duration, followed by self-efficacy and social support. Our findings are consistent with prior research that has linked these variables to longer breastfeeding periods (Goldbort et al., 2021; Granberg et al., 2020; Kronborg & Foverskov, 2020; Maleki-Saghooni et al., 2020; Wallenborn et al., 2019). In addition, Zarshenas et al. (2020) found that introducing formula feeding before the age of 6 months is associated with early discontinuation of breastfeeding. In addition, higher levels of self-efficacy have been associated with EBF and longer breastfeeding duration in prior research (Chan et al., 2016; Khresheh & Ahmed, 2018; Kronborg & Foverskov, 2020; Wallenborn et al., 2019). These findings suggest that mothers who do not intend to practice EBF and have low self-efficacy may be more likely to introduce formula feeding before the recommended six months of exclusive breastfeeding. Future research may explore the role of maternal perceptions regarding breast milk in relation to breastfeeding duration.

### **Strengths and Limitations**

This study conducted in Taif is noteworthy for its examination of the relationships between BFSE, intention, social support, and breastfeeding duration. The findings demonstrate that the intention to breastfeed has the most significant influence on duration. Using data from three military hospitals in Taif enhances the generalizability of the study's results. Additionally, the BFEPI and EBFSS scales used in this study were validated and translated into Arabic, increasing their relevance to the population studied. However, this study's cross-sectional design, which assessed variables at a single time instead of over an extended period, is a limitation. Additionally, due to the recruitment process, many mothers were occupied with consoling their crying children after immunization, making it difficult to invite them to participate in the study.

### Implications of the Study

The implications of our findings are significant. Our study highlights the crucial role of postnatal BFSE, social support, and maternal intentions in achieving positive breastfeeding outcomes. This information can be valuable to healthcare professionals, particularly nurses, midwives, or clinicians in postpartum wards, as they can use it to understand and evaluate mothers' attitudes toward breastfeeding. Understanding the essential components of mothers' confidence, intention, and social support can help practitioners ensure that all three variables remain high for as long as possible, thereby improving breastfeeding outcomes.

Early interventions are vital in promoting longer breastfeeding duration and preventing breastfeeding cessation. All dimensions of social support are critical in achieving this goal. Nurses should provide breastfeeding mothers with the necessary information and improve their awareness of breastfeeding-related factors. It is essential to include information on breastfeeding mechanisms and positions and natural or mechanical pumping, especially for working mothers. Breastfeeding education should not be limited to the benefits of breastfeeding.

Our study results provide insight into the influence of intention, self-efficacy, and social support on breastfeeding duration. However, further research is necessary to explore why Saudi mothers do not adhere to EBF and to identify additional strategies to support postpartum breastfeeding. In addition, longitudinal studies can be valuable in evaluating mothers' intentions to breastfeed, starting from the antenatal period.

### Conclusion

This study investigated the relationship between postpartum BFSE, intention, social support, and EBF duration. The results indicated that breastfeeding mothers had high levels of BFSE, moderate intention to practice EBF beyond the first month, and adequate social support. BFSE, intention, and social support were all positively associated with breastfeeding duration in Group 1 and Group 2. In addition, the study revealed that intention had a stronger influence on breastfeeding duration than BFSE and social support, but a combination of high maternal BFSE, adequate social support, and strong intentions was necessary for longer breastfeeding duration.

### **Declaration of Conflicting Interest**

The authors declare no conflict of interest.

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### Authors' Contributions

All authors have made substantial contributions to the design, acquisition, analysis, and interpretation of the data in this work. They have also contributed to drafting and critically revising the manuscript for important intellectual content. All authors have given final approval of the version to be published and have agreed to be accountable for all aspects of the work.

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### **Data Availability**

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

# Declaration of use of AI in Scientific Writing Nothing to declare.

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