# Association between mode of delivery and breastfeeding practices in Egypt: secondary analysis of Egypt Demographic and Health Survey

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# Abstract

**Background:** The rise in caesarean deliveries constitutes a major public health concern in low- and middle-income countries (LMICs). Evidence on the influence of caesarean delivery on breastfeeding practices in LMICs is currently lacking.

**Aims:** To examine the association between mode of delivery and breastfeeding initiation and prelacteal feeding practices in a nationally representative sample of Egyptian women.

**Methods:** A cross-sectional study was carried out on 3773 women from the 2014 Egypt Demographic and Health Survey. The outcomes of interest were the timing of breastfeeding initiation and prelacteal feeding practices. Descriptive statistics and multivariable logistic regression models were performed.

**Results:** Overall, 25.1% of mothers initiated breastfeeding within 1 hour of birth and 63.5% practised prelacteal feeding within 3 days of birth. Mothers who had caesarean delivery had higher odds of delayed breastfeeding initiation [adjusted odds ratio (AOR) 2.25; 95% confidence interval (CI): 1.84–2.74] and were more likely to engage in prelacteal feeding (AOR: 1.44; 95% CI, 1.19–1.74). Moreover, the relationship between caesarean delivery and delayed breastfeeding initiation varied by parity with stronger association among multiparous (AOR: 2.57; 95% CI, 2.04–3.24) compared with primiparous mothers (AOR: 1.52; 95% CI, 1.03–2.25).

**Conclusion:** Caesarean delivery significantly increased the likelihood of delayed breastfeeding initiation and increased prelacteal feeding practices. Breastfeeding support and guidance should target women considering caesarean delivery.

Keywords: feeding practices, breastfeeding initiation, caesarean delivery, Egyptian women

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# Introduction

During the early years of life nutrition is fundamental for child health and development (1). Scaling up breastfeeding to near universal level (90-95%) might prevent approximately 823 000 deaths in low and middle-income countries (LMICs) (2). Suboptimal breastfeeding substantially contributes to under-5 mortality due to neonatal infections (45%), diarrhoea (30%) or acute respiratory infections (30%) (3). Beyond survival, breastfeeding boosts brain development in children and protects against overweight and obesity. Mothers also reap significant health benefits from breastfeeding, including decreased risk of breast cancer, ovarian cancer and type 2 diabetes (4). Additionally, it aids in birth spacing (5). The World Health Organization (WHO) recommend breastfeeding initiation within an hour of birth, exclusive breastfeeding for the first 6 months of life and breastfeeding continuation thereafter (3).

It is recognized that LMICs are disproportionately affected by suboptimal breastfeeding practices (6): only 37% of infants aged < 6 months are exclusively breastfed and only 50% of mothers initiate breastfeeding within one hour of delivery (2). In Egypt, only 29% of 4–5-monthold infants were exclusively breastfed, 56% of infants were put to breast within one hour of birth and 47% were given something other than human milk during the first 3 days after birth (7).

Timely breastfeeding initiation stimulates oxytocin production which enhances uterine contractions and reduces post-partum haemorrhage. The release of colostrum, the first human milk, which contains nutritious and immunity factors, is facilitated by early breast suckling (8). Delayed breastfeeding initiation raises the possibility of neonatal mortality and is more likely related to provision of prelacteal feeds and the withholding of colostrum (9).

The provision of prelacteal feeds, a key contributor to suboptimal breastfeeding, is also prevalent in many LMICs (9). Practising prelacteal feeding implies that an infant is not exclusively breastfed. Prelacteal feeding affects stimulation of human milk production, infant's suckling, and maternal–infant bonding. It exposes the infant to the risk of infection, especially it is introduced before the infant has received colostrum (10). Evidence has shown a variety of factors that influence breastfeeding practices in early infant life (11,12). Of particular concern is the possible influence of caesarean section on the initiation of breastfeeding and provision of prelacteal feeds (13,14). Further exploration of this complicated relationship is crucial due to the increasing prevalence of caesarean deliveries in LMICs, with a 6.7% increase from 1990 to 2014 (15). In Egypt, rates of caesarean delivery increased from 10.3% in 2000 to 27.6% in 2008 (7) and 51.8% in 2014 (16).

The influence of caesarean delivery on infant feeding practices has not been examined in Egypt. Improved understanding of such a relationship could help to develop interventions for promoting optimal breastfeeding. Therefore, the aim of the current study was to explore the relationship between mode of delivery and infant feeding indicators among nationally representative women of reproductive age in Egypt. We hypothesized that the mothers who had caesarean delivery would be more likely to delay breastfeeding initiation and would be more likely to practise prelacteal feeding.

# **Methods**

### Study design

The present study is based on a secondary analysis of data from the 2014 Egypt Demographic and Health Survey. A detailed description of the sampling techniques and other related methodology for the 2014 survey is available elsewhere (16).

In brief, the survey was designed to provide up-todate demographic and health indicators with special emphasis on maternal and child health. A probabilitybased, stratified, multi-stage cluster sampling technique was used to select participants that were representative of the Egyptian population. Data were collected with approval from the Ministry of Health and Population (MoHP) (16). Informed consent was obtained from all the respondents before their participation in the survey. Out of the 21 903 eligible women, 21 762 were successfully interviewed, representing a response rate of 99.4% (16).

#### Study population and sample size

The sampling frame for the current analysis was restricted to mothers with last-born, ever breastfed children born within 2 years preceding the 2014 Egypt Demographic and Health Survey (n = 6130). Mothers with missing data on mode of delivery or any of the other covariates determined in the current study were excluded (n = 2357), leaving a final sample of 3773 mothers.

#### **Operational definitions and study variables**

#### **Outcome variables**

The main outcomes were infant feeding indicators reflecting breastfeeding practices during early life, i.e. timing of breastfeeding initiation and introduction of prelacteal feeds. In the Egypt Demographic and Health Survey individual questionnaire, mothers were asked how long following delivery they initiated breastfeeding. Answers were recorded in hours and days (16). The timing of breastfeeding initiation was then classified as early initiation if breastfeeding was initiated within an hour of birth and delayed initiation if breastfeeding was initiated more than one hour following delivery. The Egypt Demographic and Health Survey defined the introduction of prelacteal feeds as giving anything other than human milk to an infant during the first 3 days after birth. (16). This was coded as 1 if mother provided prelacteal feeds, and 0 otherwise.

#### Exposure variable

Mode of delivery of the index child was the exposure of interest in the current study, whether delivery was caesarean section or vaginal.

#### Covariates

Several confounding variables were involved in the current analysis depending on prior studies (11,12) such as mother's age at time of birth, mother's education, mother's occupation (no, yes), residence, number of household members, wealth index and parity. Sex of the child, birth weight and birth status were also considered. Maternal health service-related factors were also included such as the number of antenatal care (ANC) visits, place of delivery and attendance of a skilled provider at delivery.

The mother's age at birth was obtained by subtracting date of birth of the child from the mother's birth date. The wealth index was used to estimate the cumulative living standard of households. It was precalculated in the Egypt Demographic and Health Survey based on having of specific assets such as TVs and bicycles, construction materials, water sources, and sanitation. Each household was then classified into 1 of 5 groups; ranging from first quantile (poorest) to fifth quintile (richest) (16). In the current study, mothers were categorized as poor if they belonged to the first or second quintile, middle if they belonged to the third quantile, and rich if they belonged to the fourth and fifth quintiles.

Children weighing < 2500 g at birth were classified as low birth weight, those > 4200 g were categorized as macrosomia, otherwise they were considered normal birth weight. A mother was considered to have had regular ANC visits if she attended at least 4 visits throughout pregnancy (17). A skilled provider at delivery was determined when the delivery was facilitated by a doctor or trained nurse/midwife (16).

#### Statistical analysis

Frequencies and proportions were used to describe the characteristics of the study participants. The Rao-Scott chi-square test was performed to analyse the study participants according to their breastfeeding practices. Two fully adjusted logistic regression models were created to assess the association between mode of delivery and infant feeding indicators. Pairwise interactions between mode of delivery and each covariate were performed to explore if a third variable influenced the association between mode of delivery and infant feeding indicators. A multivariable adjusted logistic regression model was then created to examine the association between mode of delivery and timing of breastfeeding initiation. All the confounding variables were entered simultaneously into all regression models.

A complex sample design analysis that took into consideration the cluster sampling design, sample weight and strata was performed to provide generalizable and accurate estimates for the population parameters. Thus, weighted percentages were presented. The potential presence of multicollinearity was examined and ruled out using a variance inflation factor. Statistical tests were performed using SAS, University Edition. Two-tailed *P*-value < 0.05 was considered statistically significant.

### **Ethical considerations**

The dataset was downloaded after the purpose of the study was justified and approved by the Demographic and Health Survey. The current study was deemed exempt from a full review because it was based on the anonymous public use of a secondary dataset with no identifiable information on the survey participants.

# Results

Out of the 3773 participating mothers, 74.9% initiated breastfeeding more than 1 hour after birth and 63.5% practised prelacteal feeding within 3 days after birth (Table 1). A high proportion of mothers at the time of birth were aged 25–34 years (84%) and nearly two-thirds were rural residents (66%). The majority of mothers (89%) had at least 4 ANC visits during their last pregnancy, majority of births (93.2%) took place in health facilities and approximately two-thirds of deliveries were via caesarean section (64.3%).

Breastfeeding initiation more than one hour following delivery was statistically significantly associated with urban residence, rich wealth index, multiparity,  $\ge 4$  ANC visits, caesarean delivery, delivery at a a health facility, exposure to a skilled provider at delivery and prelacteal feeds (Table 1). The introduction of prelacteal feeds was statistically significantly more frequent among mothers with poor wealth index, multiparity, low birth weight child, multiple births,  $\ge 4$ ANC visits, caesarean delivery and delayed initiation of breastfeeding (Table 1).

Mothers who had a caesarean section were significantly more likely to delay breastfeeding initiation and introduce prelacteal feeds to their children by 2.25 [95% confidence interval (CI): 1.84-2.74] and 1.44 (95% CI: 1.19-1.74) times, respectively (Table 2). Additionally, we found a significant interaction between parity and mode of delivery on the timing of breastfeeding initiation (*P* for interaction = 0.0156). Table 3 displays the results of the analysis examining the association between caesarean delivery and delayed breastfeeding initiation stratified by parity. Caesarean delivery was statistically significantly associated with greater odds of delayed breastfeeding initiation. However, the strength of the association was more pronounced among the multiparous mothers

[adjusted odds ratio (AOL) 2.57; 95% CI: 2.04–3.24) when compared with the primiparous mothers (AOR 1.52; 95% CI: 1.03–2.25).

# Discussion

The current study showed that infant feeding indicators in Egypt were at a suboptimal level. It was reported that nearly three-quarters of mothers started to breastfeed more than 1 hour after their most recent delivery, giving a rate of "poor" according to the WHO infant feeding indicators (18). Globally, rates of delayed breastfeeding initiation vary between 82.3% in Peru, 40.1% in China, 21.7% in Nigeria and 1.6% in Angola (19). In the WHO Eastern Mediterranean Region, delayed breastfeeding initiation varies from 81.4% in Jordan, 57.2% in Iraq, 31.3 % in the Islamic Republic of Iran and 28.7% in Oman (4). Our finding could be explained by the fact that the women in the study tended to be from wealthier families, were more educated and used private facilities, which might not adequately promote proper breastfeeding practices (20).

The majority of births in the current study took place in health facilities which were associated with delayed initiation of breastfeeding. Delayed breastfeeding initiation is probably attributed to health facility practices. It could be related to heavy workload and shortage of health providers necessary to provide supportive care and enhance timely breastfeeding initiation (19).

About two-thirds of mothers introduced prelacteal feeds within 3 days of delivery, which was similar to the findings reported in the Dominican Republic (55%) (21) and Côte d'Ivoire (67%) (1), but higher than reported in Sudan (53%) (22), the Islamic Republic of Iran (40.8%) (23), Nepal (26.5%) (24) and Ethiopia (25.29%) (25), and lower than the findings from Kuwait (81.8%) (26). The rate of prelacteal feeding varies among countries due to different cultures, beliefs, and available feed. Prelacteal feeding is given because mothers believe it cleans the meconium from the intestines or has laxative and rehydration effects for infants (27).

The estimated prevalence of caesarean delivery in the analytic sample for the current study (64.3%) and the national prevalence rate (51.8%) are quite alarming (16). The difference between the prevalence in the current analysis and the national prevalence might be due to different sampling frames. According to WHO, the ideal population-based rate for caesarean deliveries varies between 10% and 15% (28). The reasons for the high prevalence of caesarean delivery among Egyptian women are multifactorial. Various factors might be attributed to this trend such as changes in mothers' characteristics, socioeconomic and cultural factors and the rise medical malpractice (15). Recent Egyptian studies suggested that the high prevalence of caesarean delivery is possibly related to the shift towards delivery at private health facilities (29,30). It has also been reported that women might be pushed to have caesarean deliveries by their desire to better control their time, fear of pain, misconceptions about the risks of vaginal delivery, and

Table 1 Characteristics of the study participants (mothers in Egypt) (n = 3773) according to early feeding indicators				
Characteristic	Initiation of	breastfeeding	Prelacteal feed	
	Early	Delayed	No	Yes
	(n = 976, 25.1%) <sup>a</sup>	(n = 2797, 74.9%) <sup>a</sup>	(n = 1381, 36.5%) <sup>a</sup>	(n = 2392, 63.5%) <sup>a</sup>
	No. (%)	No. (%)	No. (%)	No. (%)
Mother's age at birth (years)				
15-24	77 (24.8)	208 (75.2)	111 (36.1)	174 (63.9)
25-34	820 (25.7)	2349 (74.3)	1137 (36.1)	2032 (63.9)
35-49	79 (19.8)	240 (80.2)	133 (41.8)	186 (58.2)
<i>P</i> -value	0.1	429	0.2648	
Mother's education				
No education	122 (26.9)	293 (73.1)	167 (39.8)	248 (60.2)
Primary	71 (26.7)	185 (73.3)	104 (39.4)	152 (60.6)
Secondary or higher	783 (24.7)	2319 (75.3)	1110 (35.8)	1992 (64.2)
P-value	0.6	429	0.2	700
Mother's occupation				
No	837 (24.4)	2452 (75.6)	1197 (36.4)	2092 (63.6)
Yes	139 (29.6)	345 (70.4)	184 (37.5)	300 (62.5)
P-value	0.0	359	0.6	965
Residence				
Urban	397 (21.8)	1280 (78.2)	622 (37.5)	1055 (62.5)
Rural	579 (26.8)	1517 (73.2)	759 (36.1)	1337 (63.9)
<i>P</i> -value	0.0	066	0.54	490
No. of household member				
1-4	450 (24.0)	1455 (76.0)	657 (35.0)	1248 (65.0)
5-6	332 (25.3)	939 (74.7)	488 (39.3)	783 (60.7)
≥ 7	194 (28.9)	403 (71.1)	236 (35.6)	316(64.4)
<i>P</i> -value	0.1	601	0.1	132
Wealth index				
Poor	306 (25.9)	768 (74.1)	351 (31.4)	723 (68.6)
Middle	237 (29.6)	560 (70.4)	310 (38.5)	487 (61.5)
Rich	433 (22.1)	1469 (77.9)	720 (38.8)	1182 (61.2)
<i>P</i> -value	0.0	045	0.0	042
Parity				
Primiparous	272 (21.6)	938 (78.4)	376 (32.1)	834 (67.9)
Multiparous	704 (26.8)	1859 (73.2)	1005 (38.6)	1558 (61.4)
P-value	0.0	016	0.0	014
Sex of child				
Male	509 (25.7)	1485 (74.3)	741 (37.3)	1253 (62.7)
Female	467 (24.4)	1312 (75.6)	640 (35.7)	1139 (64.3)
<i>P</i> -value	0.3	998	0.3	825
Birth weight				
Low	120 (23.4)	395 (76.6)	159 (31.1)	356 (68.9)
Normal	839 (25.3)	2347 (74.7)	1197 (37.5)	1989 (62.5)
Macrosomia	17 (30.1)	55 (69.9)	25 (34.5)	47 (65.5)
<i>P</i> -value	0.5	395	0.04	450
Birth status				
Single birth	965 (25.2)	2747 (74.8)	1370 (36.8)	2342 (63.2)
Multiple birth	11 (20.0)	50 (80.0)	11 (19.7)	50 (80.3)
<i>P</i> -value	0.4	485	0.0	140

Table 1 Characteristics of the study participants (mothers in Egypt) (n = 3773) according to early feeding indicators (concluded)					
Characteristic	Initiation of breastfeeding		Prelacteal feed		
	Early	Delayed	No	Yes	
	$(n = 976, 25.1\%)^{a}$	(n = 2797, 74.9%) <sup>a</sup>	(n = 1381, 36.5%) <sup>a</sup>	(n = 2392, 63.5%) <sup>a</sup>	
	No. (%)	No. (%)	No. (%)	No. (%)	
Antenatal care visits					
None	86 (44.5)	107 (55.5)	100 (53.1)	93 (46.9)	
1-3	62 (27.5)	155 (72.5)	79 (35.7)	138 (64.3)	
≥ 4	828 (23.8)	2535 (76.2)	1202 (35.6)	2161 (64.4)	
P-value	< 0.	< 0.0001		0.0002	
Mode of delivery					
Vaginal	557 (38.3)	807 (61.7)	608 (44.5)	756 (55.5)	
Caesarean section	419 (17.8)	1990 (82.2)	773(32.1)	1636 (67.9)	
P-value	< 0	< 0001		< 0.0001	
Place of delivery					
Public health facility	275 (26.4)	689 (73.6)	397 (39.8)	567 (60.2)	
Private health facility	596 (22.4)	1992 (77.6)	894 (35.1)	1694 (64.9)	
Home	105 (49.0)	116 (51.0)	90 (40.3)	131 (59.7)	
P-value	< 0.	< 0.0001		0.0643	
Exposure to skilled provider at delivery <sup>b</sup>					
No	66 (50.6)	62 (49.4)	53 (40.0)	75 (60.0)	
Yes	910 (24.1)	2735 (75.9)	1328 (36.4)	2317 (63.6)	
P-value	< 0.	< 0.0001		0.4313	
Prelacteal feed					
No	530 (40.2)	851 (59.8)	-	-	
Yes	446 (16.4)	1946 (83.6)	-	-	
<i>P</i> -value	< 0.	0001			
Initiation of breastfeeding					
Early (within 1 hour of birth)	-	-	530 (58.6)	446 (41.4)	
Delayed	-	-	851 (29.2)	1946 (70.8)	
P-value			< 0.	0001	

<sup>a</sup>Weighted percentage.

<sup>b</sup>Skilled provider includes doctor and trained nurse/midwife.

to ensure the sexual satisfaction of their husbands. It could also be attributed to health system-related factors such as lack of standardized protocols and inadequate supervision, combined with provider-specific factors including the profitability incentive, convenience factor, and fear of medical litigation (30).

The present study reports that caesarean section substantially increased the odds of delayed breastfeeding initiation and increased the odds of provision of prelacteal feeds. Our findings are consistent with existing research that has shown a lower likelihood of breastfeeding within 1 hour after birth (13,14,19) and a higher likelihood

Table 2 Association between mode of delivery and early feeding indicators among mothers in Egypt (n = 3773)					
Mode of delivery		Early feeding indicator			
	Delayed initia	ntion of breastfeeding	Received prelacteal feed		
	AOR	95% CI	AOR	95% CI	
Vaginal	1.00	-	1.00	-	
Caesarean section	2.25*	1.84-2.74	1.44*	1.19–1.74	

Models for initiation of breastfeeding were adjusted for maternal age, education, occupation, residence, number of household members, wealth index, parity, child gender, birth weight, birth status, antenatal care visits, mode of delivery, place of delivery, assistance at delivery and prelacteal feeding.

Models for prelacteal feed were adjusted for maternal age, education, occupation, residence, number of household members, wealth index, parity, child gender, birth weight, birth status, antenatal care visits, mode of delivery, place of delivery, assistance at delivery and initiation of breastfeeding.

AOR = adjusted odds ratio; CI = confidence interval.

\*P < 0.05.

(n = 3773)	node of derivery and m	itiation of breastreeding acc	ording to parity among	mothers in Egypt
Mode of delivery		Pari	ty	
	Prim	iparous	Mult	iparous
	AOR	95% CI	AOR	95% CI
Vaginal	1.00	-	1.00	-
Caesarean section	1.52*	1.03–2.25	2.57*	2.04-3.24

Models for initiation of breastfeeding were adjusted for maternal age, education, occupation, residence, number of household members, wealth index, parity, child gender, birth weight, birth status, antenatal care visits, mode of delivery, place of delivery, assistance at delivery and prelacteal feeding.

AOR = adjusted odds ratio; CI = confidence interval.

\*P < 0.05.

of prelacteal feeding among women with caesarean delivery (1,11,13,21).

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Various factors have been linked with decreased breastfeeding initiation or exclusivity among women with caesarean deliveries. These include mother-neonate separation immediately after birth and post-operational pain (13). Neonates delivered by caesarean section were less likely to have skin-to-skin contact directly postdelivery and were more likely not to initiate breastfeeding within a day of birth (31). Initiation, maintenance and duration of breastfeeding are enhanced by skin-toskin contact (32). Additionally, hormones that stimulate lactogenesis could be interrupted by caesarean section due to mothers' stress or lower oxytocin production and could impede milk secretion (33). Another study also reported an association between mothers' preference for caesarean section and the choice not to breastfeed (34).

The present study revealed that the relationship between caesarean delivery and delayed breastfeeding initiation was moderated by parit,y with stronger odds among multiparous mothers compared with first-time mothers. Some studies have reported that multiparous mothers were less likely to breastfeed when compared to primiparas (35,36), consistent with our results. On the other hand, other studies have found multiparity to be significantly associated with longer exclusive breastfeeding (37,38). Multiparous mothers may have previous negative breastfeeding experiences and decided not to breastfeed. Mothers' future decisions regarding breastfeeding are affected by their previous breastfeeding experiences (39,40). Future studies should utilize survival analysis techniques to analyse more accurately the relationship between mode of delivery and timing of

breastfeeding initiation after adjusting for potential confounders.

The strengths of our study included the large sample size, which provided adequate statistical power. Data were collected by authorized and credible entities using a well-tested methodology (16). The dataset also contained several potential confounding factors for breastfeeding practices that were used for adjustment in the current analysis. On the other hand, inaccurate answers from respondents due to the time interval between delivery and the survey may have contributed to potential recall bias. The exclusion of 38% of eligible participants due to missing data may have introduced selection bias. Additionally, data on the type of caesarean delivery (elective or emergency), intention to breastfeed and women's prior experiences with breastfeeding were not captured in the Egypt Demographic and Health Survey 2014.

### Conclusion

Considering the suboptimal breastfeeding practices and the increasing rates of caesarean delivery in Egypt, anticipatory guidance and supportive care regarding breastfeeding should target women considering caesarean delivery. Furthermore, interventions to raise awareness among women and health providers regarding the potential negative consequences of caesarean delivery are also urgently needed. Support should also be tailored for pregnant multiparous women, especially for those with a history of unsuccessful breastfeeding. Further research is needed to determine the effect of the rising prevalence of caesarean deliveries on other maternal and child health outcomes.

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**Competing interests:** None declared.

# Association entre le mode d'accouchement et les pratiques d'allaitement au sein en Égypte : analyse de l'enquête démographique et sanitaire égyptienne Résumé

**Contexte :** L'augmentation du nombre des césariennes constitue une préoccupation de santé publique majeure dans les pays à revenu faible et intermédiaire. Les données sur l'influence des césariennes sur les pratiques d'allaitement au sein dans ces pays font actuellement défaut.

**Objectifs :** Étudier l'association entre le mode d'accouchement et la mise en route de l'allaitement au sein et les pratiques d'alimentation prélactée dans un échantillon de femmes égyptiennes représentatif au niveau national.

**Méthodes :** Une étude transversale a été réalisée auprès de 3773 femmes dans le cadre de l'enquête démographique et sanitaire égyptienne de 2014. Les résultats d'intérêt étaient le moment de la mise en route de l'allaitement au sein et les pratiques d'alimentation prélactée. Des statistiques descriptives et des modèles de régression logistique multivariable ont été appliqués.

**Résultats :** Au total, 25,1 % des mères ont commencé à allaiter dans l'heure suivant l'accouchement et 63,5 % ont pratiqué l'alimentation prélactée dans les trois jours suivant l'accouchement. Les mères qui ont accouché par césarienne étaient plus susceptibles de retarder le début de l'allaitement au sein [odds ratio ajusté (ORa) : 2,25 ; intervalle de confiance (IC) à 95 % : 1,84-2,74] et de s'engager dans l'alimentation prélactée (ORa : 1,44 ; IC à 95 % : 1,19-1,74). En outre, la relation entre l'accouchement par césarienne et la mise en route tardive de l'allaitement au sein varie selon le nombre d'enfants, avec une association plus forte chez les multipares (ORa : 2,57 ; IC à 95 % : 2,04-3,24) par rapport aux mères primipares (ORa : 1,52 ; IC à 95 % : 1,03-2,25).

**Conclusions :** L'accouchement par césarienne a considérablement augmenté la probabilité de retarder le début de l'allaitement au sein et les pratiques d'alimentation prélactée. L'appui et l'orientation en matière d'allaitement au sein devraient cibler les femmes qui envisagent l'accouchement par césarienne.

الارتباط بين طريقة الولادة وممارسات الرضاعة الطبيعية في مصر : تحليل ثانوي للمسح السكاني والصحى لمصر

نهى فاضل، زيلاليم هالي

### الخلاصة

الخلفية: تُشكل زيادة عدد عمليات الولادة القيصرية مصدرًا رئيسيًا للقلق في مجال الصحة العامة في البلدان المنخفضة والمتوسطة الدخل. ولا تتوافر حاليًا براهين حول تأثير الولادة القيصرية على ممارسات الرضاعة الطبيعية في هذه البلدان.

**الأهداف**: هدفت هذه الدراسة إلى دراسة الارتباط بين طريقة الولادة وبدء الرضاعة الطبيعية وممارسات التغذية السابقة للدَرّ (ظهور الأسنان اللبنية) في عينة تمثيلية وطنية من النساء المصريات.

**طرق البحث**: أُجريت دراسة مقطعية شملت 3773 امرأة من المسح السكاني والصحي لمصر . وتمثلت النتائج محل الاهتمام في توقيت بدء الرضاعة الطبيعية وممارسات التغذية السابقة للدَرّ . وقد أُجريت إحصاءات وصفية ونهاذج انحدار لوجستي متعدد المتغيرات.

النتائج: بوجه عام، بلغت نسبة الأمهات اللاتي بدأن الرضاعة الطبيعية خلال ساعة من الولادة 1.25%، بينما بلغت نسبة الأمهات اللاتي مارسن التغذية السابقة للدرّ خلال 3 أيام من الولادة 3.55%. وكانت نسبة الأرجحية لتأخر بدء الرضاعة الطبيعية أعلى بين الأمهات اللاتي ولدن ولادة قيصرية [نسبة الأرجحية المُصحّحة 2.25؛ بفاصل ثقة 95%: 1.84–2.74]، وازدادت احتمالية قيامهن بالتغذية السابقة للدرّ المُصحّحة: 1.44؛ بفاصل ثقة 95%، 1.19–1.74). وعلاوة على ذلك، تباينت العلاقة بين الولادة القيصرية وتأخر بدء الرضاع حيث التكافؤ مع وجود ارتباط أقوى بين الولادات المتعددة (نسبة الأرجحية المُصحّحة: 2.57؛ بفاصل ثقة 95%، 2.54) مقارنة بالأمهات اللاتي ولدن مرة واحدة فقط (نسبة الأرجحية المُصحّحة: 1.52؛ بفاصل ثقة 95%، 2.51

**الاستنتاجات**: أدت الولادة القيصرية إلى زيادة احتمال تأخر بدء الرضاعة الطبيعية وممارسات التغذية السابقة للدَرّ زيادةً كبيرة. وينبغي أن يستهدف الدعم والتوجيه المتعلقان بالرضاعة الطبيعية النساء اللاتي يفكرن في الولادة القيصرية.

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