Mosul Journal of Nursing

www.mjn.mosuljournals.com

Impact Mode of Delivery on Breastfeeding Practice Among Women Delivering in Maternity Teaching Hospital Sulaimani City

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ABSTRACT

Background: Breastfeeding is a factor in the health of both the kid and the mother. However, research on how a manner of birth affects breastfeeding is scarce. Caesarean section rates are high, and breastfeeding rates are low, which are major public health problems in all developing countries.

Objective: The study aimed to evaluate the impact mode of delivery on breastfeeding practices.

*Methods***:** A quantitative/prospective longitudinal study was conducted in a maternity teaching hospital from April 24 to October 5, 2021. The study included 215 patients, 105 of whom had a cesarean section and 110 of whom had a vaginal delivery. The participants were followed for two months after childbirth. A questionnaire was used to collect demographic information and the kind of delivery. In-person interviews were used to finish all of the subjects. Using SPSS version 24 software, researchers analyzed and interpreted data using descriptive statistical analysis, inferential chi-square test, and multivariate conditional logistic regression statistical analysis.

Results: The study found that women who gave birth vaginally were more likely than those who had a cesarean section to breastfeed during the first hour following birth. In terms of skin-to-skin contact immediately after birth, rooming-in, the initiation of breastfeeding, from delivery to first breastfeeding duration, barriers to exclusive breastfeeding, and many lactations per day, there was a statistically significant difference between mothers who had vaginal deliveries and mothers who had caesarean deliveries.

Conclusion: After two months of follow-up, the study found a statistically significant relationship between mode of delivery and breastfeeding practice.

Keywords: Mode of Delivery, Breastfeeding Practice, Maternity Teaching Hospital, Sulaimani .

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INTRODUCTION

Breastfeeding is a natural practice with many benefits for mothers and babies. The advantages of breastfeeding are amplified when done appropriately. As a result, it should begin as soon as feasible after delivery, with six months of exclusive nursing (1). Colostrum contains antibodies that act as the first line of defense against illness in newborns and is high in nutrients that help them grow: It also helps to control body temperature and glucose levels, as well as stimulate milk production (2). Breastfeeding has a lot of benefits for newborns, including a lower risk of diarrhea, respiratory tract infections, otitis media, asthma, and allergies (3). Breastfeeding has many advantages for mothers, including faster uterine involution and a lower chance of bleeding after birth, as well as a lower lifetime risk of type 2 diabetes, breast, and ovarian cancer (4). According to scientific evidence, children who are not breastfed have a higher number of problems, as well as longer and more serious cases of those diseases, with long-term implications (5). The World Health Organization (WHO) recommends exclusive lactation for six months and two years (6). The mode of birth has an impact on breastfeeding habits. High rates of Caesarean sections and poor rates of breastfeeding are serious public health issues in all developing countries. More women who had C-sections had no intention of breastfeeding or did not begin breastfeeding than women who had vaginal deliveries and did not begin nursing. Breastfeeding problems are more likely in women who had their babies by C-section (4). The popularity of CS has risen all across the world. It is the most prevalent surgical procedure in the United States, accounting for 31.8 percent of all births, and even more so in China and parts of South America, where rates range from 40 to 50 percent (7). According to research, cesarean birth has been connected to delayed or non-initiation of breastfeeding, as well as the discontinuation of exclusive breastfeeding or complete cessation of the

practice. CS mothers are more likely to discontinue breastfeeding or exclusively breastfeed at a young age than mothers who have had a normal vaginal birth (6). Cesarean deliveries (C-sections) are connected to poorer breastfeeding initiation rates and shorter nursing duration when compared to vaginal deliveries. This could be due to a delay in skin-to-skin contact between the mother and the baby, physical problems in the mother after surgery, or anesthesia side effects (8).

SUBJECTS AND METHODS

Study Design

A quantitative/prospective longitudinal study was conducted to determine the impact of delivery mode on breastfeeding practice, with a sample of 215 women who attended Sulaimani Maternity Teaching Hospital between April 24 and October 5, 2021, and were eligible to participate in this study, which was prospectively followed up until the second month after delivery.

This research was carried out in a variety of settings, the first of which being the Maternity Teaching Hospital in Sulaimani City.

The house was another location where postnatal mothers' data was collected. For the second and third interviews, the researcher visits them.

A sampling of the participants

The approach for selecting samples in this study was purposeful nonprobability sampling. Those who met the inclusion criteria were interviewed by a researcher. The processes taken to obtain the final set of samples in both the VD and CS groups are depicted in the diagram below. The study comprised a total of 215 cases (110 with VD and 105 with CS). With the exception that one group had VD and the other had CS, both groups had the same inclusion and exclusion criteria. About 55 of the cases in the study

groups were eliminated from the sample. This is attributable to several factors: They didn't respond to the researchers' calls for the second and third interviews to be orientated about the methods of feeding and reasons for not exclusively breastfeeding, and some of them changed their phone number and home location, which were both incorrect.

Eligibility criteria

Specific inclusion criteria such as age 18 and above, vaginal and cesarean delivery, and multigravida women were urged to participate in the study. Mothers who gave birth to a full-term child, Have said that she intends to breastfeed their child, has agreed to participate in the study, and will be available for follow-up by the researcher until the study's conclusion. Women who do not speak Kurdish, for example, are excluded. Breast milk is not recommended. Has a medical condition that could make breastfeeding difficult, an inverted nipple, an inverted nipple, a newborn with problems and/or a congenital abnormality, and/or a newborn with a congenital abnormality.

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   │140 Vaginal     │  │129 Cesarean     │
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│21 loss to│├──► N=119     N=120◄┤loss to       │
│follow up ││                   ││follow up     │
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│2nd month,││   N=110     N=105 ││2nd month, 15 │
│9 loss    │├──► N=110    N=105◄┤loss          │
│follow up ││                   ││follow up     │
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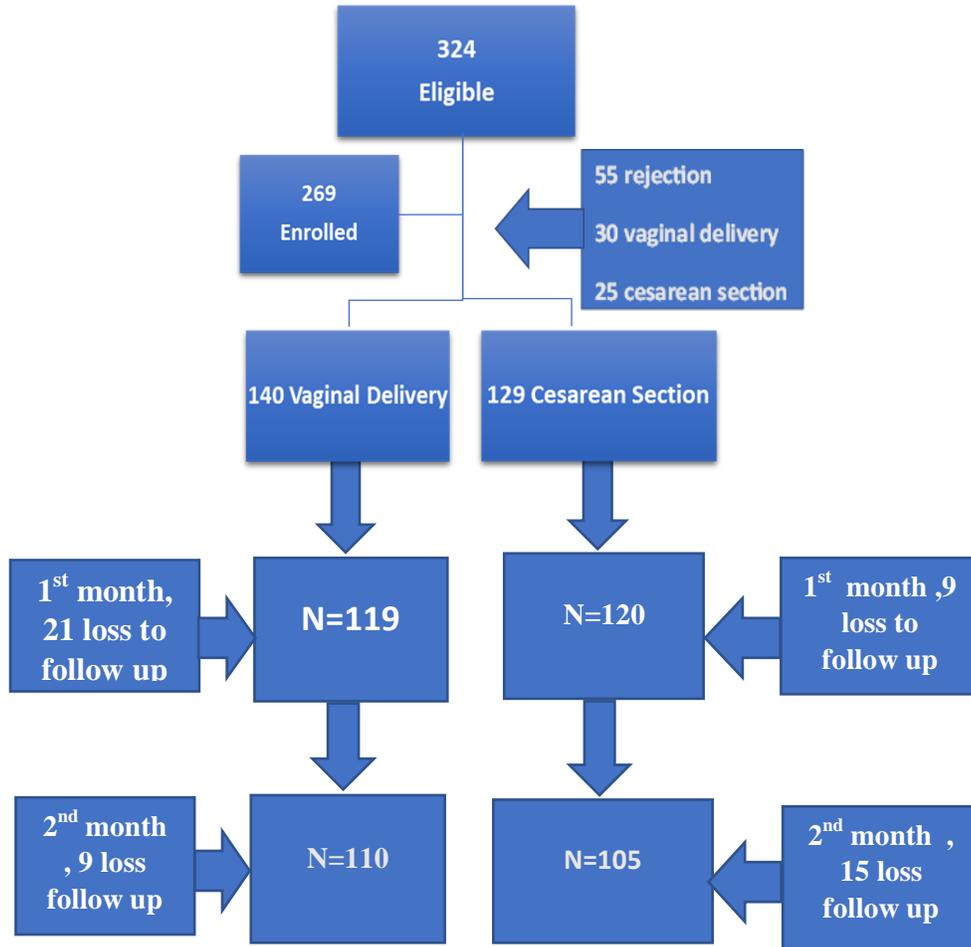
FIG. Flowchart of participants from eligibility to data analysis.

The study instruments

The researcher prepared and constructed the questionnaire after analyzing relevant types of literature and previous research. The research's final instrument is divided into four sections: A sheet of demographic characteristics that include items such as age, educational level, monthly income, occupational situation, and resistance. Characteristics of reproduction: The due date, the history of current labor, gestational age, birth weight, gender, and feeding habit are all included in this section. History of breastfeeding, such as (time of breastfeeding, breastfeeding frequency, skin to skin when immediately after birth, type of pre-lacteal feed, rooming, using a pacifier, receiving BF education). 20 obstacles to exclusive breastfeeding We used data from the prenatal, neonatal, and 2-month infant age surveys in this investigation. The questionnaire's content validity was reviewed by a panel of ten experts from various nursing and medical professions.

To improve all statistical computations, statistical approaches are applied (SPSS 24). The data was organized, tallied, and presented descriptively. The following was the statistical approach utilized to determine the investigation's outcome:

1. The alpha-alpha Cronbach's coefficient was used to assess the questionnaire's reliability.

2. Descriptive statistics are used to analyze the data.

3. Inferential data analysis: The Chi-square Test is a statistical analysis technique. With dependent samples, a T-test is used. Logistic regression model. Multinomial logistic regression model.

At the probability level, there are certain factors for determining the test's relevance: Highly significant (P 0.001), significant (P 0.05), non-significant (P> 0.05), and extremely highly significant (P> 0.05) P-values are the four types of P-values (P 0.000).

Ethical approval

This study was approved by the University of Sulaimani's College of Nursing's ethical committee, as well as the Maternity Teaching Hospital's ethical review committee, with permission number 10 on May 25, 2021. The data for this study was gathered through interviews. As a result, participants were offered the option of withdrawing at any moment during the study period.

Table (1): Distribution of the study samples according to sociodemographic characteristics

Variables	Items	Case (N=105)		Control(N=110)		Total	Significance Test
		F	%	F	%		
Mother's age	18 – 22 years old	11	10.48	21	19.09	32	χ2 =7.083 p= 0.029
	23 – 28 years old	27	25.71	31	28.18	58	
	29 – 34 years old	32	30.48	36	32.73	68	
	35 – 39 years old	22	20.95	19	17.27	41	
	More than 39 years old	13	12.38	3	2.73	16	
	Mean ±SD	36.16±6.4		28.91±6.06			T-test=2.65 P=0.009
Education level	Illiterate	8	7.6	3	2.7	11	χ2 =12.177 p= 0.016
	Able to Read &Write	12	11.4	5	4.5	17	
	Primary School Graduated	28	26.7	26	23.6	54	

	Secondary School Graduated	36	34.3	34	30.9	70	
	Institution and College Graduated	21	20.0	42	38.2	63	
Occupation	Housewife	91	86.7	94	85.5	185	χ2 =0.119
	Governmental employed	11	10.5	12	10.9	23	p= 0.942
	Self employed	3	2.9	4	3.6	7	
How many hours working per day	No	93	88.6	95	85.5	188	χ2 =0.238
	1-4	8	7.6	11	10.0	18	p= 0.888
	More than 4	4	3.8	5	4.5	5	
	Mean ±SD	0.47±1.36		0.75±2.22			T-test=-1.102 P=0.272
Residence	Urban	72	68.6	72	65.5	144	χ2 =0.236
	Rural	33	31.4	38	34.5	71	p= 0.627
Economic status	Satisfy	19	18.1	19	17.3	38	χ2 =1.134
	Barely satisfy	73	69.5	82	74.5	155	p= 0.567
	Unsatisfied	13	12.4	9	8.2	22	

Significance Test: chi-square Test

The distribution of the CS and VD groups in terms of their mothers' socio-demographic characteristics is shown in Table 1. As a result, the majority of the case and control study participants were between the ages of 29 and 34, accounting for 30.48 percent and 32.73 percent, respectively. While 10.48 percent of the case group was between the ages of 18 and 22, just 2.73 percent of the control group was beyond the age of 39. In the case study, 34.3 percent of participants had completed secondary school, while 30.9 percent of participants had completed secondary school in the control study, which was the highest rate of the control study, and 30.9 percent of participants had completed Institution and College Graduated in the control study. Furthermore, Housewife was found to be 86.7 percent in the case study and 85.5 percent in the control research. Furthermore, 88.6 percent and 85.5 percent of case and control studies, respectively, had not worked. 68.6% (Case study) and 65.5 percent (control study) of people live in cities, while 12.4 percent (SC study) and 8.2 percent (VD stud) are unhappy with their financial situation.

Then, because the p-value was smaller than the standard alpha 0.05, there were statistically significant differences between the two groups in Mother's age (p=0.029) and 029) and education level (p = 0.016). Finally, because the results (p-value >0.05) were not statistically significant, there were no statistically significant differences between the two groups in terms of occupation (p=0.942), the number of hours worked per day (p=0.888), residence (p=0.627), or economic status (p=0.567).

Table (2): Distribution of the study samples in relation to Reproductive History characteristics

Variables	Items	Case (N=105)		Control(N=110)		Total	Significance Test
		F	%	F	%		
Reproductive History of previous pregnancy							
Gravid	Less than 3	39	37.1	64	58.2	103	χ2 =10.153 p= 0.006
	3 – 5	57	54.3	42	38.2	99	
	More than 5	9	8.6	4	3.6	13	
Para	Less than 3	52	49.5	65	59.1	117	χ2 =2.387 p= 0.303
	3 – 5	49	46.7	43	39.1	92	
	More than 5	4	3.8	2	1.8	6	
Abortion	No	80	76.2	89	80.9	169	χ2 =2.189 p= 0.335
	1-3	21	20.0	20	18.2	41	
	More than 3	4	3.8	1	.9	5	
Death	No	99	94.3	105	95.5	204	χ2 =1.061 p= 0.588
	1	5	4.8	5	4.5	10	
	2	1	1.0	0	0.0	1	
Duration staying in hospital	Less than 5	5	4.8	91	82.7	96	χ2 =132.22 p= 0.000
	5-10	86	81.9	17	15.5	103	
	More than 10	14	13.3	2	1.8	16	
	Mean ±SD	9.26±3.61		3.55±3.26			T-test=12.168 P=0.000

Significance Test: chi-square Test

In terms of Reproductive History characteristics, Table (2) demonstrates the distribution of the CS and VD groupings. As a consequence, 54.3 percent of the CS were between 3 and 5 gravid, the highest rate, while the bulk of the Gravid in the control group was less than 3 gravid, accounting for 58.2 percent. The majority of participants, 49.5 percent (in CS) and 59.1 percent (in VD), had less than three children, while 20.0 percent (in CS) and 18.2 percent (in VD) had between one and three abortions, with 4.8 percent (in CS) and 4.5 percent (in VD) having died. Furthermore, the bulk of the time spent in the hospital in the case study was between 5 and 10 days, or 81.9 percent, compared to 82.7 percent in the control group, which was less than 5. There were statistically significant differences between the two groups (CS and VD) in terms of Gravid (p=0.006) and Duration of Hospitalization (p=0.000).

Finally, there were no statistically significant differences between the two groups (case and control) in terms of para (p=0.303), abortion (p=0.6335), or death (p=0.588) because of the results (p-value >0.05).

Table (3) Distribution of the study samples according to the Mode of delivery

Variables	Items	F	%	Sum	Items
Mode of delivery	Vaginal delivery with episiotomy	90	81.8	110	Control
	Vaginal delivery without episiotomy	20	18.2		
	Elective cesarean section	63	60.0	105	Case
	Emergency cesarean section	42	40.0		

The specifications of the delivery method are listed in the table (3). The majority of the control research was vaginal delivery with episiotomy, with vaginal delivery without episiotomy accounting for only 20%. Emergency cesarean sections accounted for 40% of the case study, while elective cesarean sections accounted for 60%.

Table (4): Distribution of the study samples according to the new born characteristics

Variables	Items	Case(N=105)		Control(N=110)		Total	Significance Test
		F	%	F	%		
	Less than 38	18	17.14	7	6.36	25	χ2 =7.184 p= 0.028
Gestational age (weeks)	38-39	59	56.19	77	70.00	136	
	More than 39	28	26.67	26	23.64	54	
	Mean ±SD	38.55±1.12		38.95±0.85		T-Test	T= -2.904 , P=0.004
	Less than 3500	76	72.38	46	41.82	122	χ2 =21.145 p= 0.000
Birth weight (grams)	3500-4000	25	23.81	59	53.64	84	
	More than 4000	4	3.81	5	4.55	9	
	Mean ±SD	3265.24±677.03		3462.27±398.8		T-Test	T= -2.614 , p=0.01
Gender	Male	53	50.48	52	47.27	105	χ2 =0.221 p= 0.639
	Female	52	49.52	58	52.73	110	
Feeding pattern	Breast feeding	15	14.29	63	57.27	78	χ2 =49.559 p= 0.000
	Bottle feeding	73	69.52	28	25.45	101	
	Mixed feeding	17	16.19	18	16.36	35	

Significance Test: chi-square Test

In terms of newborn characteristics, Table (4) As a result, in both the case and control studies, the majority of the gestational age was between 38 and 39 weeks, with 56.19 percent and 70.00 percent, respectively. Furthermore, in the case research, 72.38 percent of the birth weight was less than 3500 grams, compared to 53.64 percent in the control group, where the greatest rate of birth weight was 3500-4000 grams. In the case study, 50.48 percent of the participants were male, while 52.73 percent of the participants in the control group were female. Bottle feeding accounted for 69.52 percent of the feeding pattern in the case research, while breastfeeding accounted for 57.27 percent in the control study. On the other hand, there were statistically significant differences between both groups (case and control) in connection to Gestational age (p=0.028) and very statistically significant differences concerning Birth weight (p=0.000) and Feeding pattern (p=0.000) as a result of the outcome (p-value 0.05). There were no statistically significant differences between the two groups in Gender (p=0.639).

Table (5): Distribution of the study samples according to the Breastfeeding History characteristics data

Variables	Items	Case (N=105)		Control(N=110)		Total	Significance Test
		F	%	F	%		
	First hour after birth	8	7.62	63	57.27	71	
	After first hour	18	17.14	16	14.55	34	
Time of breast feeding	6 - 12 hours	8	7.62	5	4.55	13	χ2 =71.128 p= 0.000
	12 - 18 hours	1	0.95	1	0.91	2	
	18 - 24 hours	0	0.00	0	0.00	0	
	24 hours	3	2.86	6	5.45	9	

Variable	Items	F	%	F	%	Total	Significance
Breast feeding Frequency	Not initiation	67	63.81	19	17.27	86	χ2 =19.565 p= 0.000
	Every 1 hours	21	20.00	51	46.36	72	
	Every 2 hours	84	80.00	57	51.82	141	
	Every 3 hours	0	0.00	2	1.82	2	
Skin to skin when immediately after birth	Yes	20	19.05	70	63.64	90	χ2 =43.885 p= 0.000
	No	85	80.95	40	36.36	125	
Type of prelactal food	Artificial milk	0	0.00	0	0.00	0	χ2 =0.959 p= 0.327
	Water and sugar	0	0.00	1	0.91	1	
	Both	0	0.00	0	0.00	0	
	No prelacteal food	105	100.00	109	99.09	214	
Rooming in	Yes	41	39.05	27	24.55	68	χ2 =5.225 p= 0.022
	No	64	60.95	83	75.45	147	
Using pacifier	Yes	32	30.48	40	36.36	72	χ2 =0.836 p= 0.361
	No	73	69.52	70	63.64	143	
Breast feeding decision during the prenatal period	Breastfeeding only	76	72.4	91	82.7	167	χ2 =11.47 p= 0.03
	Formula only	0	0.0	5	4.5	5	
	Both	29	27.6	14	12.7	43	

Significance Test: chi-square Test

Breastfeeding History features are shown in Table (5). As a result, the majority of the time spent breastfeeding in the case study was not initiated, whereas 57.27 percent of the time spent breastfeeding in the control study was the first hour after birth, and 7.62 percent (case study) and 4.55 percent (control study) of the time spent breastfeeding was between 6 and 12 hours. In addition, the frequency of breastfeeding was between every 2 hours out of 80.00 percent (case study) and 51.82 percent (control study). In the case group, 80.95 percent of the participants did not have skin-to-skin contact soon after birth, but 63.64 percent of the participants in the control group did. Prelacteal food is not present in both groups. However. 60.95 percent of the case study and 75.45 percent of the control study did not use a pacifier. In other words, during the prenatal period, 72.4 percent (case study) and 82.7 percent (control study) of the breastfeeding decision was breastfeeding only, and 27.6 percent (case study) was breastfeeding and formula, whereas 12.7 percent in the control study was Breastfeeding and Formula.

As a result, there were statistically significant differences between both groups (case and control) in terms of Time of breastfeeding (p=0.000), Breastfeeding Frequency (p=0.000), Skin to skin contact immediately after birth (p=0.000), Rooming-in (p=0.022), and Breastfeeding decision during the prenatal period (p=0.03) because the p-value was less than the common alpha 0.05.

Table (6): Association between the CS & the VD group about Breastfeeding experience at the first interview

Variables	Items	Case (N=105)		Control(N=110)		Total	Significance Test
		F	%	F	%		
Time of breast feeding	Yes	38	36.19	91	82.73	129	χ2=48.476 P=0.000
	Not initiation	67	63.81	19	17.27	86	

Significance Test: chi-square Test

As a result, because the p-value was smaller than the standard alpha 0.05, there were highly statistically significant differences between both groups (case and control).

Table (7): Association between the CS & the VD group concerning Breastfeeding experience at 1 Month and at the second interview

Variables	Items	Case (N=105)		Control(N=110)		Total	Significance Test
		F	%	F	%		
Are you still breastfeeding	Yes	74	70.48	103	93.64	177	χ2=19.804 P=0.000
	No	31	29.52	7	6.36	38	
Breastfeeding status of baby 1 month after delivery	Exclusively breast milk feeding	33	44.59	38	36.89	71	χ2=1.063 P=0.302
	Mix feeding	41	55.41	65	63.11	106	
	Formula feeding	0	0.0	0	0.0	0	
	Total	74	100%	103	100%	177	
	Insufficient breast milk production	14	19.44	23	31.94	37	
	Concern that baby will not receive adequate nutrition	34	47.22	33	45.83	67	
	Returned to work	4	5.56	6	8.33	10	
Reason for not Exclusive breast milk feeding **	Use of medication harmful to the baby by mother	1	1.39	0	0.00	1	χ2=13.21 P=0.105
	Sore or painful nipples	2	2.78	1	1.39	3	
	The doctor prescribes a medical formula for diarrhea or constipation	8	11.11	3	4.17	11	
	If left the baby some time	3	4.17	6	8.33	9	
	Not eat breast milk	2	2.78	0	0.00	2	
	Poor sucking ability	4	5.56	0	0.00	4	
	Total	72	100%	72	100%	144	

**Including reasons has just (No and Mix feeding)

As a result, there were highly statistically significant differences in are you still nursing (p=0.000) between both groups (case and control) since the (p-value 0.05). Furthermore, because the p-value was greater than the common alpha 0.05, there was no statistically significant difference between the two groups (case and control) in terms of breastfeeding status of the baby 1 month after delivery (p=0.302) and reason for not exclusively breast milk feeding (p=0.105).

Table (8): Association between the CS & the VD group in relation to Breastfeeding experience at 2nd Month and at third interview

Variables	Items	Case (N=105)		Control (N=110)		Total	Significance Test
		F	%	F	%		
Are you still breastfeeding	Yes	70	66.67	99	90	169	χ2=17.391 P=0.000
	No	35	33.33	11	10	46	
Breastfeeding status of baby 2 months after	Exclusively breast milk feeding	20	28.57	36	36.36	56	χ2=1.124 P=0.289
	Mix feeding	50	71.43	63	63.64	113	
	Formula feeding	0	0.00	0	0.00	0	

delivery	Total	70	100%	99	100%	169	
	Insufficient breast milk production	21	24.71	23	31.08	44	
	Concern that baby will not receive adequate nutrition	33	38.82	37	50.00	70	
**Reason for not Exclusive breast milk feeding	Returned to work	3	3.53	6	8.11	9	
	Sore or painful nipples	3	3.53	0	0.00	3	χ2=20.428 P=0.005
	Doctor prescribe medical formula for diarrhea or constipation	11	12.94	0	0.00	11	
	Felt baby was poor sucking ability	4	4.71	6	8.11	10	
	Not eat breast milk	6	7.06	1	1.35	7	
	Poor sucking ability	4	4.71	1	1.35	5	
	Total	85	100%	74	100%	159	

**Including reasons has just (No and Mix feeding)

The link between the CS and VD groups in respect to Breastfeeding Experience at 2nd Month is seen in Table (8).

As a result, because the p-value was smaller than the standard alpha 0.05, there were highly statistically significant differences between both groups (case and control) concerning Are you still nursing (p=0.000) and the reason for not Exclusive breast milk feeding (p=0.005). In other words, because (p-value >0.05), there was no statistically significant difference between the two groups (case and control) in terms of breastfeeding status of the baby two months after delivery (p=0.289).

Table (9): Association between the CS & the VD group in relation to Breastfeeding experience at (Frist, second and third) interview

Breastfeeding experience	First Interview		Second Interview		Third Interview	
	Yes N (%)	No N (%)	Yes N (%)	No N (%)	Yes N (%)	No N (%)
Case (N=105)	38(36.19)	67(63.81)	74(70.48)	31(29.52)	70(66.67)	35(33.33)
Control (N=110)	91(82.73)	19(17.27)	103(93.64)	7(6.36)	99(90)	11(10)
Total	129	86	177	38	169	46
Significance Test	χ2=48.476	P=0.000	χ2=19.804	0.000	χ2=17.391	0.000

Table (9)demonstrates the relationship between the CS and VD groups in terms of breastfeeding experience at the first, second, and third interviews.

As a result, because the p-value was smaller than the standard alpha 0.05, there were highly statistically significant differences between both groups (case and control) about breastfeeding experience at (first, second, and third) interview.

Table (10): Model summary, logistic regression for the relationship between Breastfeeding experience, and Model summary
Impact Mode of delivery on the Breastfeeding practice

Independent variable: Mode delivery									
Response variable: Breastfeeding experience (First Interview)							95% EXP(B)	C.I.for	Pseudo R-square
Model	B	S.E.	Wald	Df	Sig.(P-value)	Exp(B)	Lowe	Upper	
Constant	-2.468	0.378	42.593	1	0.000	0.085	1.814	3.127	**0.464**
Mode delivery	0.868	0.139	39.063	1	0.000	2.382			
Independent variable: Mode delivery									

Response variable: Breastfeeding experience at 1 month(Second Interview)						95% EXP(B)	C.I.for	Pseudo R-square
Constant	-2.644	0.439	36.313	1	0.000	.071	1.280	2.304	0.329
Mode delivery	0.541	0.150	13.019	1	0.000	1.718			

Independent variable: Mode delivery

Response variable: Breastfeeding experience at 2 month(Third Interview)						95% EXP(B)	C.I.for	Pseudo R-square
Constant	-2.952	0.487	36.807	1	0.000	0.052	1.273	2.411	0.299
Mode delivery	0.561	0.163	11.863	1	0.001	1.752			

Note // Exp(B) is Odds Ratio

Table(10) depicts the impact of delivery mode on breastfeeding practice in the first interview. There is a statistically significant association between Mode of Delivery and Breastfeeding Practice (p=0.000) because the p-value was lower than the standard alpha 0.05. The Odds Ratio is a metric for determining how strong the link between an exposure and an outcome is. There are more chances of a link between the exposure and the result if the OR equals (1.814), which is greater than 1. According to the model summary table of logistic regression analysis above, the (Pseudo R-square) value represents how much of the overall variation in the dependent variable (Breastfeeding practice) can be explained by the independent variable (Mode delivery). In addition, the (Pseudo R-square) for this study is (0.464). 46.4 percent of the variance in (breastfeeding practice) can be explained in this scenario; in other words, 46.4 percent of the variance in (breastfeeding practice) can be explained in this scenario.

DISCUSSION

The main objective of this study is to determine the impact of delivery mode and early breastfeeding beginning, as well as exclusive breastfeeding for the first two months. also to see whether there's a link between vaginal and cesarean births and breastfeeding habits.

Between the CS group and the VD group, there is a substantial difference in age, education, occupation, residency, and economic position, as well as a significant difference in reproductive history and delivery mode.

Two hundred and fifteen women took part in the study. The first 105 individuals were delivered vaginally, and the last 110 were delivered through CS. As well as being regarded as a study group.

According to the findings of the current study, the women with the highest proportion of the CS group are between the ages of (18-22) years old (30.48%), while those in the VD group are between the ages of (29-34) years old (32.73%), with a mean of 36.166.4 vs 28.916.06 In the CS group, one-third of the education level was secondary school education (34.30 percent). In the VD category,(38.2)percent had graduated from an educational institution or college. The findings of this study agree with those of Orabi et al., (2017), who discovered that the majority of the moms were well educated (Secondary and university education).(5)Housewives made up the majority of both groups (86.7 percent vs. 85.5 percent). These results support the findings of Khaliq et al. (2017), who found that the

majority of the samples were non-functional. (8) The present study, in which the majority of the cases were housewives, is supported by Rijvi et al., (2018). (88 percent). The majority (86.5 percent) of moms in a survey done by Islam Khan et al., (2018) were housewives. (10) In both categories, more than half came from metropolitan areas. This finding is consistent with prior research conducted in Bangui by Balekouzou et al. (2017), which found that the majority of participants lived in urban areas (85.6 percent for cases and 96.6 percent for controls)(12) Joukar, et al., (2016) investigated the socio-demographic history of research participants, finding that 53.3 percent lived in an urban setting and 46.7 percent lived in a rural setting. In the VD group, 58 percent came from the city and 42 percent from the countryside. (13) The majority of participants in both groups (69.5 percent versus 74.5 percent) were barely pleased financially, with only 18 percent being completely content. Rijvi et al (2018) found that 60% of the samples were slightly happy, 4% were financially satisfied, and 36% were unsatisfied, which is virtually identical to the findings of this study. (10) In a case–control study on economic status conducted in Bangui by Balekouzou, et al. (2017), the majority of both groups, 56.9% cases and 66.4 percent controls, lived at a moderate economic level.(12)

In terms of reproductive factors, more than half of the participants in the case study (54 percent of the total respondents in the CS group and 38 percent of the entire sample in the VD group) had 3-5 previous pregnancies. In both

groups (CS and VD), half of the participants had less than three children, of whom 49. with 49.5 percent of total respondents in the CS group and 59.0 percent in the VD group. In both groups (CS and VD), the majority of the participants did not have abortions: 76.0 percent of the total responses in the CS group and 80.9 percent of the entire sample in the VD group. The majority of women, 62 percent, had an abortion in the CS and 59 percent had an abortion in the VD, according to Tessaro, (2003), who found that the majority of women had an abortion in the CS and 59 percent had an abortion in the VD. (14) The mode of delivery was another component of the research. The bulk of the cases in the research (81%) were vaginal births with episiotomies. Even though 60% of the cases in the study were delivered via elective cesarean section, the mode of delivery had a statistically significant effect on infant feeding patterns.

In comparison to unplanned C-sections or other techniques of delivery, scheduled C-sections are associated with a much lower rate of breastfeeding initiation. Recent studies have revealed similar results, demonstrating that women who have emergency C-sections are more likely than those who deliver vaginally to stop nursing before 12 weeks postpartum. Several publications, such as Sacristan et al., found substantial differences between these two factors, claiming that vaginal birth children got solely nursing at a higher rate than instrumental or caesarean delivery infants. (15) The findings revealed that whereas cesarean birth was not a risk factor for breastfeeding beginning, it was a risk factor for breastfeeding continuation at one and three months after delivery. Assisted vaginal delivery with forceps and suction was not a risk factor for breastfeeding initiation and continuation at one month, but it was a risk factor for breastfeeding cessation at three months following delivery.)(11)

According to the current study, women who had a vaginal birth rather than a planned CS birth were four times more likely to start nursing early. This result is consistent with other

research showing that vaginal birth is linked to early initiation of breastfeeding (16,17,18). However, there is a distinction to be made between planned CS and emergency CS.

According to several studies, planned CS is linked to a later start to nursing (19). Others have found that emergency CS is linked to delayed breastfeeding initiation, which is consistent with our findings. The stress involved with labor and delivery, which is linked to delayed commencement of lactation, could be to blame for the delayed initiation of breastfeeding after emergency CS. (20) According to gestational age, the majority of both groups had gestational ages between 38 and 39 weeks, with the CS group (56.19 percent) and the VD group (70 percent) having gestational ages between 38 and 39 weeks. This result is in agreement with Degefa et al. (2019), who discovered that the majority of the participants were full term. (21)

In terms of birth weight, 72.38 percent of the CS group had a birth weight of less than (3500) grams, whereas 53.64 percent of the VD group had a birth weight of between (3500-4000) grams. In terms of gender, there were no statistically significant differences between the two groups, with roughly half of the participants in both groups being male and half being female.

Bottle feeding accounted for 69.52 percent of the CS group, whereas breastfeeding accounted for 57.27 percent of the VD group. In contrast to our findings, Ekhtiari et alfindings . are revealed that there was no link between birth method and breastfeeding pattern. (22) Concerning the relationship between the case and control groups' Breastfeeding History features. The majority of the patients (63.81 percent) were not initiated to breastfeed, whereas the control group (57.27 percent) initiated nursing within the first hours after birth).

Previous research in the United States, Mexico, and Hong Kong found that cesarean delivery is a risk factor for not starting breastfeeding during the hospital stay, similar to our findings. (24,25)

In terms of breastfeeding initiation, other studies that did not differentiate between planned and unplanned C-sections found similar findings.

Women who have their babies via Csection, for example, have a significantly higher likelihood of delayed nursing than women who had their babies vaginally. (27,28) Only 19 percent of the CS made skin-to-skin contact shortly after delivery, but 63.64 percent of the VD did. Also, in the first hours after birth, the early interaction between mothers and newborns and infants is crucial for forming a mother-infant connection that can lead to effective nursing. On the other hand, surgical care methods for post caesarean birth may cause mothers to lose out on holding their babies and disturb bonding between mother and child, all of which harms breastfeeding initiation. Post-partum recovery and nursing start-up are aided by skin-to-skin contact with newborns on the mother's chest or abdomen. By controlling neonatal thermoregulation and blood glucose levels, minimizing stress reactions, enhancing bonding, and producing oxytocin, early and direct skin-to-skin contact has been shown to establish the stage for successful nursing (Moore et al. 2016) (39)

WHO recommended that healthy babies be kept in skin-to-skin contact (SCC) with their mothers for the first hour after birth to prevent hypothermia and stimulate breastfeeding (WHO, 2018b). The main hurdles to skin-to-skin care during birth were a lack of nurses and midwives, time constraints, difficulty deciding on eligibility for SSC, safety concerns, interference with clinical routines, and interdepartmental issues (Alenchery et al. 2018). In a systematic review, Moore et al. (2016) looked at the impact of early SSC on breastfeeding. They conclude that SSC can help with any form of nursing. (39)

In the current study, the majority of the CS group (60.9 percent) and the VD group (75. percent) did not have a room together. Although the hospital where we collected data for this study was not designated as a Baby-Friendly Hospital, the rooming-in practice was routinely implemented in the hospital, even if it was not

ideal because newborns were sometimes removed from their mothers' rooms for routine newborn procedures such as the first dose of vaccination and registration of birth certificate, or the newborns were sent home for bathing.

Another rooming-in tradition is to keep the mother and the newborn together.

When the evidence-based factors that influence breastfeeding to begin, WHO and UNICEF recommend steps seven and ten of the Ten Steps to Successful Breastfeeding. (29)

Only one individual used prelacteal feeding, and about a quarter of the case and control participants used a pacifier.

Contrary to our results, Thomas et al. (2014) investigated the impact of antenatal lactation counseling on mothers' breastfeeding knowledge and practice in India using a quasi-interventional design with easy sampling.

Peer support reduced incidence, according to a recent in-depth study and meta-analysis of pre-lacteal feeding in low and middle-income countries when compared to standard treatment. (30)

Pacifiers have become a cultural norm in many parts of the world (38) and their usage appears to be associated with a reduction in the incidence of sudden infant death syndrome (AAP, 2005). These findings were at odds with current WHO and UNICEF recommendations, which stated unequivocally that artificial teats and pacifiers should not be administered to breastfeeding infants. (29)

Prenatal breastfeeding decision was another variable in this study; the majority of the women reported prenatally that they planned to exclusively breastfeed their infant, with 72 percent of the CS and 82.7 percent of the VD doing so.

At two months of age, these rates began to decline, with substantially lower proportions of mothers who had a planned or unplanned C-section exclusively nursing at this time.

Future research should focus on the gap between a mother's intention to only nurse her baby during pregnancy and the initiation and continuation of nursing in the postnatal period.

According to the findings of a study conducted in Najaf (Hussain et al.,2021), the majority of moms acquired information from the media and relatives in both study and control groups (40 percent). (31)

In addition, the results show a link between the CS and VD groups in terms of Barriers to Exclusive Breastfeeding features.

According to the results of this study, women born of Caesareans (cases) had one (56) percent more likely to have problems with non-exclusive breastfeeding. When compared to women who had vaginal births or emergency c sections, more women who had planned C-sections had no intention of nursing or did not commence breastfeeding. When compared to vaginal birth (29 percent, 40 percent, and 52 percent, respectively) or scheduled C-sections, women who delivered by emergency C-section had a higher proportion of breastfeeding issues (41%) and required more resources before (67%) and after (58%) leaving the hospital (33 percent, 49percent, and 41 percent, respectively).

When compared to women who delivered vaginally, those who had a planned C-section were more likely (OR = 1.61; 95 percent CI: 1.14, 2.26; p = 0.014) to stop nursing before 12 weeks postpartum (OR = 1.61; 95 percent CI: 1.14, 2.26; p = 0.014). (3) Another reason for not exclusively nursing was that the majority of moms in the VD group (13.64 percent) stated that breast milk alone was insufficient for the infant and that they did not have enough breast milk.

According to the findings of our study, there was a statistically significant difference in exclusiveness between the two groups CS (10.48%)and VD(49 %).

In contrast to our result, a study conducted in Urmia, Iran (Elham Sadeghi, 2017) found no significant difference between breastfeeding success rate and manner of birth (normal vaginal and caesarean delivery). (9) According to another study conducted in England, cesarean delivery did not influence nursing (32).

However, Eslami et al.,(33) found that mothers who had a cesarean delivery began breastfeeding 2 hours after giving birth. Due to the pain and discomfort induced by the surgery, mothers who have had a cesarean section may not be able to get into a good position for nursing.

Furthermore, due to the effects of anesthetic medicines, they are more likely to delay

breastfeeding. (34) The results of this study demonstrated that when the researcher examined breastfeeding outcomes two months after delivery, the majority of the samples in the CS group compared to the VD group were still breastfeeding. However, there are exceptions.

According to the findings of a study conducted on 200 mothers in Turkey, there was a significant difference between the first, second, and third breastfeeding sessions in cesarean and vaginal deliveries, indicating that mothers who had cesarean deliveries had unsuccessful exclusive nitration when compared to mothers who had normal vaginal deliveries. (35)

Furthermore, more than half of the women in the CS group used formula, whereas more than half of the women in the VD group used only breast milk.

In terms of baby feeding status, there were statistically significant differences between the two groups (exclusively breastfeeding or mixed and formula feeding).

A follow-up home visit and telephone interview are used to assess any breastfeeding during the first and second months. Breastfeeding rates varied between the first and second months, with nearly half of both groups (CS and VD) mixing it up. In addition, two further trials were conducted in Australia and the United Kingdom based on our findings. They were carried out in the postpartum period, but they were ineffective in terms of breastfeeding rates at one, two, and six months. (36)

Conclusion: The study concluded a statistical significant relationship between mode of delivery and breastfeeding practice, and statistically significant association between them after 2 months follow up.

Recommendation: The study suggests that educational interventions be implemented at both the individual and community levels to address the barriers and misconceptions surrounding breastfeeding to encourage early initiation and continuation of breastfeeding for

up to six months, which has unique benefits for both the mother and the baby.

Disclosure

There are no financial disclosures to be made and no conflict of interest in this research study.

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