

Knowledge and Practices of Exclusive Breastfeeding among Rural Women during the COVID-19 Pandemic: A Cross Sectional Study

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Abstract

Background

Worldwide exclusive breastfeeding is still recommended as a successful strategy even during COVID - 19 pandemic to lower infant morbidity and mortality. This study aimed to assess the knowledge and practices of exclusive breastfeeding among rural women during COVID-19 pandemic.

Methods

A descriptive Cross-sectional study was conducted at EL-Morabeen Family Medicine Center, in rural Damietta, Egypt among 178 lactating women who were chosen by purposive sample. A developed structured questionnaire consisting of four parts was used for gathering data between March to May 2022 to assess knowledge and practices during the COVID-19 pandemic. Univariate analysis for descriptive data and bivariate analysis through the Chi-square test were performed.

Results

The current study revealed that 73% of the studied rural women didn't receive any breastfeeding counselling during antenatal visits. Only 15.2% of them breastfeed their infant exclusively for 6 months while 88.2% of mothers delayed breastfeeding initiation after delivery and 48.3% administered the pre-lacteal feeds. 98.3% of rural women had never made skin to skin contact. Additionally, a statistically significant association between good knowledge, practices with highly educated women aged from 26–30 years, with family income of 4000–6000 L.E was found. Furthermore, only 26.4% and 26.1% respectively of rural women had good knowledge and practice score.

Conclusion

Suboptimal breastfeeding practices as delayed onset of breastfeeding, low percentages of exclusivity, early weaning, pre-lacteal feeding administration, and lack of skin-to-skin contact were prevalent among the studied rural mothers. Breastfeeding counselling for all pregnant women and implementation of evidence-based practices in health care system as early initiation of breastfeeding and skin-to-skin contact are recommended.

Background

Providing breast milk only to newborn infants except for supplements or medications during the 1st 6 months of life is known as exclusive breastfeeding (EBF) [1]. EBF is the clinical gold standard for infant feeding. It grants unique health benefits for infants and mothers. Moreover, breast milk is designed specially to satisfy the health needs of a growing newborn [2]. Colostrum is recognized as the first infant's vaccine and a powerful natural medication. It has significant levels of antibodies that defend against communicable and infectious diseases [3, 4].

The World Health Organization's (WHO) first recommendation of EBF was in 1990, followed by a statement in 2001 that six months was the optimal duration for EBF. The evidence supporting the six-month EBF recommendation came from a systematic review of 20 research that compared the impact of EBF for 6 months versus EBF for 3–4 months. This research concluded that adding supplementary nutrients before the advised age of six months showed no benefits on weight gain or growth. Exclusively breastfed Infants for 6 months were able to walk and crawl before those who were breastfed exclusively for 4 months old. Compared to infants who had EBF for a shorter duration, exclusively breastfed infants for 6 months experienced gastrointestinal infections less frequently [5].

Optimal breastfeeding practices include initiating lactation during the first hour after birth, rooming-in, lactating exclusively on demand, continued along with nutritionally adequate and safe complementary food until age of two years are the ideal newborn feeding strategy for promoting infant's healthy growth and development [6]. Optimal practices could save the lives of 820 000 children under the age of 5 years annually, raise the intelligence quotient (IQ) from 3 to 4 points, increase school attendance, and prevent around 20,000 breast cancer deaths. Optimal practices enable the nation to save hundreds of millions of dollars spent on health care by promoting child development and reducing healthcare costs [7].

Even during the COVID-19 pandemic which has become a new obstacle for the health care system worldwide and continuity of health practices, the WHO recommended early breastfeeding, skin- to -skin contact (SSC) and EBF among all mothers regardless of their confirmed COVID-19 status. The WHO endorsed using a protective measure before and after infant contact. As there is no proof of COVID transmission via breastfeeding [8]. However, clear WHO recommendations regarding EBF practice during the pandemic, infected mothers delayed the initiation or even expression of breast milk until the third week after birth because of quarantine measures [9].

It is recognized that EBF rates are affected by complex arrays of socio-cultural, health care system, and economic factors. These factors include poor knowledge about BF and the risks of not lactating exclusively. Also, correct BF positions among mothers, their families, healthcare professionals, and policymakers [10]. Several studies have shown a lack of knowledge regarding EBF and the prevalence of suboptimal BF among rural mothers. Therefore, the CDC recommends that efforts to promote breastfeeding particularly focus on rural mothers as one of the priority categories [11, 12, 13, 14].

Despite significant efforts over the last few decades to reduce infant and child mortality in Egypt, chronic malnutrition among children under the age of five remains a major problem throughout the country, with stunting increasing from 23% in 2005 to 29% in 2008 [15]. However, breastfeeding is a common practice in Egyptian culture, the 2014 Egypt Demographic and Health Survey explored that only 27% of women initiated lactation during the first hour after birth compared to 52% in 2008. Also, about 13% of mothers breastfeed their infants exclusively until four or five months compared to 29% in 2008. Incorrect EBF practices and pre-lacteal feeding are common in Egyptian culture and associated with childhood malnutrition [16].

Several countries have reported that producers of infant formula have promoted it as a safer alternative to breastfeeding during the pandemic [8]. Also, the physical distancing rules led to fewer contacts with mothers resulting in fewer opportunities for effective breastfeeding support. Moreover, some countries adopted non-evidence-based procedures such as infant -mother separation and stopping breastfeeding for suspected cases. Besides the limited social contact, community breastfeeding support groups were not accessible to parents in need of assistance [17]. So, this study aimed to assess the knowledge and practices of exclusive breastfeeding among rural women during the COVID-19 pandemic.

Methods

Study design

A cross sectional study design was used to accomplish the aim of the study.

Study Setting

The study was conducted at El-Morabeen Family Medicine Center in rural Damietta governorate, Egypt. It includes two vaccination clinics for the infants and children that are accessible two days a week (Saturdays and Tuesdays from 8 AM to 1 PM).

Sampling Technique

This study used a non-probability purposive sample of 178 lactating women who attended the Family Medicine Center. They were selected according to the study's inclusion and exclusion criteria.

Inclusion Criteria

1. Breastfeeding rural mothers.
2. Mothers with infants aged 0 to 6 months.
3. Mothers who accept to participate in the study.

Exclusion Criteria

1. Non breastfeeding rural mothers.
2. Mothers who have infants older than 6 months.
3. Mothers are unwilling to participate in the study.

Sample Size:

Based on data from literature [18] considering the power of the study is 80%, with precision/absolute error of 5% and type 1 error of 5%, the sample size was calculated according to the following equation: $\text{Sample size} = [Z_{1-\alpha/2}]^2 \cdot P(1-P)/d^2$ Whereas, $Z_{1-\alpha/2}$ = is the standard normal variate, at 5% type 1 error ($p < 0.05$) it is 1.96. P = the expected proportion in population based on previous studies. d = absolute error or precision. So, $\text{Sample size} = [(1.96)^2 \cdot (0.347) \cdot (1-0.347)] / (0.07)^2 = 177.6$. So, the needed sample is **178**

Study Tool:

Data were gathered by the researcher using a structured questionnaire developed after reviewing the relevant literature [3, 9, 19, 20]. It consisted of four parts. **Part one:** socio- demographic traits of rural women that included age, level of education, occupation, and family income. **Part two:** Obstetric history that included gravidity, parity, gestational age, and mode of previous delivery.

Part three

Exclusive breastfeeding knowledge of rural women during the COVID – 19 pandemic It consisted of 17 questions such as the definition of EBF, the optimal duration of EBF, infant benefits of EBF, maternal benefits of EBF, whether COVID – 19 is transmitted through breastmilk, EBF continuation for suspected or infected cases.

Scoring system: Each question had two alternative answers: correct and incorrect. The responder score was 1: 0 for each response respectively. The total knowledge score was calculated based on the number of questions answered in which more than 75% considered good knowledge ,50–75% considered fair knowledge, and less than 50% considered poor knowledge [21].

Part four

Exclusive breastfeeding practices of rural women during the COVID – 19 pandemic. It consisted of 16 questions such as initiation time, frequency of feeding, pre-lacteal feeding, COVID vaccination state, and performance of respiratory hygiene during the pandemic.

Scoring system: Each question had two alternative answers: correct, and incorrect. The responder score was 1 and 0 for each response respectively. The total practices score was calculated based on the number of questions answered with more than 75% will be considered good practice, 50–75% will be considered fair practice and less than 50% will be considered poor practice [21].

Data Quality Control

The study tool's validity was evaluated by 3 experts in women's health and midwifery nursing. The reliability of the study tool was tested by Cronbach's alpha. The Cronbach's alpha value (internal consistency) of the knowledge section was 0.874, and the practice section was 0.902.

Pilot Study Phase

After designing the tool, a pilot study including 18 women who met the study criteria that represent 10% of the total sample was carried out in the same setting to assess the clarity, applicability of the tool, and any obstacles in collecting the data. The pilot participants were eliminated from the study sample. This period took a month (February 2022).

Fieldwork

Data were gathered over a three-month period beginning in March 2022 and ending in May 2022. The researcher attended two days a week (Saturday and Tuesday) from 8 a.m. to 1 p.m. After self-introduction to the nurses and the mothers, the researcher interviewed the mothers to choose only participants who met the inclusion criteria of the study. Then the researcher explained the study's aim and got the mothers' written informed consent for participating in the study. Every mother was interviewed individually for 15 to 20 minutes to gather data via the structured questionnaire. The researcher read each question from the questionnaire to the woman and explained its meaning in Arabic before recording her responses.

Statistical Analysis

The Statistical Package for Social Sciences (SPSS) version 20 was used to analyze the gathered data. Cronbach's alpha was used to test the internal consistency of the study tool. Descriptive statistics such as number, percentage, mean, and Standard Deviation (mean \pm SD) were utilized for quantitative data. The Chi-square test was used to detect the association between categorical variables. At a p value of ≤ 0.05 , the association was statistically significant, and at a p value of < 0.001 , it was highly statistically significant. Finally, the results were presented in tables and figures.

Results

Table 1
Socio-demographic characteristics of the
studied rural women

Variables	(n = 178)	%
Age (years)		
≥ 20	18	10.1
21–25	41	23.1
26–30	91	51.1
More than 30	28	15.7
Mean ± SD	27.4 ± 4.3	
Education		
High school	59	33.2
Institution	33	18.5
University or higher	86	48.3
Occupation		
Work	79	44.4
Housewife	99	55.6
Family income (L.E.)		
less than 4000	27	15.2
4000–6000	144	80.9
6000–10000	7	3.9

Table one reveals that average age of the studied women was **27.4 ± (4.3)**. Nearly half (**48.3%**) of them had university education or higher. As well, more than half (**55.6%**) of them were housewives. More than three-quarters (**80.9%**) of family income ranged between 4000 and 6000 L.E. among the studied mothers.

Table 2
Obstetric history of the studied rural women

Variables	(n = 178)	%
Gravidity		
1	13	7.3
2-3	132	74.2
More than 3	33	18.5
Parity		
1	14	7.9
2-3	136	76.4
More than 3	28	15.7
Abortions		
None	168	94.4
Once	8	4.4
2-3	1	0.6
More than 3	1	0.6
Living Children		
1	15	8.4
2 or More	163	91.6
Previous mode of delivery		
C.S	128	71.9
SVD	50	28.1
Gestational age (Weeks)		
Less than 37	11	6.2
37-42	164	92.1
More than 42	3	1.7
Newborn birth weight (K.G.)		
< 2.5	11	6.2
2.5-3.5	152	85.4
> 3.5	15	8.4
Age of youngest infant (months)		
< 2	1	0.6
2 - < 4	76	42.7
4-6	101	56.7

Table two reveals that nearly three-quarters (**74.2% and 76.4% respectively**) of the studied women were multigravida 2–3 times as well, their parity from twice to three times. Moreover, more than two-thirds (**71.9%**) of them had C.S deliveries. Also, most (**92.1%**) of the studied women delivered at term. Also, the majority (**85.4%**) of infant birth weights were within the normal range.

Table 3
Exclusive breastfeeding knowledge among the studied rural women during the COVID-19 (n = 178)

Variables	Correct		Incorrect	
	n	%	n	%
Have you Heard of exclusive breastfeeding?	11	6.2	167	93.8
Exclusive breastfeeding definition	43	24.2	135	75.8
Best time to start breastfeeding	83	46.6	95	53.4
Colostrum benefits the baby	139	78.1	39	21.9
EBF protects newborns against infectious diseases	144	80.9	34	19.1
EBF protects newborns against chronic diseases	66	37.1	112	62.9
EBF protects women against breast and ovarian cancers	141	79.2	37	20.8
EBF protects women from certain chronic diseases	36	20.2	142	79.8
Frequency of breastfeeding	114	64.0	64	36.0
Recommended fluids for infants < 6 months	46	25.8	132	74.2
The optimal age to start complementary food	53	29.8	125	70.2
Management of scanty milk in the first 3 days	129	72.5	49	27.5
Coronavirus is transmitted by breastmilk	69	38.8	109	61.2
A breastfeeding mother can protect herself and infant from COVID-19 by				
Maintaining a social distance of 1 meter	174	97.8	4	2.2
Avoiding contact with ill people	177	99.4	1	0.6
Wearing a surgical mask outdoor	177	99.4	1	0.6
Maintaining handwashing before and after infant contact	178	100.0	0	0.0
Using hand sanitizers as alcohol	160	89.9	18	10.1
Maintaining respiratory hygiene practices	161	90.4	17	9.6
WHO recommendation for COVID – 19 suspected or positive mothers	106	59.6	72	40.4
WHO recommendation for severe positive mothers	108	60.7	70	39.3
COVID-19 vaccination recommended for bf women	82	46.1	96	53.9

Table three shows that three-quarters (**75.8%**) of the studied women couldn't define EBF correctly. Also, more than half (**53.4%**) of them didn't know the best time for BF initiation. While nearly three-quarters (**74.2%**) of them were unaware of the recommended fluids for infants under the age of six months. Also, more than two-thirds (**70.2%**) of them didn't know the optimal age to start complementary food. Less than two-thirds (**61.2%**) of the studied women had incorrect idea about Coronavirus transition through breastmilk, while more than half of them (53.9%) had incorrect knowledge about the COVID-19 vaccination recommendation.

Table 4

Exclusive breastfeeding practices of the studied rural women during the COVID-19 (n = 178)

Variables	Yes		No	
	n	%	n	%
Starting breastfeeding during the 1st hour after delivery.	21	11.8	157	88.2
Feeding colostrum for the 1st 3 days.	169	94.9	9	5.1
Giving pre-lacteal feeds to the newborn infant.	86	48.3	92	51.7
Each feeding duration for a \geq 15 minutes.	105	59.0	73	41.0
Providing both breasts on each feed.	46	25.8	132	74.2
Starting with last breast on the subsequent feed.	68	38.2	110	61.8
Feeding only breast milk for the 1st 6 months.	27	15.2	151	84.8
Administrating water before six months besides breastfeeding.	151	84.8	27	15.2
Providing food before six months besides breastfeeding	150	84.3	28	15.7
Using artificial teats or pacifiers.	163	91.6	15	8.4
Practicing skin-to-skin contact.	3	1.7	175	98.3
Allowing others to kiss the infant.	172	96.6	6	3.4
Vaccinated against the coronavirus.	37	20.8	141	79.2
Maintain good respiratory hygiene	118	66.3	60	33.7
Committed with facemask outdoor.	100	56.2	78	43.8
Washing hands after coughing or sneezing.	101	56.7	77	43.3

Table four shows that the majority (**88.2%**) of the studied women didn't initiate breastfeeding within the 1st hour while, nearly half (**48.3%**) of them gave pre-lacteal feeds to their infants. Also, feeding duration was less than 15 minutes among more than two thirds (**41%**) of women. Moreover, the majority (**84.8%**) of the studied women didn't breastfeed exclusively, as the majority (**84.8% and 84.3% respectively**) of them provided water and food during the 1st 6 months. Moreover, most (**98.3%**) of the studied women didn't practice skin-to-skin. Additionally, more than three-fourths (**79.2%**) of the studied women didn't vaccinate against COVID. However, two-thirds (**66.3%**) of the studied women maintain good respiratory hygiene.

Table 5

Association between socio-demographic characteristics and exclusive breastfeeding knowledge among the studied rural women (n = 178)

Variables	Poor Knowledge (n = 70)		Fair Knowledge (n = 61)		Good Knowledge (n = 47)		Significance test	
	n	%	n	%	n	%	χ^2	P
Age (years)								
≥ 20	16	22.9	2	3.3	0	0.0		
21–25	27	38.6	9	14.8	5	10.6		
26–30	12	17.1	40	65.6	39	83.0		
More than 30	15	21.4	10	16.4	3	6.4	62.804	< 0.001**
Education								
Secondary education	52	74.3	7	11.5	0	0.0		
Institution	15	21.4	15	24.6	3	6.4		
University or higher	3	4.3	39	63.9	44	93.6	116.361	< 0.001**
Occupation								
Working	19	27.1	30	49.2	30	63.8		
Housewife	51	72.9	31	50.8	17	36.2	16.198	< 0.001**
Family income (L.E.)								
less than 4000	17	24.3	9	14.8	1	2.1		
4000–6000	49	70.0	49	80.3	46	97.9		
6000–10000	4	5.7	3	4.9	0	0.0	14.380	0.006*

Note: χ^2 : Chi -square test *(P) Significant at $P \leq 0.05$ ** High significant at $P \leq 0.001$

Table five reveals a highly statistically significant association between knowledge score and age, educational level, and occupation ($P < 0.001$). Also, a statistically significant relationship between knowledge score and family income ($P < 0.006$).

Table 6
Association between socio-demographic characteristics and exclusive breastfeeding practices among the studied rural women (n = 178)

Variables	Poor Practices (n = 69)		Fair Practices (n = 59)		Good Practices (n = 50)		Significance test	
	N	%	n	%	n	%	χ^2	P
Age (years)								
≥ 20	14	20.3	4	6.8	0	0.0		
21–25	26	37.7	10	16.9	5	10.0		
26–30	10	14.5	41	69.5	40	80.0		
More than 30	19	27.5	4	6.8	5	10.0	64.156	< 0.001**
Education								
Secondary education	48	69.6	11	18.6	0	0.0		
Institution	17	24.6	15	25.4	1	2.0		
University or higher	4	5.8	33	55.9	49	98.0	110.270	< 0.001**
Occupation								
Work	21	30.4	29	49.2	29	58.0		
Housewife	48	69.6	30	50.8	21	42.0	9.738	0.008*
Family income (L.E.)								
less than 4000	18	26.1	6	10.2	3	6.0		
4000–6000	47	68.1	51	86.4	46	92.0		
6000–10000	4	5.8	2	3.4	1	2.0	12.674	0.013*

Note: χ^2 : Chi -square test *(P) Significant at $P \leq 0.05$ ** High significant at $P \leq 0.001$

Table six reveals a highly statistically significant relationship between practices score, age and educational level ($P < 0.001$). Also, there was a statistically significant relationship regarding occupation ($P = 0.008$) and family income ($P = 0.013$).

Discussion

The current study surveyed the knowledge and practices of rural women regarding exclusive breastfeeding during the COVID-19 pandemic and found a statistically positive link between knowledge, practices and highly educated, working mothers with family income ranging from 4000–6000 L.E. per month. These findings are supported by several Egyptian studies conducted by [14] in upper Egypt; [22] in Mansoura; [23]. in Giza, who found a significant relationship between good knowledge, attitude, practices scores and sociodemographic data.

Rural women knowledge of EBF during the COVID-19

This study reported that only one-third of the studied mothers received breastfeeding counselling during antenatal visits by a health care provider, whereas it was higher in the study of [24] who found three-quarters of the studied women received breastfeeding counselling during antenatal visits. This might be explained by different follow-up settings in both studies.

This is a missed chance to counsel mothers about the value of six months exclusive breastfeeding for both mother and infant's health during antenatal care visits.

In addition, the current study found that the EBF term was unfamiliar among most of studied mothers, and three-quarters of them didn't know the definition of EBF. This result was supported by the research conducted by [25] in Indonesia; [26] in Ghana which concluded that most of the studied women didn't hear of exclusive breastfeeding, and nearly one quarter of them were unable to define EBF. Also, two thirds of them defined EBF incorrectly.

The current study revealed a lack of proper knowledge in the sample as more than two-thirds of the studied rural mothers had poor knowledge of EBF, while more than half of them had good knowledge of WHO recommendations for breastfeeding during the pandemic (standard precautions and breastfeeding in case of being infected or suspected of coronavirus). This finding was lower than the result of [27] in India which reported that nearly three-fourths of mothers had good knowledge. Inversely, [28] revealed very poor knowledge among mothers in rural areas of Bangladesh. The researcher explained this result by a number of factors as low socio-economic status among the studied sample and the need for more female education.

Rural women practices of EBF during COVID-19

The WHO grades early breastfeeding initiation from 0–29% as poor, 30–49% as fair, 50–89% as good, and 90–100% as very good [29]. The current study found early breastfeeding initiation to be (poor). This finding is consistent with other Egyptian studies [24] which found a 5.5% prevalence of early initiation, [30] which showed the prevalence of early initiation was 2.7%. On contrast, this result was much lower than study of [31] which reported the lactation initiation was 27% within the first hour.

Also, the current study found a statistically negative relationship between mode of birth and time of breastfeeding initiation. This result is supported by several studies conducted by [32] in China; [33]; [34] in Indonesia; [35] in Calgary, Alberta; [36] in Ethiopia; [37] in Bangladesh; Inversely, [38] in Nicaragua found no significant difference between breastfeeding initiation and delivery mode. This contrast could be explained by the success of Nicaragua adopted policies in the execution of the Baby Friendly Hospital Initiative.

Additionally, the current study revealed the EBF rate for the first 6 months was only (15.2%). This is far from the WHO target level of 50% EBF all over the world. Also, this finding was lower than the results of [24] found that 28% of infants were exclusively breastfed; [13] revealed that EBF was 40% ; 42.8% in the study conducted by [39] in Kampala Uganda; and a study in Iran conducted by [40] showed that EBF was more than 50% this variation might be because of knowledge gap of exclusive breastfeeding duration and benefits among the studied rural women.

Moreover, this study indicated that slightly more than half of the sample already gave pre-lacteal feeds. This is similar to several Egyptian studies [41] in Giza, Egypt found (53.2%) of the studied women administered pre-lacteal feed and [42] in Mansoura, Egypt reported that more than half (58%) of newborns received pre-lacteal feeds. This may be due to prevalent myths about inadequate milk supply in the 1st days following delivery in Egyptian culture. Also, the results are lower than study findings of [43] in India found that slightly more than two-thirds of the studied women already gave pre-lacteal feeds.

However, early uninterrupted SSC is recommended by WHO even during the pandemic to improve neonatal survival [44] The current study showed that skin-to-skin is uncommon practice by most of the studied women. This result agrees with [45] presented that only 10% of mothers reported SSC and [46] found that rates of SSC following a vaginal delivery were below 20% in low-income countries like Tanzania, Ethiopia, and Nepal. Low rates could be explained by hospital policies which demand immediate mother- newborn separation. Also, knowledge gap of the studied women about skin-to-skin contact concept, and its benefits.

Conclusion

Based on the present study results, it is concluded that: There are suboptimal breastfeeding practices as delayed initiation of breastfeeding, low rates of exclusivity, pre-lacteal feeding administration, and lack of skin-to-skin contact among the studied rural mothers compared to WHO recommendation. Hence, the study recommends making breastfeeding counselling an integral part in health care system protocols including private sectors additionally, Implementation of up-to-date evidence-based practices such as skin to skin contact and early starting of breastfeeding during golden hour and activation of baby friendly hospital in Egypt.

Abbreviations

CDC

Center for disease control and prevention

COVID - 19

Coronavirus

EBF

Exclusive breastfeeding

IQ

intelligence quotient

SCC

skin to- skin contact

SD

Standard Deviation

SPSS

Statistical Package for Social Sciences

WHO

World Health Organization

Declarations

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Availability of data and materials

The datasets used and analyzed during the current study are available.

from the corresponding author on reasonable request.

Ethics approval and consent to participate.

Ethical approval was obtained from the Research Ethics Committee at the Faculty of Nursing - Mansoura University in October ,2021. Voluntary participation, confidentiality and right to withdraw from the study at any time without any penalties were clarified to all mothers then a written informed consent was taken from all participants.

Conflict of Interests

The researchers declare that there is no conflict of interest in this study.

Consent for publication

Not applicable

Authors' contributions

A.M. contributed to the methodology and manuscript writing and revision. **N.G.** contributed to developing the tool, collecting, analyzing, and interpreting data and writing this manuscript. All authors have read and approved the manuscript.

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Figures

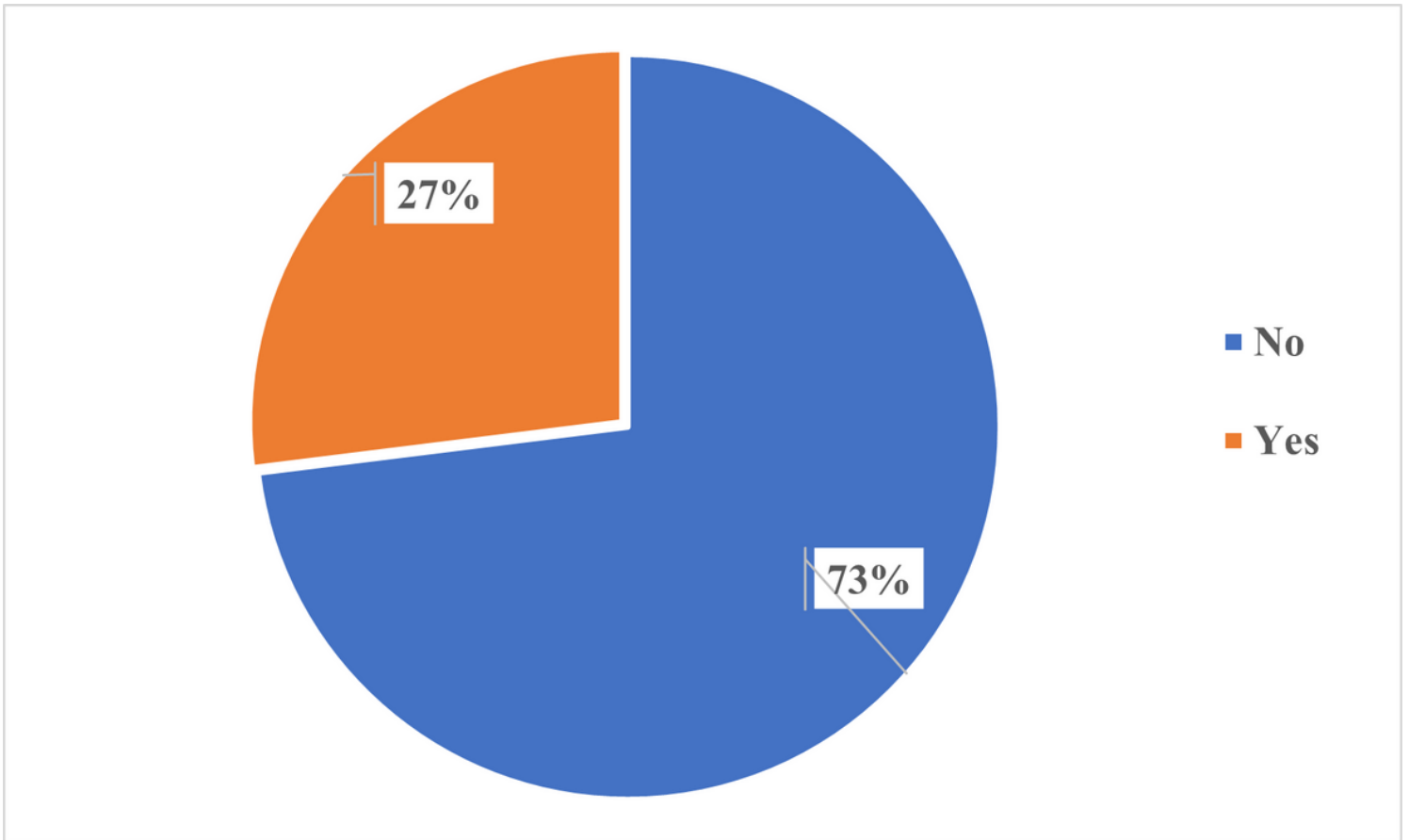


Figure 1

Percent of the studied rural women who received breastfeeding counselling during antenatal care by health care provider (**n=178**)

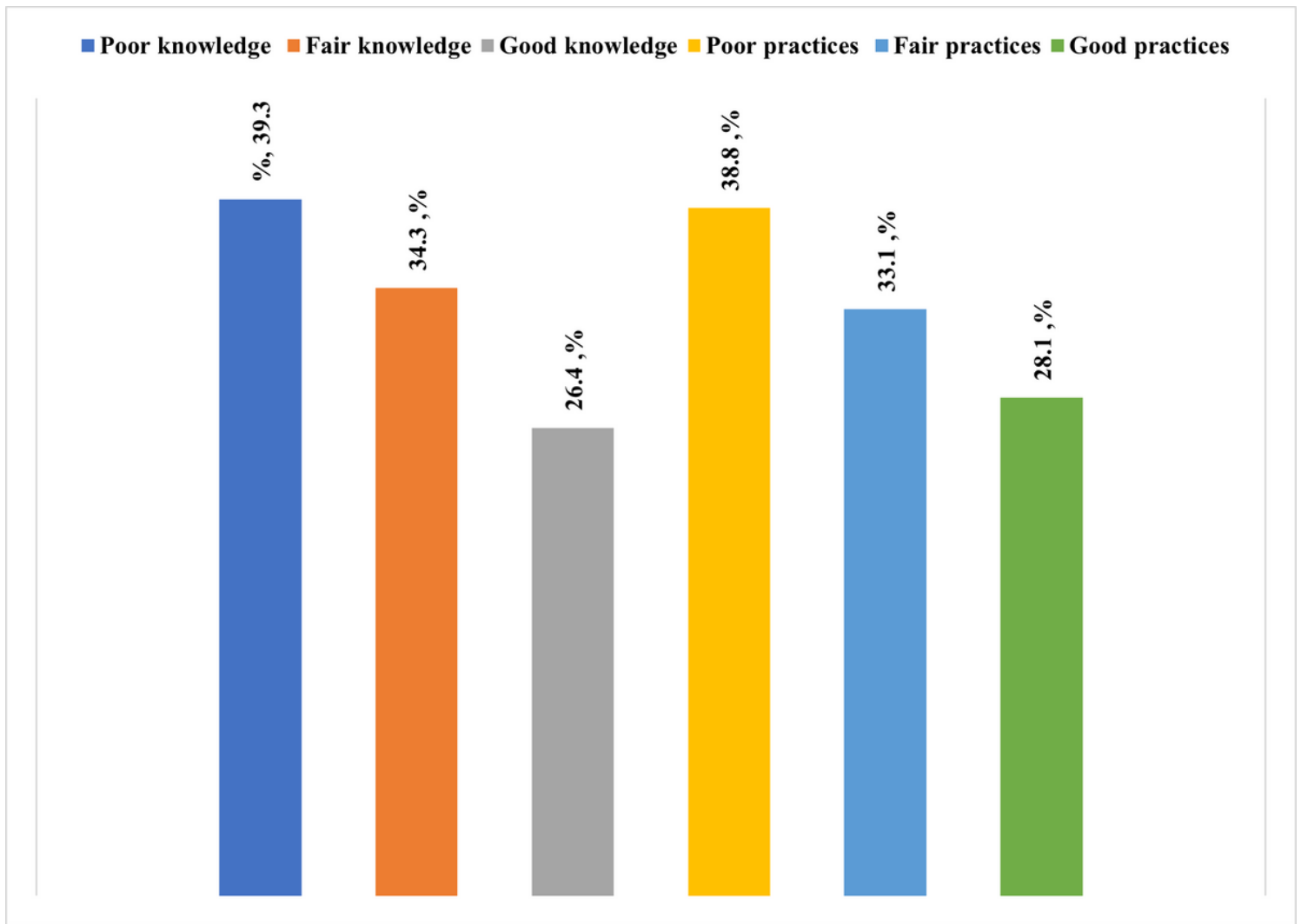


Figure 2

Knowledge and practice scores among the studied rural women (n=178)

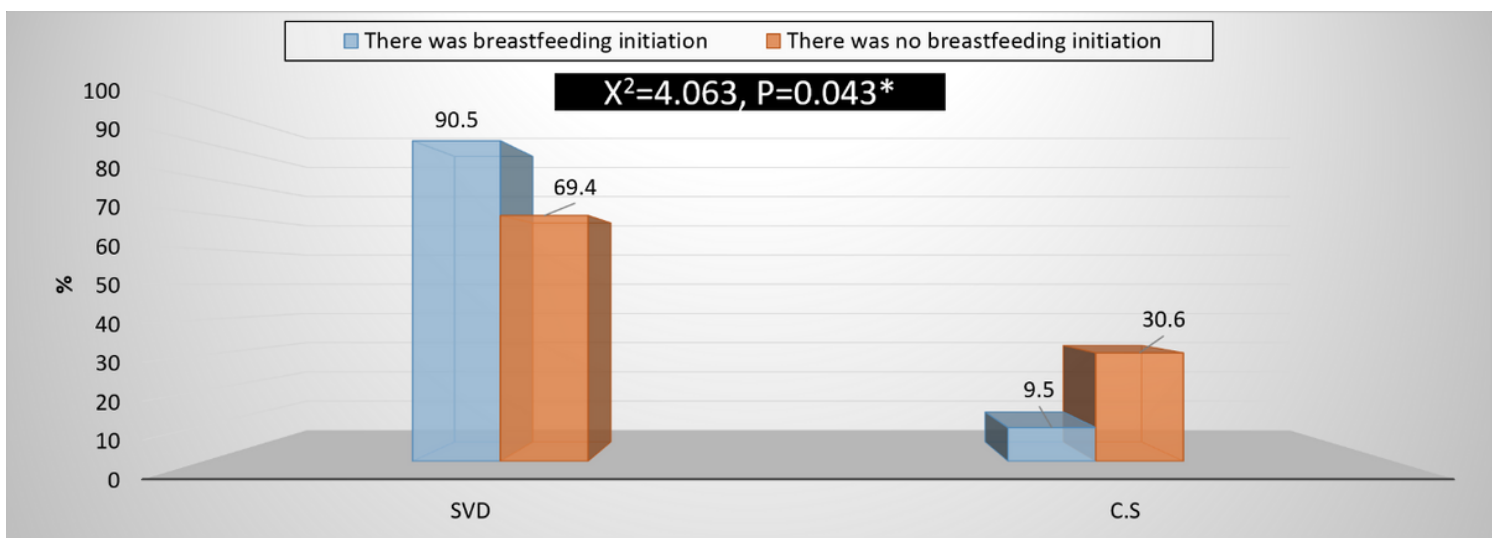


Figure 3

Association between Previous mode of delivery and early initiation of breast feeding (n=178)

Note: χ^2 : Chi-square test at $P \leq 0.05$ ** High significant at $P \leq 0.001$