

## Factors associated with knowledge, attitude, and practice of exclusively breastfeeding Palestinian women: A cross-sectional study

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### ABSTRACT

This study identified the factors associated with adequate knowledge, attitude, and practice of exclusively breastfeeding women who visit maternity healthcare clinics in Palestine. This study was conducted in a cross-sectional design. A pre-tested questionnaire was used to collect the data. The women were recruited from different maternity care and primary healthcare clinics. In this study, 51 (51.0%) of the exclusively breastfeeding women reported that they did not receive counseling on breastfeeding from healthcare providers on the last visit to the maternity clinic before delivery, and 43 (43.0%) of the women reported that they did not receive counseling on breastfeeding from healthcare providers after delivery. Of the exclusively breastfeeding women, 36 (36.0%) reported facing challenges while breastfeeding the last child. Exclusively breastfeeding women who had a male last-child, pregnancy of  $\geq 37$  weeks, received counseling on breastfeeding from healthcare providers in the last visit to the clinic before delivery, experienced sore/cracked nipples, and planned for another pregnancy were 5.55-fold (95% CI: 1.10-28.14), 6.51-fold (95% CI: 1.09-38.94), 7.08-fold (95% CI: 1.42-35.26), 7.26-fold (95% CI: 1.46-36.12), and 9.36-fold (95% CI: 1.93-45.55) more likely to score  $\geq 60\%$  in the knowledge and attitudes test. Women who believed breastfeeding changed their body shape were 3.87-fold (95% CI: 1.12-13.44) more likely to score  $\geq 80\%$  on the practice items. Most Palestinian women who practiced exclusive breastfeeding had good knowledge and positive attitudes toward breastfeeding. However, women reported less than optimal counseling by healthcare providers during their visits to the maternity healthcare clinics before and after delivery. Healthcare providers should counsel women about the benefits and good practices of breastfeeding, notably those whose last child is a female, had a short pregnancy period, and did not plan for another pregnancy. Larger studies are still needed to investigate the prevalence of exclusive breastfeeding among Palestinian women. Additionally, more studies are still needed to investigate the effect of support from husbands and families on practicing exclusive breastfeeding among Palestinian women.

**Keywords:** Breastfeeding, Maternity Healthcare Clinics, Knowledge, Attitude, Practice.

### INTRODUCTION

Exclusive breastfeeding is feeding infants breast milk with no other foods or drinks, including water, for the first six months of age except medications, vitamins, and mineral supplements (1). According to the recommendations of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), women have to initiate breastfeeding within the first hour after birth unless breastfeeding is contraindicated in that

case. Women are advised to exclusively breastfeed their babies for the first six months of their life and then gradually introduce appropriate complementary foods while continuing to breastfeed until the age of two years or more (2).

It has been argued that women's good knowledge of exclusive breastfeeding can positively affect their attitudes and can promote adequate practices of exclusive breastfeeding (3). This would ultimately promote

the health and normal development of infants. Therefore, many studies were conducted to assess the knowledge, attitude, and practice of exclusive breastfeeding among women in different regions (3-5). A previous study investigated breastfeeding patterns of Palestinian infants in the refugee camps around Nablus (6). The study reported that 69.7% of the infants were exclusively breastfed. It is important to mention that the study was based on the files of the women who visited the maternal and child health services provided by the clinics of the United Nations Relief and Works Agency for Palestine Refugees, and the women were not interviewed in person. A recent study in the Gaza Strip revealed that 63% of women initiated breastfeeding early, but 42% reported that their infants were given non-breast milk liquids within the first three days of life (7). In the study, approximately half of the women tackled breast milk insufficiency by consuming extra fluids, while 40% resorted to infant formula. Only 18% of the women reported receiving breastfeeding guidance during their interactions with healthcare professionals throughout labor, delivery, and post-natal check-ups. In another study in the Gaza Strip, 88% of pregnant women knew breast milk was the best food for infants (8). Most women who participated in the study acknowledged that complementary feeding should begin after an infant reaches six months of age, and exclusive breastfeeding should be maintained until that age. Only 44% of the women were aware of the beneficial properties of colostrum for infants.

In Palestine, little is known about the knowledge and attitudes of women who practiced exclusive breastfeeding for the entire period of the first 6 months of their infants' lives. Additionally, little is known about the factors

associated with good knowledge, attitude, and breastfeeding practice among those women. Therefore, this study aimed to assess the knowledge, attitude, and practice of exclusive breastfeeding among women who visit maternity clinics in Palestine. The study also aimed to identify the factors associated with adequate knowledge, attitude, and practice of exclusively breastfeeding women who visit maternity healthcare clinics in Palestine.

## **METHODS**

### ***Study design***

This study used a cross-sectional observational design. A questionnaire was used as the primary data collection instrument. The study was conducted and reported per the rigorous guidelines outlined by the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement, ensuring the study's transparency and adherence to the highest reporting standards in epidemiological research (9).

### ***Population***

This study's participants were breastfeeding women who visited maternity healthcare clinics in Palestine. Women 18 years or older were eligible for screening to be included in the study. Women were included in the study if they had exclusively breastfed their infants for at least the first 6 months of their age and their infants were not given formula after delivery at the hospital. Women who had chronic diseases, those who received medications on a chronic basis, and those whose infants had congenital, chromosomal, and metabolic diseases that affected the infant's milk sucking were excluded. Notably, women who suffered from a self-limiting illness and used medications for a short term were not excluded.

### ***Sample size calculation***

This study calculated the sample size based on a large population of breastfeeding women (more than 20,000). The sample size was calculated at a 95% confidence interval and tolerating a margin of error 0.05. The sample size needed for this study was 385.

### ***The study tool***

The study tool was a questionnaire adapted from previous studies (10-12). The questionnaire contained different sections. The first section collected the demographic variables of the women like age, educational level, employment status, satisfaction with household income, number of children, gender of the last child, duration of pregnancy, mode of delivery, and if the woman had breastfed before. The second section asked women about the frequency of counseling about breastfeeding on the last visit to the clinic before delivery, after delivery, and counseling on the best breastfeeding practices from healthcare providers. The women were also asked to indicate their sources of knowledge about breastfeeding. In the third section, the women were asked to report their breastfeeding challenges. The fourth section contained a 16-item knowledge and attitude scale that women had to respond with either no, yes, or I do not know. The last section contained 6 practice items that women had to answer with either yes or no.

### ***Validity and pilot testing***

The language of the questionnaire was Arabic. To ensure validity, forward- and back-translation approaches were used. The questionnaire was reviewed by the researchers who were native Arabic speakers and had accepta-

ble skills in English for scientific/medical purposes. A pilot study was conducted with 25 women who were asked to respond to the questionnaire twice. The rest-retest method was used to ensure the stability of answers. The answers of the women in both rounds were correlated. Pearson's correlation coefficient was 0.94, which indicated excellent test-retest reliability. The internal consistency of the questionnaire was tested using Cronbach's alpha. The Cronbach's alpha was 0.73, indicating the questionnaire's acceptable internal consistency.

### ***Statistical analysis***

The data collected in this study were entered into SPSS for Windows v.21.0. Descriptive statistics were generated. Because of the small sample size, nonparametric statistics were used. Age was categorized around the median. Categorical groups were compared using Chi-square or Fisher's exact test as appropriate. To control for confounding factors, a multivariate logistic model included the variables with a p-value of  $< 0.25$ . Odds ratios were calculated using multivariate logistic models. A p-value of  $< 0.05$  indicated statistical significance.

### ***Ethical considerations***

The present study complied with local and international ethical standards governing research involving human subjects, including those outlined in the Declaration of Helsinki. Approval was sought and granted by the ethics committee of the University. Participants were thoroughly briefed on the study's objectives, procedures, and potential risks, and the data collected were treated with the utmost confidentiality and privacy. Before their participa-

tion, all participants provided written informed consent, thereby indicating their voluntary participation in the study.

## RESULTS

### *Response rate and characteristics of the women*

In this study, 1,166 women were met at the maternity healthcare clinics. The women who did not breastfeed or partially breastfed their last child were excluded. A total of 500 (42.9%) women indicated that they exclusively breastfed their infants, believed that their infants were given infants' formula after delivery at the hospitals, had no chronic diseases, and were not taking medications on a chronic basis. When screened about the duration of exclusive breastfeeding, only 100 (20.0%) women met the inclusion criteria primarily determined by exclusively breastfeeding their last child for at least 6 months. Of the women, 51 (51.0%) were younger than 30 years, 86 (86.0%) had a university education, 58 (58.0%) were employed, 90 (90.0%) were satisfied with their household income, and 80 (80.0%) had more than one child. Most of the women, 83 (83.0%), had a duration of pregnancy of 37 weeks or more, and 78 (78.0%) had a normal delivery. The detailed demographic variables of the women who participated in this study are shown in Table 1.

Regarding the frequency of counseling, 51 (51.0%) of the women reported that they did not receive counseling on breastfeeding from healthcare providers on the last visit to the clinic before delivery, and 43 (43.0%) of the women reported that they did not receive counseling on breastfeeding from healthcare providers after delivery. Additionally, 47 (47.0%) of the women reported not receiving counseling on the best breastfeeding practices

from healthcare providers. Details of the frequency of counseling about breastfeeding received by the women are shown in Table 1. When the women were asked about their sources of information about breastfeeding, 25 (25.0%) reported that healthcare providers were their primary source of information. Details of the sources of information are shown in Table 1. In this study, 36 (36.0%) women reported facing challenges while breastfeeding the last child. The challenges reported by the women are listed in Table 1. When the women were asked if someone advised them to use infant formula, 18 (18.0%) reported that healthcare providers advised them to do so. Details are shown in Table 1.

**Table (1):** Demographic variables of the exclusively breastfeeding women, frequency of counseling, the primary source of information, and challenges faced while breastfeeding.

Variable	n	%
<b>Sociodemographic</b>		
<b>Age (years)</b>		
< 30	51	51.0
≥ 30	49	49.0
<b>Education</b>		
School	14	14.0
University	86	86.0
<b>Employment status</b>		
Not employed	42	42.0
Employed	58	58.0
<b>Self-reported satisfaction with household income</b>		
Unsatisfied	10	10.0
Satisfied	90	90.0
<b>Number of children</b>		
One child	20	20.0
More than one child	80	80.0

Variable	n	%
<b>Gender of the last child</b>		
Male	45	45.0
Female	55	55.0
<b>Duration of pregnancy</b>		
< 37 weeks	17	17.0
≥ 37 weeks	83	83.0
<b>Mode of delivery</b>		
Normal delivery	78	78.0
Cesarean delivery	22	22.0
<b>I have breastfed before</b>		
No	17	17.0
Yes	83	83.0
<b>Counseling about breastfeeding</b>		
<b>Received counseling on breastfeeding from healthcare providers on the last visit to the clinic before delivery</b>		
No	51	51.0
Yes	49	49.0
<b>Received counseling on breastfeeding from healthcare providers after delivery</b>		
No	43	43.0
Yes	57	57.0
<b>Received counseling on the best breastfeeding practices from healthcare providers</b>		
No	47	47.0
Yes	53	53.0
<b>Sources of information about breastfeeding</b>		
Healthcare providers	25	25.0
Internet/T.V./social media	46	46.0
Breastfeeding training session	7	7.0
Family and friends	22	22.0
<b>Challenges to breastfeeding reported by the women</b>		
<b>Faced challenges with breastfeeding my last child</b>		

Variable	n	%
No	64	64.0
Yes	36	36.0
<b>I experienced sore/cracked nipples.</b>		
No	67	67.0
Yes	33	33.0
<b>I was tired of breastfeeding</b>		
No	35	35.0
Yes	65	65.0
<b>I had difficulty breastfeeding outside my house</b>		
No	23	23.0
Yes	77	77.0
<b>I had a lot of work to do</b>		
No	14	14.0
Yes	86	86.0
<b>My husband was not supportive</b>		
No	78	78.0
Yes	22	22.0
<b>My family was not supportive</b>		
No	79	79.0
Yes	21	21.0
<b>I had to ask other women to breastfeed my child</b>		
No	91	91.0
Yes	9	9.0
<b>I had to avoid many foods</b>		
No	76	76.0
Yes	24	24.0
<b>I experienced hair loss</b>		
No	94	94.0
Yes	6	6.0
<b>Breastfeeding changed my body shape</b>		
No	44	44.0
Yes	56	56.0
<b>I suffered a health issue/was taking medications</b>		
No	82	82.0
Yes	18	18.0



#	Knowledge/attitude item	No		Yes		I don't know	
		n	%	n	%	n	%
9	Breastfeeding decreases the mother's weight	25	25.0	70	70.0	5	5.0
10	Breast milk does not lose its quality/benefits when it is pumped out or stored appropriately	13	13.0	73	73.0	14	14.0
11	Pumped breast milk can be stored at room temperature (15.5 °C to 29.4 °C) for up to 8 hours	42	42.0	39	39.0	19	19.0
12	Pumped breast milk can be stored in the refrigerator (4 °C or colder) for up to 8 days	37	37.0	45	45.0	18	18.0
13	Breastfeeding can increase the mother's weight	75	75.0	17	17.0	8	8.0
14	Breastfeeding can cause hair loss	29	29.0	50	50.0	21	21.0
15	Pumping breast milk makes it no longer beneficial for the infant	80	80.0	5	5.0	15	15.0
16	Mothers should stop breastfeeding if they take any medication	53	53.0	33	33.0	14	14.0

#### *Association between knowledge and attitude with demographic variables of the women*

Knowledge and attitude scores were significantly associated with the gender of the last child, duration of pregnancy, number of breastfeeding hours per day, breastfeeding duration, experiencing sore/cracked nipples, feeling tired of breastfeeding, and planning for another pregnancy. A multivariate logistic regression model included variables with a p-value of < 0.25. The model showed that women who had a male last child, who had a

pregnancy of  $\geq 37$  weeks, who received counseling on breastfeeding from healthcare providers in the last visit to the clinic before delivery, who experienced sore/cracked nipples, and who planned for another pregnancy were 5.55-fold (95% CI: 1.10-28.14), 6.51-fold (95% CI: 1.09-38.94), 7.08-fold (95% CI: 1.42-35.26), 7.26-fold (95% CI: 1.46-36.12), and 9.36-fold (95% CI: 1.93-45.55) more likely to score  $\geq 60\%$ . Details of the multivariate logistic regression model are shown in Table 3.

**Table (3):** Multivariate logistic regression model of factors associated with knowledge and attitude scores.

Variable	$\beta$	S.E.	Wald	p-value	OR	95% CI for OR	
						Lower	Upper
Self-reported satisfaction with household income	-0.80	1.03	0.61	0.434	0.45	0.06	3.34
Gender of the last child	1.71	0.83	4.29	0.038	5.55	1.10	28.14
Duration of pregnancy	1.87	0.91	4.22	0.040	6.51	1.09	38.94





### *Association between demographic variables of the women with their breastfeeding practices*

In this study, practice scores were significantly associated with satisfaction with household income, duration of pregnancy, having fed the infant formula in the hospital, facing challenges with breastfeeding the last child, having breastfed before, reporting that breastfeeding changed body shape, having

suffered a health issue/was taking medications, and having to return to work.

A multivariate logistic regression model included variables with a p-value of < 0.25. The model showed that women who believed breastfeeding changed their body shape were 3.87-fold (95% CI: 1.12-13.44) more likely to score  $\geq 80\%$  on practice items. Details of the multivariate logistic regression model are shown in Table 5.

**Table (5):** Multivariate logistic regression model of factors associated with practice scores.

Variable	B	S.E.	Wald	p-value	OR	95% CI for OR	
						Lower	Upper
Age	-0.87	0.64	1.87	0.171	0.42	0.12	1.46
Self-reported satisfaction with household income	-1.70	0.89	3.66	0.056	0.18	0.03	1.04
Number of children	0.43	1.03	0.17	0.677	1.54	0.20	11.66
Duration of pregnancy	-1.35	0.76	3.17	0.075	0.26	0.06	1.15
Received counseling on breastfeeding from healthcare providers on the last visit to the clinic before delivery	1.58	1.00	2.49	0.114	4.87	0.68	34.74
Received counseling on breastfeeding from healthcare providers after delivery	-0.67	1.11	0.36	0.550	0.51	0.06	4.56
Received counseling on the best breastfeeding practices from healthcare providers	-0.40	1.14	0.12	0.729	0.67	0.07	6.28
My child was fed formula in the hospital	0.44	0.66	0.44	0.507	1.55	0.42	5.72
Faced challenges with breastfeeding my last child	0.59	0.65	0.83	0.363	1.80	0.51	6.42
I have breastfed before	-1.53	1.10	1.95	0.163	0.22	0.02	1.86
I had difficulty breastfeeding outside my house	1.19	0.76	2.46	0.117	3.29	0.74	14.52
Asked other women to breastfeed my child	1.37	1.36	1.03	0.311	3.95	0.28	56.46
I experienced hair loss	-2.14	1.53	1.94	0.164	0.12	0.01	2.39

Variable	B	S.E.	Wald	P-value	OR	95% CI for OR	
						Lower	Upper
Breastfeeding changed my body shape	1.35	0.64	4.54	0.033	3.87	1.12	13.44
I suffered a health issue/was taking medications	1.07	0.88	1.47	0.225	2.92	0.52	16.51
I had to return to work	0.83	0.77	1.14	0.285	2.29	0.50	10.41
I was expecting to face challenges if I had to breastfeed during working hours	0.52	0.62	0.70	0.402	1.68	0.50	5.61

## DISCUSSION

Because of its multiple benefits for the infant and mother, different health authorities and professional bodies have recommended exclusive breastfeeding for the first 6 months of life. For the first time, the frequency of counseling challenges to breastfeeding, knowledge, attitude, and breastfeeding practices was assessed among women visiting maternity healthcare clinics in Palestine. The study established associations between demographic variables of the women with their knowledge, attitude, and breastfeeding practices. The findings of this study have significant importance to the larger society because breastfeeding practices might affect the next generation's normal development. Additionally, adequate knowledge, a positive attitude, and correct breastfeeding practices are important for infants' normal growth and development.

In this study, more than half of the women indicated that they did not receive counseling on breastfeeding on the last visit to the clinic before delivery, after delivery, or specific counseling on the best breastfeeding practices from healthcare providers. The findings reported in this study were consistent with those

previously reported in the Gaza Strip (7). Additionally, only 25.0% of the women in this study indicated that their primary source of information on breastfeeding was healthcare providers. These findings are alarming and might present a call for action from decision-makers in health authorities and professional bodies. It has been argued that healthcare providers should counsel/educate women about the benefits of breastfeeding for the infant and mother and adequate breastfeeding practices before and after delivery. These counseling sessions might improve knowledge, attitude, and breastfeeding practice (13, 14). Additionally, healthcare providers are knowledgeable about the adequate practices of breastfeeding. Therefore, they should present themselves as sources of knowledge for the women visiting maternity healthcare clinics.

In this study, more than one-third of the women faced challenges with breastfeeding. These challenges, like sore/cracked nipples and tiredness, might decrease adherence to the recommended exclusive breastfeeding for the first 6 months of life, adequacy of the breastfeeding from each breast, an adequate number of breastfeeding sessions, and adequate duration of breastfeeding per day (15-17). The

challenges reported in this study were consistent with those reported in a previous qualitative study in Jordan (18). healthcare providers should address these challenges and discuss them with the women during their visits to maternity healthcare clinics. Addressing these issues might improve the breastfeeding experiences of women.

In this study, about 40% of the women received advice to use infant formula to feed their infants. Surprisingly, 18.0% of the women indicated that this advice came from healthcare providers. Although the use of infant formula cannot be avoided, women should be encouraged and supported to exclusively breastfeed their infants in the first 6 months of their infants' lives (19, 20). A previous study in Palestine reported that 14.3% of the infants in the Nablus refugee camps were exclusively formula-fed (6). The study showed that women's late marriage and cesarean delivery negatively affected breastfeeding practices.

The findings of this study showed that knowledge and attitude scores were associated with the gender of the child. In many cultures, including the Arab Palestinian culture, males receive privileged care compared to their female counterparts (21). Probably, this has also affected the knowledge and attitudes of the women who had male infants in this study. In Jordan, a previous study reported that most women knew about the benefits of breastfeeding and had positive attitudes toward exclusive breastfeeding (22). In this study, the duration of pregnancy, number of breastfeeding hours, and breastfeeding duration affected the knowledge and attitudes of the women. Probably, the longer the duration of breastfeeding, the more women become aware of breastfeeding.

Moreover, the women who experienced sore/cracked nipples felt tired of breastfeeding and planned for another pregnancy might have sought more knowledge about breastfeeding. In this study, the women who believed breastfeeding changed their body shape were likelier to report higher adequate practice scores. The weight of women increases significantly during pregnancy (23). Probably, women become more concerned about their body shape and look forward to losing weight and regaining their body shape.

### ***Limitations and strengths of the study***

This study has many limitations. First, this study was conducted in a cross-sectional design. The findings reported from cross-sectional studies are time-bound and represent those that prevailed during the study. Second, there was no intervention in this study. Interventional studies could be more interesting as they test the effects of some interventions among the study population. In this study, we could have tested an intervention to increase counseling about breastfeeding. Third, the sample size used in this study was relatively small. However, this should be interpreted cautiously because 1,166 women were screened against the inclusion and exclusion criteria. Women who did not breastfeed partially breastfed their infants, whose infants were given formula after delivery at the hospital, those who had chronic diseases, took medication on a chronic basis, and those who did not exclusively breastfeed their infants for the entire period of the first 6 months of their infants' lives were excluded. This explains the small sample size included and analyzed in this study. Despite the small sample size in this study, important associations were established. Fourth, we did not collect information

on the infants' health status and the fathers' educational level. The inclusion of these variables might have produced interesting findings.

### ***Strengths of the study***

This study has some strong points. First, this is the first study of its type in Palestine. The findings of this study might be informative to decision-makers in health authorities. Second, an appropriate study tool was used in this study. The study tool was valid and was previously tested for use in other studies. Third, the study tool used allowed for measuring many dimensions. These dimensions should have broadened the findings reported in this study and provided more insights for the decision-makers who might use the findings to design appropriate interventions to improve breastfeeding practices among women.

### **CONCLUSION**

Most Palestinian women who practiced exclusive breastfeeding had good knowledge and positive attitudes toward breastfeeding. However, women reported less than optimal counseling by healthcare providers during their visits to the maternity healthcare clinics, before and after delivery. Healthcare providers should counsel women about the benefits and good practices of breastfeeding, notably those whose last child is a female, had a short pregnancy period, and did not plan for another pregnancy. Larger studies are still needed to investigate the true prevalence of exclusive breastfeeding among Palestinian women. Additionally, more studies are still needed to investigate the effect of support from husbands and families on practicing exclusive breastfeeding among Palestinian women.

### **DECLARATIONS**

#### ***Consent for Publication***

Not applicable.

#### ***Data Availability***

The data relevant to this study are provided within this manuscript.

#### ***Author Contributions***

R.S., M.J., H.H., and I.M. were involved in the conception and design of the work, analysis, and interpretation of data, and drafting and final approval of the manuscript. LHY, N.N., and N.B. were involved in the data acquisition, analysis, drafting of the work, and final approval of the version to be published. This research is based on a student project. All authors approved the final manuscript.

#### ***Competing Interests***

The authors declare no competing interests.

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### **REFERENCES**

- 1] WHO U. Global nutrition targets 2025: Breastfeeding policy brief. Geneva: World Health Organization, 2014.
- 2] UNICEF. Breastfeeding: A mother's gift, for every child. UNICEF, 2018.

- 3] Dukuzumuremyi JPC, Acheampong K, Abesig J, Luo J. Knowledge, attitude, and practice of exclusive breastfeeding among mothers in East Africa: a systematic review. *Int Breastfeed J.* 2020; 15(1):70.
- 4] Zhang Z, Zhu Y, Zhang L, Wan H. What factors influence exclusive breastfeeding based on the theory of planned behaviour. *Midwifery.* 2018;62:177-82.
- 5] Cascone D, Tomassoni D, Napolitano F, Di Giuseppe G. Evaluation of Knowledge, Attitudes, and Practices about Exclusive Breastfeeding among Women in Italy. *Int J Environ Res Public Health.* 2019; 16(12).
- 6] Musmar SG, Qanadeelu S. Breastfeeding patterns among Palestinian infants in the first 6 months in Nablus refugee camps: a cross-sectional study. *Journal of human lactation: official journal of International Lactation Consultant Association.* 2012; 28(2): 196-202.
- 7] Iellamo A, Monaghan E, Moghany SAL, Latham J, Nassereddin N. Breastfeeding knowledge of mothers in protracted crises: the Gaza Strip example. *BMC Public Health.* 2021;21(1):742.
- 8] O.jalambo M, Kanoa B, younis S, Elkariri M. knowledge, Attitudes on infant Feeding Among Pregnant Mothers in The Gaza Strip, Palestine. 2018.
- 9] Vandembroucke JP, von Elm E, Altman DG, Gøtzsche PC, Mulrow CD, Pocock SJ, et al. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): explanation and elaboration. *PLoS Med.* 2007;4(10):e297.
- 10] Al Ketbi MI, Al Noman S, Al Ali A, Darwish E, Al Fahim M, Rajah J. Knowledge, attitudes, and practices of breastfeeding among women visiting primary healthcare clinics on the island of Abu Dhabi, United Arab Emirates. *Int Breastfeed J.* 2018;13:26.
- 11] Taha Z, Garemo M, Nanda J. Patterns of breastfeeding practices among infants and young children in Abu Dhabi, United Arab Emirates. *Int Breastfeed J.* 2018;13:48.
- 12] Taha Z, Garemo M, El Ktaibi F, Nanda J. Breastfeeding Practices in the United Arab Emirates: Prenatal Intentions and Post-natal Outcomes. *Nutrients.* 2022; 14(4):806.
- 13] Shafaei FS, Mirghafourvand M, Havizari S. The effect of prenatal counseling on breastfeeding self-efficacy and frequency of breastfeeding problems in mothers with previous unsuccessful breastfeeding: a randomized controlled clinical trial. *BMC Womens Health.* 2020; 20(1):94.
- 14] Keenan-Devlin LS, Hughes-Jones JY, Borders AEB. Clinically integrated breastfeeding peer counseling and breastfeeding outcomes. *J Perinatol.* 2021; 41(8):2095-103.
- 15] Spencer JP. Management of mastitis in breastfeeding women. *American family physician.* 2008;78(6):727-31.
- 16] Feenstra MM, Jørgine Kirkeby M, Thygesen M, Danbjørg DB, Kronborg H. Early breastfeeding problems: A mixed method study of mothers' experiences. *Sex Reprod Healthc.* 2018; 16:167-74.

