

Effectiveness of Teaching Program on Knowledge Regarding the Breast Feeding Problems among Postnatal Mothers

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Abstract

Background: The mother should start breast-feeding as soon as possible after the birth, to give the baby time to learn to breastfeed before the breasts become full and firm. Any problems of breast, if left untreated it may cause further complications like recurrence of the problems of breast and even breast cancer. In the Grampian study 33% of all women experienced breast problems in the first 2 weeks and 28% in the thereafter. If mothers have knowledge regarding management of breast feeding problems, they can prevent those complications. Aim of the study: Evaluate the effectiveness of teaching program on knowledge regarding breast feeding problems among postnatal mothers. Research Design: Quasi- experimental research design (One group pre-test, posttest) was utilized in the current study. Subject: Non probability convenient sampling technique was utilized. The study sample includes 350 postnatal women in rural area in Minia city. Setting: This study was conducted in five primary health care units in Minia city in the following villages (bani –ahmed, maquosa, tua, demshir, elborgaia).this villages was selected randomly . Tools of data collection:include : 1-Structured self-administrative questionnaire to collect data related to socio demographic data and characteristics of breast feeding, 2-Knowledge assessment tool (pre –posttest education).Result: the study revealed Significant improvement was observed in the level of knowledge post program as compared to preprogram ($p < 0.000$).Majority (97.4%) of mothers had good knowledge and only 2.6% had have average knowledge post program . It found that level of knowledge posttest were significantly higher after teaching program as compared to their values at pretest. There was statistically significant difference between pretest knowledge with women education, occupation and income conclusion: Teaching program is effective in improving the knowledge of postpartum mothers. Recommendation: It's recommended that Providing the postnatal mothers health education program about proper breastfeeding technique in their discharge teaching plan and maintain continuous contact with them.

Keywords: effectiveness, breastfeeding problems, postnatal mothers

Introduction

Breastfeeding is the closest thing the world has to a magic bullet for child survival. In developing countries, optimal breastfeeding – starting within one hour of birth, exclusive breastfeeding (no additional foods or liquids, including water) for the first 6 months of life, and continued breastfeeding until age 2 or longer – has the potential to prevent more than 800,000 deaths in children under age 5 and 20,000 deaths in women every year (1).

The crucial time for good nutrition of a baby is between the inception of pregnancy of a woman and the second birthday of a child, which is usually referred to as the 'critical window'. The best food for a child's growth and development during this critical window is breast milk. All of the vitamins, minerals, enzymes and antibodies needed by a child to grow and thrive are provided by breast milk (2). Exclusively breastfed children are less susceptible to diarrhea and pneumonia and are 14 times more likely to survive than non-breastfed children (3). Putting the newborn to the breast to nurse is now considered "normative" in the United States with 75% of women doing so (4).

Despite the advantages of breastfeeding, many women choose not to breastfeed for a variety of reasons. Others initiate breastfeeding but stop due to problems that arise. Several common problems that may arise during early breastfeeding period such as ;breast engorgement, plugged milk duct, breast infection and insufficient milk supply, which originate from conditions that lead the mother to inadequate empty of the breasts. Incorrect technique, not frequent breastfeeding and breastfeeding on scheduled times, pacifiers and food suppliers are important risk factors that can predispose to lactation problems. The adequate management of those conditions is fundamental, as if not treated they frequently lead to early weaning (5).

The correction of positioning and attachment is associated with fewer breastfeeding problems (6). Antenatal

counseling as well as support in the postpartum period by the maternity nurse helps in establishing good lactation and ensure the reduction or prevention of breast and nipple problems (7).

Breastfeeding has been recognized by the American academy of pediatrics as the optimal source of nutrition for infants.it has many benefits for both infant and mother. Exclusive breastfeeding has the single largest potential impact on child mortality of any preventive intervention (8). World Health Organization (WHO) recommends breastfeeding as a main source of food for babies for the first six months, and encourages mothers to consider breastfeeding as the only feeding source. Between six months and two years old, it is recommended that mothers could use other supplemental sources (such as water, other liquids, or solid baby food) to feed their babies along with breastfeeding (9).In addition to. Bear, Mayer, Ryan and Up Hoff (2015) mentioned poor positioning; insufficient milk resulted to damaged nipple, or disorganized the breast, fussiness at the breast accompanied by fever, lethargy, cough, stunted growth and dehydration (10).

Several such studies have reported the high prevalence of post-natal breast problem and the major cause of it to be the lack of knowledge of mothers and their ignorance regarding the same. Even the postnatal mothers have been ignorant of the various methods of managing the postnatal breast problems. (Anjali Pushkar,2016) found in his study that only nominal number of postnatal mothers had adequate knowledge on postnatal breast problems and their management which indicated that there was still lack of adequate knowledge(11).

Thus, health education programs are required to enhance the knowledge regarding postnatal breast problems, proper breast feeding techniques and breast care to create awareness among post natal mothers as well as antenatal mothers which may further help to reduce breast problems in

postnatal period. Awareness regarding management of postnatal breast problems can be planned to improve knowledge among nursing students, staffs and other health personnel so it can help to improve knowledge among community people through these health personnel (11).

Significance of the Study

A study was conducted at postnatal ward and outpatient clinic at el- Manial maternity hospital in Egypt among 90 postnatal mother randomly assigned into two group (45 for each group), more than twenty percent of each group suffered from breast engorgement (22.2%-28.9%) (12).

Meeting the educational needs of the new mother and her family is one of the primary challenges facing the postnatal needs that vary based on age, background, experience and expectation (13). Nipple pain and damage are common in the early postpartum period and are associated with early cessation of breastfeeding and co- morbidities such as depression, anxiety, and mastitis. Also an appropriate education with regard to breastfeeding challenges in the first days, would prepare mothers to have a successful breastfeeding (14).

In the Grampian study 33% of all women experienced breast problems in the first 2 weeks and 28% in the thereafter. This may be an underestimation, because some of the women may have considered these problems as baby feeding problems. Apart from overt mastitis, a relatively rare condition of these problems may have comprised engorgement, sore, cracked, bleeding or inverted nipples. Breast problems are often cited as the reason for stopping breastfeeding. The majority of such problems can be prevented by practices which support breastfeeding, and skilled help to establish breastfeeding in the early postpartum period (5). There for, there is need to assess the level of knowledge of the mothers about breastfeeding problems and its management and providing them teaching program about it. After that, assessing the level of their knowledge after the program.

Aim of the study:

The aim of this study is:-

1. Evaluate the effectiveness of teaching program on knowledge regarding breast feeding problems among postnatal mothers.
2. Find out the association between pretest knowledge scores among postnatal mothers with their selected demographic variables.

Research Hypothesis:

1. There is significant difference between the mean pre-test and post-test knowledge scores regarding breastfeeding problems among postnatal mothers.
2. There is significant association between pre-test knowledge scores regarding breastfeeding problems among the postnatal mothers with selected socio-demographic variables.

Subjects and methods:

Research Design

Quasi- experimental research design (One group pre-test, posttest) was used for the current study.

Subject:

Simple random sample technique was utilized in this study. The study sample includes 350 postnatal women in rural area in Minia city. The sample size determined according to:

$$N = P * (1-p) * (Z \alpha / d)^2$$

$$N = 70 \% * (1-70\%) * (1.96 / 0.05)^2$$

- (n) refer to sample size
- (P) refer to expected proportion of post natal mothers with deficit of knowledge regarding breast feeding problems and its management (70%)(11).
- (d) refer to tolerated error/margin of error = 0.05; confidence interval (CI) =95%, the value for (Z α) = 1.96 is found in statistical tables (15). accordingly, the sample size was estimated and an additional 10% of the calculated sample was added to guard against non-respondents rate or drop out from the study.

Inclusion criteria:

- Post natal mothers of reproductive age range (15yrs – 49yrs)
- Primipara
- First postnatal days (3-5days)
- Healthy newborn
- Exclusion criteria:
- Refused women

Setting

This study was conducted in five primary health care units in Minia city in the following villages (bani – ahmed, maquosa, tua, demshir, elborgaia). these villages were selected randomly. Every primary health care units consist of two floor, this PHC units provide different services such as antenatal care services (Follow-up of the pregnant mother during pregnancy from maternal and fetal health and laboratory tests, Take the required vaccination and medication, postnatal care services, family planning services and health education services.

Tools of data collection

Tools of data collection used in this study were consisted of:

The first tool:

A self-administrative questionnaire it was designed by the researcher and consisted of two parts:

- Part I: was used to assess Sociodemographic characteristics: such as (age, occupation, education, family income, residence, address, telephone number) and date of delivery, place of delivery, type of labor and source of information.
- Part II: was used to assess breastfeeding characteristics: such as initiation of breast feeding, type of baby feeding, duration of feeding, position, frequency of feeding, number of feeding during the day, using a pacifier before breast feeding, weight of baby, days of postpartum period, difficulty of feeding, and adequacy of breast milk, baby weight, antenatal education and sleeping of baby.

The second tool:

- Knowledge assessment tool developed by the researcher to assess the women's knowledge about breastfeeding problems, the knowledge was

determined by using multiple-choice questions. It was included four main questions related to five breast feeding problems which included (77) questions about definition, causes, sign and symptoms and management of each one.

Scoring System:

The women's answers related to knowledge was scored and calculated. each correct answer was given a score of one and wrong answer a score of zero respectively , with maximum score of (77) and minimum was zero .these scores was converted into a percent score (poor knowledge scored <50%,average knowledge 50%- <75% and good knowledge scored 75% or more).

Validity and reliability of tools:

- Tools content validity was done to identify the degree to which the used tools which measure what was supposed to be measured. The developed tools were examined by a panel of five experts in the field of women health and obstetric nursing, and necessary modifications were done.
- The tools was tested for internal reliability by using alpha Cronbach's was performed. It was found (0.977).

Pilot study

A pilot study was carried out on 35 women (10%) of the total sample to test feasibility, objectivity, and applicability of the tools. Results of the pilot study illustrated that no any refinements and modifications needed so the subjects were included to the actual sample.

Ethical consideration:

Before the conduction of the pilot study as well as actual study, an official permission was obtained from the dean of the Faculty of Nursing and requested to the Director of health affairs. Research proposal was approved from ethical committee and post graduate committee in faculty of nursing. Oral Consent was obtained from mothers that are willing to participate in the study, after explaining the nature and purpose of the study. Study subjects have the right to refuse to participate or withdrawal from the study without any rational any time. Study subject privacy was considered during collection of data. Participants was assure that all their data are highly confidential

Data collection procedure:

- After obtaining an official permission, an oral informed consent was obtained from each woman included in the study. It included full explanation of

Result

I-socio-demographic characteristics:-

Table (1) Distribution of the mothers by their socio -demographic characteristics:-

Items	N=350	
	No.	%
Age (years)		
15 < 25	119	34.0
25 < 35	194	55.4
35- 49	37	10.6
Mean ± SD	26.7 ± 5.6 years	
Occupation		
Working	98	28.0

the procedure, and rights for privacy and confidentiality. Socio-demographic data, characteristics of breast feeding and women's knowledge regarding to breast feeding problems were assessed.

- The researcher collected the sample through two days per week from the beginning of the study. The study was carried out in the period from March through July, 2017. The researcher attended to PHC of five villages at 9:00 a.m., to 1:00 p.m.; Face to face interview
- During implementation of the program, the woman in the study sample received the knowledge related to breastfeeding problems and its management.
- The session's numbers were around two sessions per day for each small group. Each session lasted for around 35to 45minute in each session the researcher used face to face method to achieved the proposed goal and allow women to asking, discussion and reach high level of understanding. During these sessions the researcher used illustrations, examples of objects, lectures and pamphlet.
- The researcher had periodic contact with the women through phone for refreshing the provided knowledge, solving any problems and answering any questions.
- All the study sample received handout includes knowledge related to breastfeeding problems such as definition, causes, sign and symptoms and how to manage and prevent it.
- Two evaluations were conducted for each woman in the study. First one was at the beginning of the study as a baseline data. Second evaluation was two weeks after implementing the program to detect the effect of teaching program on the women's level of knowledge. The same assessment tool (second tool) was used during the two evaluations.
- Before leaving each PHC unit the researcher left paner and numbers of brochure to the personnel who responsible for giving health education in the unit.

Statistical analysis

Statistical analysis was done by using Statistical Package for the Social Science (SPSS 20.0). Data were presented by using descriptive statistics in the form of frequencies and percentage for qualitative variables, and mean for quantitative variable. The level of significance was developed accepted at p < 0.05.

Items	N=350	
	No.	%
House wife	252	72.0
Education		
Illiterate	39	11.1
Read and write	21	6.0
Primary education	30	8.6
Secondary education	56	16.0
University education	204	58.3
Income (L.E)		
<1000	232	66.3
1000 < 2000	113	32.3
2000- 3000	5	1.4
Mean ± SD	979.0 ± 425 L.E	
Residence		
Urban	23	6.6
Rural	327	93.4

Data in Table (1) illustrates distribution of the mothers according to their socio- demographic characteristics. Regarding age it was observed that more than half (55.4%) of the studied mothers their age ranged between (25 < 35) with the mean age of the mothers was (26.7years). Regarding mother's occupation around three quarter (72%) of the mothers were housewife. More than two half of the studied mothers (58.3%) had university education. it was noticed that (93.4%) of the mothers were living in rural areas. In addition more than half of mothers (66.3%) their income was 1000 L.E.

Figure (A): Distribution of the mothers according to their source of information:-

Source of information

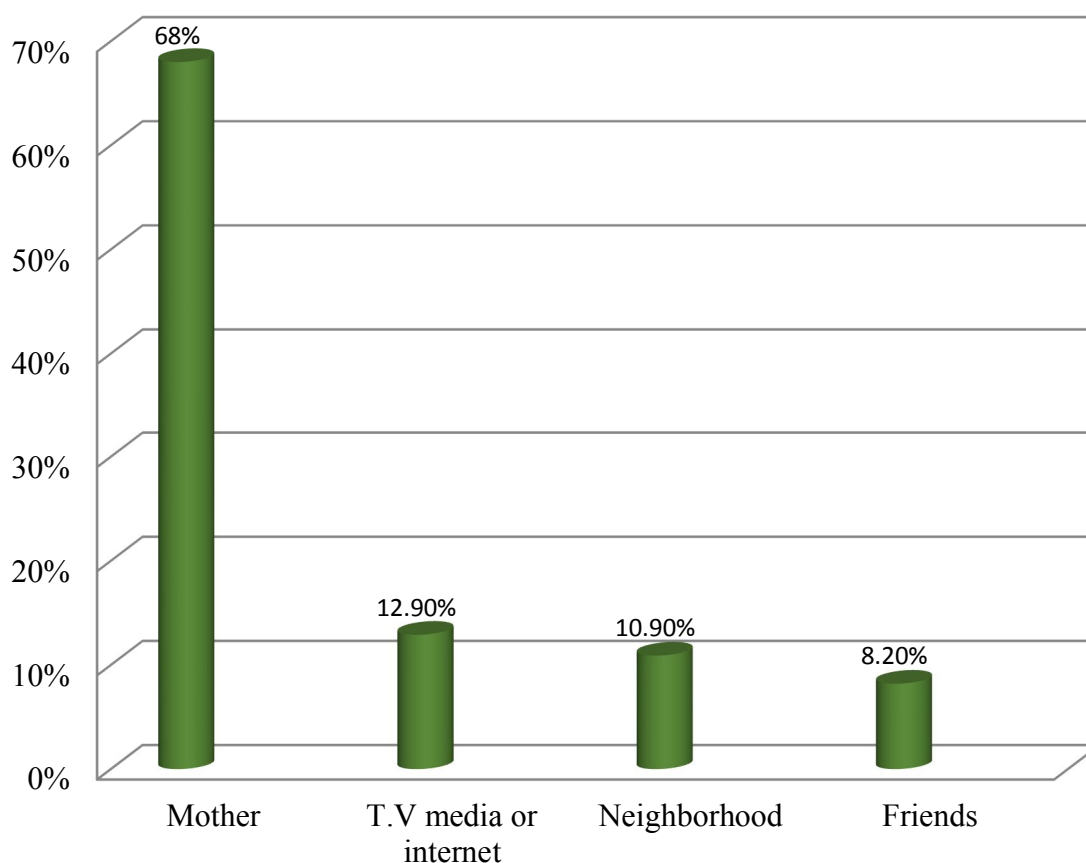


Figure (A): shows the distribution of the mothers according to their source of information. It was noticed that more than two third (68%) of mothers the source of their information was their mothers. while only (8.20%) of the mothers the source of their information was friends.

II-Feeding characteristics:-

Figure (B): Distribution of the mothers by their time of initiate breast feeding:-

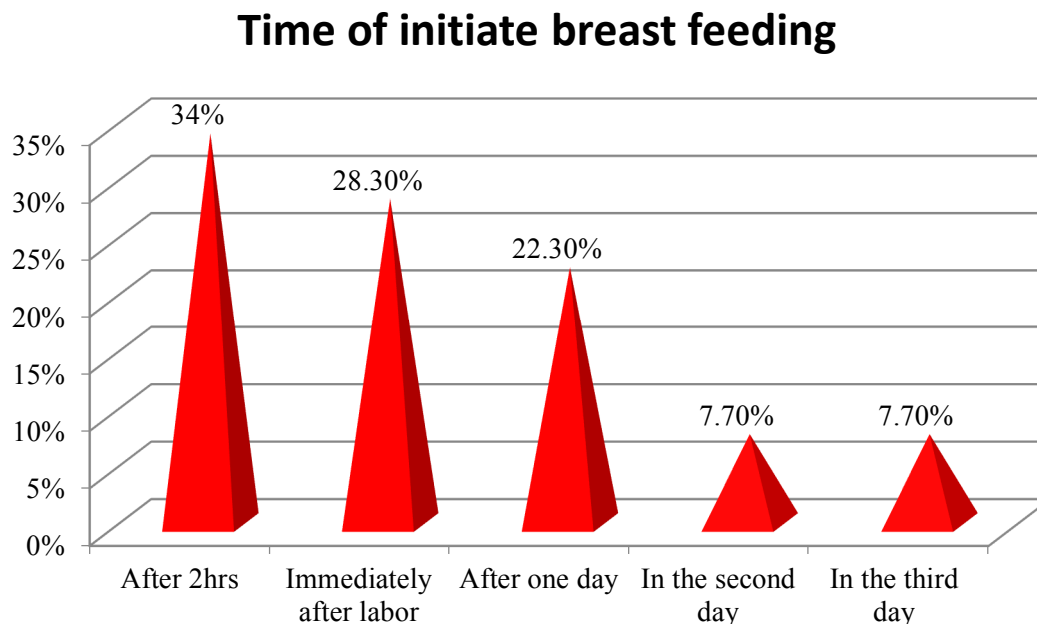


Figure (B): illustrate that's one third (34%) of mothers initiated breast feeding after 2hrs , and more than one quarter of the mothers (28.30%) initiated breast feeding immediately after labor while only (7.70%) of mothers initiated breastfeeding in the second and third day.

Table (2): Distribution of the mothers by their feeding characteristics:-

Feeding characteristics	Pre-program (n= 350)		Post- program (n= 350)		X2	P - value
	No.	%	No.	%		
Duration of breast feeding						
10 minutes	139	39.7	22	6.3	187.026	.000*
20 minutes	160	45.7	326	93.1		
30minutes or more	51	14.4	2	.06		
Mother position during breastfeeding						
Side lying	142	40.6	26	7.4	105.388	.000*
Sitting	208	59.4	324	92.6		
Frequency of feeding in hours						
On Demand	230	65.6	292	83.4	29.602	.000*
1hour	65	18.6	35	10.0		
2hour	45	12.9	18	5.2		
3hour	10	2.9	5	1.4		
The mother feed her baby at least 8-12 feed in 24hrs						
Yes	154	44.0	311	88.9	127.898	.000*
No	196	56.0	39	11.1		
The baby sucked in a pacifier before breast feeding						
Yes	127	36.3	40	11.4	59.524	.000*
No	223	63.7	310	88.6		
Type of feeding the baby						
Breast feeding exclusively	209	59.7	210	60.0	.006	.997 NS
Both breast feeding and Formula	135	38.6	134	38.3		
Feeding by formula	6	1.7	6	1.7		

NS= not statistically significance

* statistically significance differences

As shown in Table (2): Distribution of the women according to their feeding characteristics. It showed that (45.7%) of mothers fed their baby for 20 minutes pre-program while the majority (93.1%) of the mothers fed for 20 minutes post-program . Regarding to mothers position during breast feeding more than half of mothers (59.4%) fed in sitting position in pre-program as compared to (92.6%) post- program . Regarding to Frequency of feeding more than half (65.6%) of the mothers fed on demand in pre-program but post- program it increased to (83.4%). Less than half (44%) of mothers fed their baby at least 8-12 feeds in 24hrs pre –program as compared to (88.9%) post-program . More than one quarter (36.3%) of baby sucked in pacifier before feeding in pre –program compared to (11.4%) post-program.

Table (3): knowledge regarding breast feeding problems.

Breast feeding problems and management	Pre-program N=350		Post-Program N=350		X2	P - value
	No.	%	No.	%		
Breast engorgement						
Poor	259	74.0	0	.0	601.571	.000*
Average	85	24.3	24	6.9		
Good	6	1.7	326	93.1		
Cracked nipple						
Poor	239	68.3	0	.0	390.428	.000*
Average	103	29.4	217	62.0		
Good	8	2.3	133	38.0		
Breast mastitis						
Poor	122	34.9	0	.0	527.291	.000*
Average	199	56.9	18	5.1		
Good	29	8.3	332	94.9		
Breast abscess						
Poor	132	37.7	0	.0	477.113	.000*
Average	192	54.9	38	10.9		
Good	26	7.4	312	89.1		
Inverted or flat nipple						
Poor	206	58.9	0	.0	438.267	.000*
Average	88	25.1	22	6.3		
Good	56	16.0	328	93.7		

As shown in table (3): There was highly statistically significance related to knowledge of the mothers post-program about (breast engorgement, cracked nipple, breast mastitis, breast abscess and inverted nipple) as compared to pre-program (p< 0.000).

Table (4): Total knowledge about breast feeding problems and its management

Total knowledge about breast feeding problems and management	Pre (N)	%	Post (N)	%	X2	P value
Poor	190	54.3	0	.0	627.177	.000*
Average	150	42.9	9	2.6		
Good	10	2.9	341	97.4		

As shown in Table (4): illustrate total knowledge about breast feeding problems and management .Significant improvement was observed in the level of knowledge post-program as compared to pre-program (p< 0.000).Majority (97.4%) of mothers had good knowledge and only 2.6% had have average knowledge post-program.

Table (5): The relationship between demographic characteristic of mothers and their knowledge at pretest.

Items	Level of knowledge						X2	P - value
	Poor (n= 190)		Average (n=150)		Good (n=10)			
	No.	%	No.	%	No.	%		
Age (years)								
15 < 25	70	36.8	49	32.7	0	.0	8.263	.082 NS
25 < 35	101	53.2	86	57.3	7	70.0		
35- 49	19	10.0	15	10.0	3	30.0		
Occupation								
Working	40	21.1	54	36.0	4	40.0	10.025	.007*
House wife	150	78.9	96	64.0	6	60.0		
Education								
Illiterate	28	14.7	11	7.3	0	.0	38.418	.000*
Read and write	15	7.9	6	4.0	0	.0		
Primary education	19	10.0	11	7.3	0	.0		
Secondary education	32	16.8	22	14.7	2	20.0		
University education	96	50.5	100	66.6	8	80.0		
Income (L.E)								
< 1000	142	74.7	87	58.0	3	30.0	17.793	.001*
1000 < 2000	45	23.7	61	40.7	7	70.0		
2000- 3000	3	1.6	2	1.3	0	.0		
Residence								

Items	Level of knowledge						X2	P - value
	Poor (n= 190)		Average (n=150)		Good (n=10)			
	No.	%	No.	%	No.	%		
Urban	11	5.8	12	8.0	0	.0	1.391	.499
Rural	179	94.2	138	92.0	10	100.0		

Data in Table (5): illustrate the relationship between socio-demographic characteristic and total knowledge of mothers regarding breast feeding problems. . There were highly statistically significance different between the demographic characteristics such as occupation, education and income with mothers knowledge at pretest ($p < 0.007$, $p < 0.000$, $p < 0.001$) respectively. While there was no relation between pretest knowledge with mothers age and residence.

Discussion

The breast problems are rampantly present in postnatal mothers. Usually if proper care is not taken, mothers get affected with these breast problems within 3-5 days of postnatal period. Minor breast problems are not life threatening. A minor problem may escalate and become serious complication of postnatal period. Following faulty breast feeding techniques, ignorance of mother regarding feeding practices, improper breast hygiene, lack of proper health education, cultural beliefs and practices during postnatal period forces mothers to neglect proper breast feeding techniques and breast care. This negligence and ignorance leads to exaggerate and in turn leads to suppression of lactation. (11).

The aim of this study was to evaluate the effectiveness of teaching program on knowledge regarding breast feeding problems among postnatal mothers. To fulfill the aim of this study, research hypothesis were tested.

Several such studies have reported the high prevalence of post-natal breast problem and the major cause of it to be the lack of knowledge of mothers and their ignorance regarding the same. Even the postnatal mothers have been ignorant of the various methods of managing the postnatal breast problems (11).

As regard to socio-demographic characteristics of study sample, the present study indicated that slightly more than two quarter of mothers were aged from 25 -<35 .This finding is supported by (Najem ,B.et al,2011) who performed the study in Alyarmook teaching hospital (maternity department) in Baghdad, Iraq, about ‘‘ Breast Feeding Problems in Primipara Mothers in Early Postnatal Period ’’who asserted that more than half of them were between 20-30 y of age(16). This result also was supported by the work of the (Hadiza , L, 2015) who done his study in nigerlia about breast feeding problem as it affects mother and infant’s health who showed that around half of the respondents were within the age range of 26-35years. (17).While this result disagreed with (Mise, P. J et al, 2017) who performed their study in Karnataka, India about ‘‘ Study of breastfeeding practices and problems among postnatal mothers: a hospital based study’’ who reported that the majority of the women their age group between (15-30) years. This difference may be due to the differences of age group among studied sample. (18).

In the present study, around three quarter of the mothers was housewife. This were come in accordance with (Najem, B,et al,2010) who mentioned that the majority of the study were housewife (11). .In the same line , (Singh,J et al., 2012) who performed their study in Mysore hospital, Karnataka, India about ‘‘ Breastfeeding practices among lactating mothers: Problems and prospects in a cross-sectional study’’ who assured that more than three quarter of the mothers were housewives (19).This due to this study was

conducted in PHC units in 5 villages. Regarding to educational level, the current study indicates that more than half of mothers are university education. Its disagreed with Tiwari , A.et al , (2016) whose study on " Knowledge regarding selected postnatal breast problems and their management among postnatal mothers." who mentioned that more than half of mothers in primary level education(11).

Regarding the distribution of the mothers according to their source of information, in this study more than two quarter of the mothers depend on their knowledge on their mothers. Its agreed with the study done by (Najem,B,et al,2011) who reported that more than one quarter provided by mothers(11). This also agreed with the study done by ‘‘(Kamath, S. P., Garg, D., Khan, M., Jain, A., & Baliga, B. S. (2016) whose study about (Perceptions and Practices regarding Breastfeeding among Postnatal Women at a District Tertiary Referral Government Hospital in Southern India) who revealed that more than one third the source of the mothers information from their own mothers (20). These result disagreed with (De, M., Taraphdar, P., & Paul, S. (2016) who performed the study in Kolkata, India about ‘‘Awareness of Breast Feeding Among Mothers Attending Antenatal OPD of NRS Medical College’’ who found that the major source of information regarding breast feeding was family and neighbors(21). On the other hand (Kegode, Everlyne Agisa, 2013) his study on "Breastfeeding practices during the neonatal period among mothers delivering at Naivasha District Hospital" who showed that more than three quarter of the mothers reported that they got breast feeding information from health workers (22). This may be attributed to in rural area new mothers depend mainly in their mothers experience in their life so; they considered them the first source for any information for them.

The world health organization recommends that breastfeeding be initiated within 1hr of birth. Early initiation of breastfeeding provides benefits for both mother and the baby (Who, 2009) the baby friendly hospital initiative (BFHI) was designed to promote early initiation of breastfeeding preferably immediately after the birth (23).In the current study regarding to the time of initiation of breast feeding more than one quarter of the mothers initiate breast feeding immediately after labor, its agreed with (Mise, P. J et al, 2017) who recorded that more than one quarter of the cases initiated breastfeeding within 1 hour of delivery(18). It also agreed with (Haque ,M.,et al, 2014) his study in in Dhaka Medical College Hospital and Pan Pacific Hospital ,Dhaka , Bangladesh. About (A Cross Sectional Study on Feeding Practice of New Born Babies in Selected Hospitals) who found that more than half of the mothers started breast feeding less than half an hour(24). These result disagreed with (Kamath, S. P., Garg, D., Khan, M., Jain, A., & Baliga, B. S. (2016) who reported that less than one quarter (22.9%) of mothers feed within 1-4 hours(20).On

the other hand these result not supported by (Elwelely MZ , et al , 2017) whose study about "Problems Facing Newly Breast Feeding Mothers and the Plan of Nursing action " in Tanta ,Egypt who found that Most of them initiate breast feeding beyond the recommended 6 hours after delivery(25). This may be due to Lack of knowledge, non-supportive behaviors inconsistent advice, and minimal prenatal encouragement to breastfeed.

As regarding to feeding session duration, the present study showed that less than two quarter of mothers feeding their baby within (20 minutes) and more than one quarter feeding within (10 minutes) preprogram which came in agree with (Noonan, M,2011) a study on" Breastfeeding: Is my baby getting enough milk?" who Saied that A wide range of the length of the feeding sessions may be normal and belong to the personal feeding style of mothers and babies ,some infant are able to get a large volume of breast milk during a short period (5-10 minutes) where as other may need longer time (15-20minutes) (26).

This study revealed that more than two third of mothers feeding their babies on demand preprogram but post program it's found that more than three quarter feeding on demand. These result came in accordance to (Mise, P. J et al, 2017) who said that around two third of the infants received breast milk on demand basis (18)., and also agree with (Ayed, A. A. (2014) who assessed the women knowledge regarding breastfeeding in abha city and found that more than half of the participant said that Breastfeeding should be given on demand (27). This was disagreed with (Singh,j, et al, 2017) the majority of mothers were breastfeeding their baby every 2 hrs.(19). This refer to that mothers don't aware with the importance of feeding their baby on demand not regulated by hour as it help to completely emptying her breast and prevent development of breast engorgement.

Regarding to frequency of feeding, in the current study more than three quarter of the mothers fed their babies at least 8-12 times per day post program. As (UNICEF, WHO, UNESCO, UNFPA, UNDP, UNAIDS, WFP & the World Bank) recommended at least 8 times daily (day and night) , This stimulates the milk production and ensures that the child is properly nourished. This came in agree With (Haque , M.,et al, 2012) who reported that more than half of mothers were fed 5-8 times (25). while (Lerseth, M. S. (2013) who study on "Breast feeding practices among Saharawi women in the Algerian refugee camps" who mentioned that around three quarter of the children were breastfed at least 6 times every day(28).. Which indicate that their lack of knowledge about frequency of breastfeed during the day and night.

The study revealed that more than half of the mothers feeding their babies exclusively breastfeeding preprogram .this result can supported by a study done by (WARILLE, D. E. B. (2015) whose study on " knowledge and practice of exclusive breastfeeding among women with children between 9and 12 months of age in el sabbah hospital al juba- south sudan" who found that more than half of the mothers exclusive breastfeeding(29).This inconsistent with the study done by (Lenggogeni, P. (2016) who performed "Examining Exclusive Breastfeeding Practice in Indonesia, and its Association to Maternal Socio demographic Determinants, to Inform Intervention Efforts Aimed at Reducing Infant Mortality" who reported that Exclusive breastfeeding practice in Indonesia was less than one quarter of mothers(30). This due to lack of knowledge of

mothers about the importance of exclusive breastfeeding up to 6 months.

As regarding to mothers knowledge about breastfeeding problems, the current study showed that less than three quarter had poor knowledge preprogram regarding breast engorgement but post program the majority of mothers had good knowledge. This may be related to primipara mothers less experience and had low knowledge regarding breastfeeding, its problems and its management and they depend on past non-medical information of their mothers and their relatives. These findings come in contrast with the study finding by (Sharma, P. (2013) the study performed in selected hospital of Ludhiana, about (A Study to Assess Knowledge of Postnatal Mothers Regarding Breast Engorgement) whose founding revealed that the majority of postnatal mothers had average knowledge regarding breast engorgement (31).

In the present study regarding total knowledge of postnatal mothers on cracked nipple found that more than half of the mothers had poor knowledge about it preprogram. This disagreed with (Kaur, P., & Singh, P. (2015) who performed a study about" Effect of Planned Teaching Programme on Knowledge regarding Prevention of Nipple Sore among Postnatal mothers in Gian Sagar Medical College and Hospital, Ram Nagar, Rajpura, Punjab" Who found that less than three quarter of postnatal mothers were having average knowledge about cracked nipple(32). This due to cracked nipple in primipara mother may begin to appear from the last month of pregnancy but the pregnant women don't care and not seek help until after labor.

In the current study regarding the total knowledge of mothers about breast mastitis revealed that more than half of the mothers had average knowledge preprogram about it. These result disagreed with (Elhakam, E.M., & Elmoniemi, S.O. 2016) who performed the study in gynecological outpatient clinic at Benha University Hospital. About (Effectiveness of Nursing Intervention Measures on Minimizing Puerperal Mastitis and promoting breast feeding) who revealed that (6.7%) only in study group and (8.3%) in control group had good (complete & correct) knowledge regarding the meaning of mastitis, more than half of mothers in study group and three quarter in control group had average knowledge regarding sign & symptoms , more than half of mothers in study group and more than one third in control group had average knowledge about causes of mastitis but his study agree with these study in the level of knowledge of breast mastitis management more than half in study group and in control group had poor knowledge regarding management of mastitis(33).This due to near to three quarter of the mothers not received antenatal education about breastfeeding and its technique.

In the present study regarding total knowledge of the mothers about breast abscess, more than one third of the mothers had poor knowledge preprogram. This agreed with (Kapatamoyo ,B. 2010) whose study about "factors associated with the development of breast abscesses in women presented to the university teaching hospital, Lusaka" who found that more than one third of the mothers didn't know the cause of breast abscess(34).In rural area there is delayed in seeking medical care until the problem become complicated.

In current study regarding knowledge on inverted nipple more than half of the mothers had poor knowledge preprogram. These results agreed with (BORSTLAP,C. et al, 2016) whose study on (Do pregnant women know how to

correct inverted nipples?) In an antenatal care (ANC) clinic at a tertiary hospital in the Tshwane District, Gauteng Province. Who found that Most of the women had very limited knowledge of inverted nipples and knew very little about correcting devices (35). This related to primipara women don't care on nipple until starting breastfeeding.

Regarding total knowledge scores of mothers about breastfeeding problems and its management, In this study the results illustrated that Significant improvement was observed in the level of knowledge post program as compared to preprogram ($p < 0.000$). Majority (97.4%) of mothers had good knowledge and only 2.6% had average knowledge post program. This information can be supported to a study done by (Tiwari, A. et al, 2016) who found related to knowledge scores showed that a more than one quarter of the participants had inadequate and more than one third of mothers had average knowledge regarding postnatal breast problems and their management, respectively(11).

A similar finding was reported in a study done by HadijahMbwana (2012) A study on exclusive breast feeding mothers awareness and healthcare providers practices during antenatal visits at Morogo, Tanzania who asserted that more than half of mothers had average knowledge regarding management of postnatal breast problems in postnatal mothers. One of the reasons for knowledge scores of the participants of both of the studies falling in average range .may be due to the lack of proper previous exposure & education about selected postnatal breast problems and their management (36).

Regarding to relationship between knowledge and socio-demographic, in this study there wasn't statistical significance relationship between age of the mother and total knowledge score of women regarding breast feeding problems. (p - Value = .082). this came in accordance with (Tiwari, A. et al, 2016) who found that Analysis of the association between the level of knowledge regarding postnatal breast problems and their management among postnatal mothers and their selected variables revealed that the variables age in years in relation with knowledge scores of Postnatal mothers were independent of each other (all p values > 0.05). There was no significant association between the knowledge score and age group(11). Similar finding was seen in a study conducted by LucenAfrose and et al (2012) a study on "Factors associated with knowledge about breast feeding among female garment workers" in Dhaka city which showed that there was no significant relationship between age in years and knowledge scores regarding management of postnatal breast problems in postnatal mothers(37). This highlight the importance of giving more concentration to the primipara at any age as they hadn't any experience before, so they need more education, guidance, counseling and support.

This study revealed that there were highly statistically significance different between the demographic characteristics such as occupation, education and income with mothers knowledge at pre-test ($p < 0.007$, $p < 0.000$, $p < 0.001$) respectively. this disagreed with (Tiwari, A. et al, 2016) who found that education and monthly income (in Indian rupees) in relation with knowledge scores of Postnatal mothers were independent of each other (all p values > 0.05) (11).

The present study agreed with (Najem, B., et al, 2011) study which covers various aspects of breastfeeding problems in primipara mothers in early post natal period. It

shows that limited information & experience of primipara mothers about breast feeding is the most common problem, this finding may lead to viscous ring of problems which may end in failure of establishment & continuation of breast feeding, so advices & supports to mothers may be important in dealing with early problems (16).

Conclusion

Based on the findings of the present study it was concluded that:

Teaching program is effective in improving the knowledge of postpartum mothers. It found that level of knowledge post-test were significantly higher after teaching program as compared to their values at pre-test. There was statistically significant difference between pretest knowledge with women education, occupation and income.

Recommendations:

In the light of the present study findings, the following recommendations are suggested:

- Providing the postnatal mothers health education program about proper breastfeeding technique in their discharge teaching plan and maintain continuous contact with them.
- Counseling nursing mothers for proper lactation before delivery.
- Early detection and nursing care are important to prevent breastfeeding problems.
- Further researches needed to be conducted to assess the knowledge of the mothers about prevention and management of breastfeeding problems especial in rural area among postnatal mothers.

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