

Preparation for motherhood: Home based maternal and newborn care for first time mothers

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Abstract: Mothers may not feel adequately prepared for parenthood if they are situated in an unsupported environment. In the postpartum period, women need more information on the baby and herself care. Community nurses play a critically essential role during the development of mothers' skills. **Aim:** is to enhance knowledge and skills among first time mothers for caring their-self and their newborn during postnatal period. A quasi-experimental design was conducted at postnatal department, postnatal outpatient clinic in Suez Canal university hospitals, followed by a telephone interview at 2 weeks after birth. Data was collected using structured interview questionnaire sheet, includes socio demographic data, mother's knowledge, and reporting practice regarding self-care and their newborn care during post-partum period before and after educational session. The study is consisted of (103) postnatal women. **Results:** Concerning post natal self care, 82% of mothers had incorrect knowledge about components of post-partum self-care. Mothers' total self-care and newborn care practices and knowledge during postpartum period were improved after program application **Conclusion:** First-time mothers whose didn't better prepare for motherhood may be considered a at risk group. Educational session was effective to increase the knowledge and practice regarding maternal and newborn care for first time mothers **Recommendation:** Conducting an educational program for mothers-especially for first time mothers must be started during late pregnancy to inform primigravida about self-care during postnatal period.

Key words: postnatal period, first time mother, self-care, newborn care practices

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I. Introduction

Preparation for parenting begins throughout pregnancy, once parents become conscious to their role in ensuring their child achieves his or her greatest health potential. Parental behavior is therefore a key factor to ensuring healthy child development from the beginning of pregnancy (Cardoso and Marín, 2018). Postnatal period is a period of beginning immediately after child's birth and extending for about six weeks. The weeks following birth are a critical period for a woman and her infant. She is recovering from childbirth, adjusting to changing hormones, and learning to feed and care for her newborn (Aber, 2013). The change in role from a nonparent, being only responsible for one-self, to having added responsibility in caring for their newborn could take a toll on first-time mothers if their expectations do not match their experiences (Harwood et al., 2007). First time mothers in particular may feel anxious regarding however they're going away to cope with looking after themselves and their newborn (Dutta, 2014).

Once childbearing mothers come back home following her baby's birth, they're expected to obtain care of themselves and their babies. Mothers, not only care for their own physical and psychological requirements self-care component like good appearance, nutrition, hygiene, and sleep during the postnatal period, but also those of their newborns (Rew, 2015). The main role of nursing during postpartum is to provide assist to the women to help them during their initial transition to parenting through planned and provided care which focuses on their physiological and psychological well-being recovery to make her able to care for herself and her new baby (Yonemoto et al., 2017).

Self-care is defined as the variety of activities that individuals personally initiate and perform on their own behalf to maintain life, health, and wellbeing; it encompasses preventive measures of self-treatment and decision making (Rotich and Wolvaardt, 2017). Every mature person has the ability to meet up self-care requirements, but when someone experiences the lack of ability to do as a result due to restrictions thus a self-care deficit. A person benefits from nursing intervention when a health situation inhibits the ability to perform self-care or creates a situation where the abilities aren't enough to take care of health and wellness. Nursing action focus on detection of limitation or shortage and implementing suitable interventions to meet the requirements of person (Dennis, 2012).

The early days following childbirth are formative for new mother, baby and family. Certain basic requirements and essential services are essential for adjustment during postnatal period. These fundamental needs and basic services (assessment of physiological adaptation of mother and baby, prevention of infection, prevention of bleeding, maintains of uterine tone, prevention of bladder distention, promotion of rest, ambulation and exercise, promotion of normal bladder and bowel functions) (*Petiprin, 2015*). Every newborn **needs** basic care which has to be provided by the mother at home. This includes love, feeding, basic hygiene and recognition of hazard signs, and seeking assist from health personnel whenever required (*Dutta, 2014*). Post-partum self-care includes personal hygiene, breast care, breast feeding, perineal care, dental care, family planning services, nutrition, post-partum exercise, rest, relaxation techniques and post-partum visits (*Ricci, 2013*).

Postpartum nurses assume many roles while implementing the nursing care plan. Nurses provide direct physical care, teach mother care, and provide anticipatory guidance and counseling (*Abd El-Razek, 2013*). Many nurses find it useful to use the acronym **BUBBLE-HE** to remember the necessary components of the postpartum assessment and teaching topics these include, Breasts, Uterus, Bowel function, Bladder, Lochia, Episiotomy/perineum, Humans' sign, and Emotions (*Varney, 2014*).

Items of health education:

Breast feeding position should be efficient and comfortable by changing positions frequently. There are 3 common breast feeding positions are cradle position, side lying position and football position. Perform breast care before and after feeding to promote comfort and cleanliness (*Sandra, 2010*). Breast care, the nipples require little attention other than cleanliness and attention to skin fissures. Fissured nipples render nursing painful, and they may have a deleterious influence on milk production. Poor latching of the neonate to the breast can create such fissures (*Varney, 2014*).

Nutrition, ask mother to increase protein and caloric intake to restore body tissues. If mother breast feed she should drink 8/10 glasses of water /day. Drink plenty of warm fluids and eat foods that are high in fibers to prevent constipation vitamin A and iron supplementation for the mother. Iron and folic acid supplementation should be provided for at least three months after delivery (*Sandra, 2010*).

Perform perineal care with each voiding from front to back, bowel movement and pad change. Take a daily shower to relieve discomfort of normal post-partum diaphoresis. Dispose of perineal pads in plastic bag (*Driscoll, 2012*). Activity and exercise, request assistance in getting out of bed the first several hours following delivery to minimize dizziness and fainting from medications .Be sure to get adequate amount of rest by taking naps during the day and rest when the neonate is resting. Begin exercise when allowed by health care provider start slowly and gradually (*Lewis & Kennedy, 2011*).

Significance of the study

According to the WHO, postpartum care services should be provided at intervals 48 h, 1–2 weeks and at six weeks following birth in order to grasp the benefits of postpartum care. Therefore, the capability to afford self- care is a primary requisite for childbearing women to keep and improve health throughout the postpartum period (*Law et al. 2018*).

With the short length of hospital stay on a postpartum unit, the time for teaching is definitely limited (*Fleck, 2016; Huggins, 2017*). The mother challenge will be to learn how to care for herself and her new infant in a very short period of time. The nurse's challenge will be to teach the mother all the things necessary to care for herself, her infant (*Black, 2016*). The first chance for postpartum service is at the hospital for those mothers who have their births in a hospital. This initial contact is a crucial chance to interact with new mothers regarding health promotion messages.

Aim of the study

The study aims to enhance knowledge and skills among first time mothers for caring their-self and their newborn during postnatal period

Specific objectives:

1. Determining the existing knowledge of postnatal mothers regard self-care and newborn care practice after labor.
2. Raising women's awareness to regard self-care practice and newborn care.
3. Finding out an association between knowledge and practice with selected demographic variables of postnatal mothers regard self-care and newborn care after labor.

Research hypothesis:

Rising in postnatal women's awareness regard self-care and their newborn care practice after educational session

Methods:

Research design:

A Quasi-experimental design was used to achieve the study objectives.

Setting:

The study was conducted at postnatal department and postnatal outpatient clinic in Suez Canal university hospitals

Participants:

The study is consisted of (103) using purposive sampling technique based on the following inclusion criteria: (1) postnatal women with different modes of delivery (2) primigravida, and free from any obstetrics complications (3) delivered full-term baby (4) can read and write. All those who were approached agreed to participate. The study objectives were explained, confirming the voluntary nature of participation and the participants' right to withdraw from the study at any time.

Tools of data collection:

Structured interview questionnaire sheet, it included three parts:

First part: was designed to assess first time mother's socio demographic data and the obstetric history. **Second part:** was designed to assess mother's knowledge regarding self-care and their newborn care practices during post-partum period before and after educational session. **Third part: reporting practice by questionnaire:** was designed to evaluate mother's self-care and newborn care practice by reporting during post-partum period.

Procedure:

At the beginning, mothers were oriented about educational session objectives, contents, and procedures. The data was collected from mothers using the tools designed in the previous phase. The researcher met each mother separately to fill questionnaire sheet. Then, health teaching class was conducted. The researcher took the phone number of mother and call her after two weeks to fill post-test questionnaire because the mother stay in post-partum department less than 12 hours post CS, less than 6 hours post normal labor and discharged so this time wasn't enough. The researcher developed a postnatal nursing guideline using the related literature. Arabic booklet was prepared in a clear and concise form; each mother got the educational booklet before discharge as a handout to facilitate learning process. Outcomes were measured at the following time points for all participants in (1) after delivery and before discharge, and immediately after the intervention (baseline data), (2) two weeks after the intervention.

II. Results

Table (1): distribution of mothers' knowledge (Pre-Post intervention) in relation to post-partum self-care (n=103).

Mothers' knowledge	Pre intervention				Post intervention			
	Incorrect		Correct		Incorrect		Correct	
	No.	%	No.	%	No.	%	No.	%
Definition of post-partum self-care	65	63.1	38	36.9	0	0.0	103	100.0
The components of post-partum self-care	85	82.5	18	17.5	0	0.0	103	100.0
The aim of post-partum self-care	84	81.6	19	18.4	0	0.0	103	100.0
Post-partum visits schedule	91	88.3	12	11.7	4	3.9	99	96.1
Diet								
The importance of healthy nutrition after birth	57	55.3	46	44.7	23	22.3	80	77.7
The components of healthy nutrition after birth	96	93.2	7	6.8	14	13.6	89	86.1
The best time for initiate women nourishment	25	24.3	78	75.7	3	2.9	100	97.1
Sleep and rest								
The suitable hours for rest and sleep during puerperium	54	52.4	49	47.6	2	1.9	101	98.1
The need for rest and sleep during the day	11	10.7	92	89.3	1	1.0	102	99.0
Duration of rest after birth	57	55.3	46	44.7	2	1.9	101	98.1
Ambulation and exercises								
The best time for initiate ambulation after delivery	63	61.1	40	38.9	2	1.9	101	98.1
The importance of early ambulation in puerperium	94	91.2	9	8.8	12	11.7	91	88.3
Types of postnatal exercises	101	98.1	2	1.9	88	85.4	15	14.6
After Pain								
Pain strength increased with	6	5.9	97	94.1	7	6.8	93	93.2
Pain duration	6	5.9	97	94.1	7	6.8	93	93.2
Methods to relieve after pain	83	80.6	20	19.4	19	18.4	84	81.6
Perineal care								
Frequency of perineal care / day	60	58.3	43	41.7	55	53.3	48	46.7
solution should be used in perineal care	88	85.4	15	14.6	45	43.7	58	56.3

technique for perineal cleaning	49	47.6	54	52.4	2	1.0	101	99.0
Methods to relieve perennial pain	73	70.9	30	29.1	41	39.8	62	60.2
the different between normal and abnormal lochia	84	81.6	19	18.4	4	3.9	99	97.1
The danger signs for mother after birth	83	80.6	20	19.4	2	1.0	101	99.0
Starting sexual relation after birth	26	25.2	77	74.8	1	0.5	102	99.5
The best time for using family planning methods after birth	38	36.9	65	63.1	2	1.0	101	99.0

Table (1) reveals that, 63.1% from mothers had incorrect knowledge about the definition of post-partum self-care, also it shows that, 81.6 % of mothers had incorrect knowledge about the aim of post-partum self-care, and at the same time 55.3% of them had incorrect knowledge about the importance of healthy nutrition after birth, also shows that, 93.2% had incorrect knowledge about components of healthy nutrition after birth, as well as 55.3 % had enough rest after birth, and 80.6% had incorrect knowledge about danger signs after birth.

Also it shows that, 25% had correct knowledge about starting sexual relation after birth. This table also shows that, 82% of mothers had incorrect knowledge about components of post-partum self-care; most of them 99% had incorrect knowledge about post-partum exercise. On the other hand all knowledge had improved post program for all mothers 100%.

Table (2): Distribution of the studied cases according to reporting practice for breast care after educational session (n = 103)

Items	Correct		Correct Incomplete		Wrong	
	No.	%	No.	%	No.	%
Prepared the necessary equipment.	18	17.5	60	58.3	25	24.2
Protect herself from drafts and keep privacy.	103	100.0	0	0.0	0	0.0
Wash hands.	77	74.8	18	17.5	8	7.7
Place a mackintosh under the breast.	25	24.2	9	8.7	69	67.1
Assess each breast for signs of engorgement, abscess, mastitis or cracked nipples also the nipple condition and type are cracked (inflamed or not) (normal, flat or inverted).	77	74.8	18	17.5	8	7.7
Massage and palpate each breast from the areola down to the nipple.	26	25.2	43	41.7	34	33.0
Check the availability of enough milk flow to breast feeding by expressing few drops of colostrum or milk from each breast.	8	7.7	8	7.7	8	7.7
Hold each breast with one hand and gently clean with the other hand using warm water and cotton swab. Start cleaning from the nipple upward to areola and to the rest of the breast in one direction circular motion.	94	91.3	9	8.7	0	0.0
Dispose the used cotton correctly.	43	41.7	17	16.6	43	41.7
Dry each breast using the previous technique.	77	74.8	18	17.5	8	7.7
Apply some olive oil ointment in case of dry or cracked nipple.	43	41.8	51	49.5	9	8.7
Apply disposable pad on the nipple to absorb running milk.	25	24.2	18	17.5	60	58.3
Wash hands and dry them.	85	82.5	18	17.5	0	0.0

Table (2): displays that, 91.3% of mothers hold each breast with one hand and gently clean with the other hand using warm water and cotton swab. Start cleaning from the nipple upward to areola and to the rest of the breast in one direction circular motion. 74.8% assess each breast for signs of engorgement, abscess, mastitis or cracked nipples also the nipple condition and type are cracked (inflamed or not) (normal, flat or inverted) and dry each breast using the proper technique. Also this table shows that, 83.0% from mothers wash hands and dry them.

Table (3): Distribution of the studied cases according to reporting practice for perineal care after educational session (n = 103)

Items of perineal care	Correct		Correct Incomplete		Wrong	
	No.	%	No.	%	No.	%
Prepare the equipment (antiseptic solution, clean pad)	35	34.0	34	33.0	34	33.0
Wash hands.	76	73.8	18	17.5	9	8.7
Expose the perineal area.	103	100.0	0	0.0	0	0.0
Remove the solid pad from front to back.	76	73.8	9	8.7	18	17.5
Observe color, odor and amount of discharge.	17	16.5	35	34.0	51	49.5

Warp pads and discard it.	103	100.0	0	0.0	0	0.0
Void before cleaning.	86	83.5	17	16.5	0	0.0
Test temperature of solution by pouring small amount on the wrist.	94	91.3	0	0.0	9	8.7
Washed the perineum by antiseptic solution in the correcting way	103	100.0	0	0.0	0	0.0
Dry the perineum by the same way of cleaning using the same sequence and techniques.	85	82.5	18	17.5	0	0.0
Apply sterile dry pad from up to down without touching the surface.	103	100.0	0	0.0	0	0.0
Wash hands.	103	100.0	0	0.0	0	0.0

Table (3): shows that, 74.8% from post-partum mothers remove the solid pad from front to back. All of them 100% apply sterile dry pad from up to down without touching the surface, wash hands, warp pads and discard it.

Table (4): Distribution of the studied sample according to maternal knowledge regard newborn care (n = 103)

Mothers' knowledge	Pre program				Post program			
	Incorrect		Correct		Incorrect		Correct	
	No.	%	No.	%	No.	%	No.	%
Having knowledge about newborn care practices during this pregnancy	90	87.4	13	12.6	0	0.0	103	100.0
type of information were about breast feeding only	96	93.2	7	6.8	2	1.9	101	98.1
Neonatal warms after delivery	6	5.8	97	94.2	0	0.0	103	100.0
Initiation of Baby bath	90	87.4	13	12.6	31	30.1	72	69.9
The umbilical cord should be covered	69	67.0	34	33.0	0	0.0	103	100.0
Substance used for cleaning umbilical cord	15	14.6	88	85.4	2	1.9	101	98.1
vaccination schedule of the baby	30	29.1	73	70.9	2	1.9	101	98.1
Purpose of vaccines of the baby after birth	4	3.9	99	96.1	0	0.0	103	100.0
The vaccine should r baby receive at birth (BCG)	99	96.1	4	3.9	16	15.5	87	84.5
The Hepatitis B(0) vaccine given to the baby	97	94.2	6	5.8	14	13.6	89	86.4
Baby eye should be cleaned	23	22.3	80	77.7	2	0.5	101	99.5
The correct direction of eye care	58	56.3	45	43.7	0	0.0	103	100.0
substances applied after cleaning of baby eye	33	32.0	70	68.0	0	0.0	103	100.0
If yes ,What these substances	55	53.4	48	46.6	0	0.0	103	100.0

Table (4) displays that 29.1% of the mothers interviewed by the present study lacked knowledge of common vaccine reactions in babies. All 100% of mothers had knowledge regard newborn care regarding neonatal warms, bath, cord care, eye care, and vaccination. Also this table shows most of mothers didn't have enough knowledge before program.

Table (5): Distribution of the studied sample according to mother's total knowledge about self-care practices (n = 103)

Total knowledge	Pre program		Post program		Test of sig.	p
	No.	%	No.	%		
Knowledge on self-care practices during the puerperium						
Inadequate	74	71.8	0	0.0	□ □	<0.001 *
Moderately adequate	27	26.3	20	19.4		
Adequate	2	1.9	83	80.6		
Total score					t = 47.783*	<0.001 *
Min. – Max.	4.0 – 35.0		28.0 – 40.0			
Mean ± SD.	18.95 ± 4.71		34.50 ± 2.45			
% score						
Min. – Max.	10.0 – 83.33		66.67 – 95.24			
Mean ± SD.	45.22 ± 11.16		82.14 ± 5.84			
Knowledge about child care						
Inadequate	60	58.3	0	0.0	□ □	<0.001 *
Moderately adequate	40	38.8	10	9.7		

Adequate	3	2.9	93	90.3		
Total score						
Min. – Max.	2.0 – 16.0		14.0 – 18.0			
Mean ± SD.	7.82 ± 2.75		16.84 ± 0.91			
% score					t = 45.467*	<0.001*
Min. – Max.	13.33 – 88.89		77.78 – 100.0			
Mean ± SD.	47.11 ± 15.12		93.58 ± 5.07			
Overall knowledge						
Inadequate	71	68.9	0	0.0		
Moderately adequate	30	29.2	3	2.9	□ □	<0.001*
Adequate	2	1.9	100	97.1		
Total score						
Min. – Max.	9.0 – 51.0		44.0 – 57.0			
Mean ± SD.	26.76 ± 6.64		51.34 ± 2.65			
% score					t = 54.520*	<0.001*
Min. – Max.	16.07 – 85.0		73.33 – 95.0			
Mean ± SD.	45.82 ± 10.98		85.57 ± 4.42			

MH: Marginal Homogeneity Test t, p: t and p values for Paired t-test *: Statistically significant at p ≤ 0.05

Table (5) shows that, mothers' total self-care practices knowledge during postpartum period was improved after program application with statistically significant deference observation regarding maternal self-care practices during the puerperium.

Table (6): Relation between maternal overall knowledge about self-care practices and knowledge regard newborn care with their demographic data (n = 103)

	N	Overall knowledge		Maternal knowledge regard newborn care		
		Pre intervention	Post intervention	Pre intervention	Post intervention	
Age (years)						
<20	6	34.35 ± 13.77	82.12 ± 2.17	34.76 ± 19.55	93.06 ± 4.81	
20 – 30	64	44.49 ± 10.39	83.81 ± 4.40	45.15 ± 14.75	93.54 ± 4.75	
30 – 40	31	50.24 ± 8.93	84.98 ± 4.29	53.40 ± 11.17	94.26 ± 5.46	
≥40	2	55.76 ± 14.61	85.0 ± 3.04	51.41 ± 28.94	86.11 ± 5.56	
F(p)		10.721* (<0.001*)	1.995 (0.116)	7.707* (<0.001*)	3.418* (0.018*)	
Residence						
Rural	69	46.29 ± 10.79	84.18 ± 4.41	47.80 ± 14.32	93.76 ± 5.22	
Urban	34	44.87 ± 11.38	83.87 ± 4.04	45.71 ± 16.64	93.22 ± 4.78	
t(p)		0.872 (0.384)	0.491(0.624)	0.932 (0.352)	0.719 (0.473)	
Educational level						
Don't read or write	15	44.44 ± 10.33	83.81 ± 4.49	50.16 ± 11.51	93.37 ± 6.16	
Read and write	36	45.12 ± 10.01	84.17 ± 4.23	45.86 ± 13.60	94.14 ± 4.74	
Intermediate education	40	45.85 ± 11.02	84.26 ± 4.25	46.81 ± 15.80	93.67 ± 4.68	
University education	12	49.58 ± 13.98	83.54 ± 4.51	47.84 ± 20.71	91.90 ± 5.67	
F(p)		1.203 (0.310)	0.225 (0.879)	0.608 (0.611)	1.196 (0.312)	
Occupation						
Employee	13	52.41 ± 12.01	84.26 ± 4.60	53.20 ± 16.75	94.67 ± 4.08	
House wife	90	44.91 ± 10.55	84.06 ± 4.25	46.26 ± 14.73	93.43 ± 5.19	
t(p)		3.278* (0.001*)	0.220(0.826)	2.168* (0.031*)	1.142 (0.255)	
Monthly income						
Enough	16	51.23 ± 14.62	83.17 ± 4.79	50.75 ± 22.39	93.70 ± 4.13	
Not enough	87	45.39 ± 10.58	84.15 ± 4.25	46.82 ± 14.44	93.57 ± 5.15	
t(p)		1.998* (0.047*)	0.851 (0.396)	0.669 (0.514)	0.097 (0.923)	
			t, p: t and p values for Paired t-test		t, p: t and p values for Student t-test F,p: F and p values for ANOVA test	

*: Statistically significant at p ≤ 0.05

Table (6): Illustrates that, there was no significant difference between overall knowledge with mother's demographic data (p-value more than0.05). Also, illustrates that, there was no significant difference between maternal knowledge regard newborn care with mother's demographic data (p-value more than0.05).

III. Discussion

Promoting women's self-care during postpartum is part of the nursing care process in the gravid- puerperal cycle. Planning the important activities for these women is therefore a challenge for nursing care. For this reason, it is necessary to encourage the creation and use of educational technologies that are able to mediate care between nurses and women in the form of information dissemination (*Oliveira et al., 2015*).

Concerning knowledge of studied mothers about postpartum self-care, the present study revealed that, majority mothers had incorrect knowledge about the components of post-partum self-care pre intervention but all them had correct knowledge after intervention this may be due to lack of health education about post-partum period. At the same line with *He et al., (2018)* who assessed knowledge of mothers regarding self-care measures in postnatal unit in a selected maternity hospital and reported that, nearly three fourth of the primipara mothers had inadequate knowledge about self-care during postnatal period. Moreover, *Lalitha (2016)* who evaluated the effectiveness and cost-effectiveness of web-based and home-based postnatal educational interventions for first-time mothers had inadequate knowledge about self-care during postnatal period-pre interventions.

The result of the present study revealed that, there was a highly statistical significant association between mothers' educational level and their knowledge regarding postpartum self-care; this may be due to woman with educational background had correct knowledge than mothers with limited educational background. The previous study finding was in the same line with *Timilsina et al., (2015)* who reported that, there was a significant association between level of mothers' knowledge regarding postpartum self-care and education.

The result of the current study showed that, there was a highly statistical significant association between mother's age and knowledge regarding postpartum self-care. The previous study finding was parallel to *Lalitha (2016)* who found that, a statistically significant association was observed between mothers' knowledge regarding postpartum self-care and age.

Regarding mother's knowledge about importance of early initiation of breast feeding .The current study revealed a highly significant improvement of mother's knowledge post intervention. This result is in accordance with *Rojana (2015)* who reported that nearly all mothers know about the advantages of early initiation of breast feeding .Also this result disagrees *Ekambaram et al., (2010)* who reported that mother's knowledge in India was in adequate increasing time of initiation of breast feeding "colostrum feeding" (56%).Our opinion is may be that the pregnant women always seek information about breast feeding to protect new born from any health problems.

This finding is in accordance with *Aisha et al., (2016)* who reported that promotion of breast feeding during the first hour after delivery with no supplement such as water, glucose in water or formula. Also these finding are in agreement with *Bowles (2011)*. Who found that initiation of breast feeding was encouraging and found that two thirds of mothers' breast feed their babies within an hour to one hour after birth and initiated breast feeding in delivery room. On the same line *Ekambaram et al., (2010)* (84%) who had correct knowledge about initiation of breastfeeding. our opinion is different it may be attributed to educational status of participants and availability of mass media messages.

Concerning mother's knowledge about breast care pre intervention .The present study reveals that the majority of study mothers had no knowledge compared to significant improvement post intervention .This finding is in accordance with *Elsherbeny (2009)* who reported lack of post-partum women knowledge regarding post-partum self-care .At the same line *Finello (2015)* recommended that an effective health education is needed to increase mother's awareness toward breast care .It may be due to lack of health education during reproductive health issues with their children which is reflected on female adults self-care during pregnancy, labor and postnatal period.

Regarding mothers' self-care practices during postpartum period as regard breast care the present study revealed that, the majority of mothers did breast care correctly; this may be due to continuous providing of health education in hospital by health team about breast care. The previous study finding was at the same line with *Darling & Bazil (2014)* who assessed knowledge and attitude of (100) post natal mothers regarding self care after childbirth in selected maternity centers in Madurai and reported that three fourth of mothers did breast care correctly.

Meanwhile, the previous study finding was on contrary with *Adam (2015)* who assessed knowledge and practice of (150) mother regarding self-care during puerperium in the obstetric unit, post natal ward in National Ribat University Hospital and reported that, nearly three fourth of mothers practice breast care incorrectly.

The mothers also showed a lack of knowledge in relation to common vaccine reactions in baby pre educational session. All 100% of mothers had knowledge regard newborn care regarding neonatal warms, bath, cord care, eye care, and vaccination after session given. This finding is similar to those of different studies. A study conducted to assess the knowledge of pregnant women in Brazil (N=65) regarding child health showed that only 29.3% knew once to begin vaccination and that none of the mothers knew which vaccines should be administered (*Castilho et al., 2013*). Another study conducted in Italy observed that only 26% of the

participating mothers knew which vaccines made up the vaccination schedule (Vonasek et al., 2016). In 2012, a preliminary study was conducted in Singapore, which reported self-efficacy improvement and PND reduction in mothers receiving a home-based psycho-educational intervention (Shorey et al., 2015). In addition, they are required to pick up new skills to take care of their newborn.

IV. Conclusion

The results highlight the areas in which knowledge and skills are most lacking in the pre intervention majority of mothers had inadequate knowledge and practice regarding self-care care practice after labor. Compared to post intervention of guideline for study group there are a highly significant difference pre and post intervention, it is concluded that guideline was effective to increase the knowledge and practice regarding post natal self-care among primigravida. So provides continuity of care for new mothers after their discharge from the hospital will enhances the safety of both the mother and the newborn.

V. Recommendations

- Conducting an educational program for mothers-especially primigravida must be started during late pregnancy to inform primigravida about self-care during postnatal period.
- Providing brochures and prints for mothers to increase their awareness about post-partum self-care practice.
- Postnatal home visits may be considered within the first week of the mothers' hospital discharge, which may be legislated by public health care policies.
- Apply new technology as smart phone application for follow up new mothers

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