Original Article

"A Study To Assess The Impact Of Nursing Intervention On Mother's Breastfeeding Self-Efficacy Among Primiparous Mothers At Tertiary Care Hospital"

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Abstract

Background: Breastfeeding is an Art. Recently, promotion of breast feeding has increased by health system. Despite these efforts, only 40% of newborns under the age of six months are exclusively breastfed internationally, and only 44% of infants commence BF within the first hour of life. At two years old, just 45% of kids are still BF.

Objectives: 1) To assess the prenatal breastfeeding self-efficacy.2) To assess impact of nursing interventions on breastfeeding self-efficacy.3) To find an association between breastfeeding self-efficacy and selected socio-demographic variables.

Methodology: A quantitative research study was conducted 80 primiparous mothers were selected by purposive sampling technique from KH&MRC, Karad. One group pretest posttest research design was used. Standardized tool was used. Informed consent was obtained. Data analyzed by using descriptive and inferential statistics.

Result: The maximum primiparous mothers were from 24-27 years of age, maximum were hindus and maximum were completed education upto degree. Maximum were housewife and from joint family, staying in rural areas. Maximum were from upper middle class. Pretest level of prenatal breastfeeding self-efficacy among primiparous mothers showed 65 (81.25%) were having low confidence, 12 (15%) were having moderate confident and only 3 (3.75%) having high confident.The comparison between pretest and posttest level of breastfeeding self-efficacy among primiparous mothers there was increase in the score of posttest. No one was having low confidence, only 1 (1.25%) was having moderate confidence and 79 (98.75%) were having high confidence.This shows the impact of nursing intervention had increased the level of confidence at breastfeeding self-efficacy.There was no statistical significant association found between selected sociodemographic variables.

Conclusion: The study concludes that nursing intervention on breastfeeding self-efficacy was effective as the mothers had increase in the level of breastfeeding self-efficacy, increase ability to breastfeed her baby.

Keywords: Breastfeeding self-efficacy-short form, Impact, Nursing intervention, Primiparous mother, Prenatal breastfeeding self-efficacy.

Background

Breastfeeding is an art and Human milk has no exact substitution for feeding the babies. A breastfeeding help to developing bond between mother and child[1]. There have been several initiatives to support, promote, and retain BF, and recently, the promotion of BF has risen by health systems in accordance with World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) policy[2]. Despite these efforts, only 40% of newborns under the age of six months are exclusively breastfed internationally, and only 44% of infants commence BF within the first hour of life. At two years old, just 45% of kids are still BF[3].

It is common knowledge that breastfeeding has a favourable impact on children's health and wellbeing as well as the health and wellbeing of mothers, families, and the larger communities and populations they comprise. Breastfeeding aids in the prevention of dental cavities and malocclusion, the reduction of acute otitis media, respiratory infections, the reduction of diarrheal incidence and severity, and the promotion of healthy cognitive development in children. Children's immune systems are strengthened and made more receptive through breastfeeding, which is crucial in the present global epidemic. Breastfeeding significantly improves maternal health and wellbeing by lowering the risk of diabetes, osteoporosis, cardiovascular disease, breast cancer, ovarian cancer, and other diseases. Furthermore, breastfeeding has long-term beneficial effects on families as well as on national and international societies from a medical and financial standpoint. Less health-related concerns mean less time lost from work lower medical expenses and less strain on local economies and medical systems. According to statistics, "the total global economic losses of not breastfeeding are predicted to be US$341.3 billion," boosting breastfeeding rates are therefore advantageous for all nations. It is projected that substituting economy brand formula for breastfeeding during a child's first two years of life will cost a household on average more than 6.1% of its income. By promoting the infant's health and safety and easing the financial burden on the family, breastfeeding helps to ensure the family has access to food, which is crucial for low-income households. When there is a crisis, like the COVID-19 epidemic, many households experience employment uncertainty and income loss, which exacerbates inequality. Breastfeeding promotes good nutrition and health, lowers disparities, and lowers household expenses[4].

Globally, the World Health Assembly (WHA) has set a target to increase the exclusive breastfeeding rate to 50% by 2025. By the time these targets were set in 2012, India was well on its way to reaching a national exclusive breastfeeding rate of 50%. Today, 55% of children under 6 months are exclusively breastfed in the country. While this should be celebrated, progress must continue so that all children are able to thrive[5].

The NFHS-5(National Family Health Survey 2019-2021) data shows improvement in exclusive breastfeeding with 16 states and Union territories reporting a rise. Maharashtra has reported an increase of 14.4 % in exclusive breastfeeding[6].

One of the theoretically controllable characteristics that is consistently associated with successful BF results is maternal self-efficacy[7]. The literature claims that difficulties and impediments to BF promotion include "mothers' poor breastfeeding self-efficacy (BSE)," "incompetence of BF services," and "family's neglect to breastfeed"[8]. A mother's confidence in her ability to breastfeed her child is referred to as breastfeeding self-efficacy. An important factor in BF outcomes is the mother's self-efficacy because it may be used to predict: whether a woman would choose breastfeeding as her preferred infant feeding method, The amount of effort she will put in during BF, Whether the mother will keep trying until she masters the task, Whether her mental habits are self-supportive or self-defeating, Her emotional reaction to nursing challenges[9].

Interventions in education have an effect on both the health of the expectant mother and the future generations of humans. By increasing their confidence, knowledge, and abilities, prenatal BF education helps women become competent BF providers[10].

Methods

The quantitative research study was conducted on 80 primiparous mothers who visited antenatal OPD and admitted in labour room of tertiary care hospital. Krishna hospital and medical research centre is one of the huge health care

setting in Karad city and provides promotive, curative, rehabilitative care for a notable target population. The study was conducted from April 2022 to May 2022. The subjects were selected by purposive sampling technique. Primiparous women were enrolled from antenatal OPD and labour room of KH & MRC, from 37 weeks and above of their gestational age who were willing to participate in the study, came to antenatal OPD and admitted in labour room of Krishna Hospital and Medical Research Centre, for delivery and who were available during the time of study, with singleton pregnancy. The included subjects agreed to participate in the study and were ready to be followed-up by the researcher during study period. Mothers with complications during present pregnancy, High risk pregnancy, with inverted nipples and who were mentally ill or physically handicapped were excluded from the study.

Study tools for data collection

The questionnaire had four parts as following:

Part A: The socio-demographic characteristics of the subjects.

Part B: It consist of obstetrical data.

Part C: A tool to assess prenatal breastfeeding self-efficacy. Standardized tool of prenatal breastfeeding self-efficacy scale by Wells, (2022) it includes 20 items deals about the prenatal breastfeeding self-efficacy. It is graded on points score maximum score of 100, 1- not at all sure, 2- slightly sure, 3- fairly sure, 4- very sure, 5- completely sure graded of prenatal breastfeeding self-efficacy[11].

Part D: A tool to assess breastfeeding self-efficacy. Standardized tool of breastfeeding self-efficacy: short form scale by Dennis, (2022) it includes 14 items deals about the breastfeeding self-efficacy. It is graded on points score maximum score of 70, 1- not at all confident 2- not confident, 3- somewhat confident, 4- confident, 5- always confident graded of breastfeeding self-efficacy[12].

Part E: It consisted of data immediate after delivery weeks of gestation at the time of delivery and weight of the baby.

Nursing Intervention

Informational Booklet contain information on Breastfeeding aspects with related images will collected in booklet in local language.

Statistical analysis

The data was analysed in terms of the objectives of the study using both descriptive and inferential statistics. Demographic variables of primiparous mothers and impact of nursing interventions on breastfeeding self-efficacy among primiparous mothers were analyzed in terms of frequency and percentage distribution. Chi square test was used to associate the pretest level of breastfeeding self-efficacy among primiparous mothers with their selected socio-demographic variables.

Ethical consideration

The study was conducted after the approval of ethical committee. Formal permission was obtained from Principal of Krishna Institute of Nursing Sciences. Permission was obtained from the Medical director, Head of the department of Obstetrics and Gynaecology, Chief nursing officer of Krishna Hospital and Medical Research Centre, Karad. The primiparous mothers were explained about the study purpose. The informed consent was obtained from the participants. The assurance of anonymity and confidentiality was obtained.

Results

Table No.1: Distribution of Primiparous Mothers according to Demographic Variables

N=80

SOCIODEMOGRAPHIC VARIABLE	RESPONDENTS	
	FREQUENCY (F)	**PERCENTAGE (%)**
Age in years		
20-23 years	32\	40 %
24-27 years	36	45 %
28-31 years	9	11.25 %
32 years and above	3	3.75 %
Age at marriage in years		
18-21 years	29	36.25 %
22-25 years	34	42.5 %
26-29 years	14	17.5 %
30 years and above	3	3.75 %
Religion		
Hindu	76	95 %
Muslim	4	5 %
Education		
Secondary school	18	22.5 %
Degree	62	77.5 %
Occupation		
Housewife	75	93.75 %
Job	5	6.25 %
Family type		
Joint family	72	90 %
Nuclear family	8	10 %
Residency		
Urban	27	33.75 %
Rural	53	66.25 %
Socioeconomic class		
Upper class	21	26.25 %
Upper middle class	59	73.75 %
Source of Knowledge		
News paper	14	17.5 %
Television	15	18.75 %
Healthworker	35	43.75 %
Friends	6	7.5 %
Family members	69	86.25 %

Table number one reveals that in according to age majority 36(45%) primiparous mothers were belongs to 24-27 years, 32(40%) were belongs to 20-23 years, 9(11.25%) were belongs to 28-31 years and 3(3.75%) were belongs to 32-35 years. According to the Age at marriage majority 34(42.5%) primiparous mothers were belongs to 22-25 years, 29(17.5%) were belongs to 18-21 years, 14(6.25%) were belongs to 26-29 and 3(3.75%) were belongs to 30-33 years. According to the religion majority 76(95%) primiparous mothers were Hindus and 4(5%) were Muslim. As per

education most of the primiparous mothers 72(77.5%) were educated up to degree and 18(12.5%) were completed secondary school education. As per occupation of the primiparous mother's majority 75(93.75%) were housewife and 5(6.25%) were doing job. As per type of family 72(90%) primiparous mothers from joint family and 8(10%) from nuclear family. According to the type of residential area majority of primiparous mothers resides in urban 27(33.75%) and whereas in rural area 53(66.25%). Maximum primiparous mothers 59(73.75%) were having middle upper class and 21(26.25%) were having upper class. Maximum primiparous mothers 69(86.25%) were having source of knowledge family members, 35(43.75%) were having source of knowledge healthworker, 15(18.75%) were having source of knowledge television, 14(17.5%) were having source of knowledge newspaper and 6(7.5%) were having source of knowledge friends.

Table No.2: Distribution of Primiparous Mothers according to Maternal Characteristics

N=80

MATERNAL CHARACTERISTICS	**RESPONDENTS**	
	FREQUENCY (F)	**PERCENTAGE (%)**
Gestational age at 1st visit in weeks		
8-16 weeks	28	35 %
17-25 weeks	11	13.75 %
26-34 weeks	41	51.25 %
No. of ANC visits till 37 weeks		
1-4 visits	33	41.25 %
5-8 visits	42	52.5 %
9-11 visits	5	6.25 %
Height in cm		
145-153 cm	35	43.75 %
154-162 cm	36	45 %
163-171 cm	9	11.25 %
Weight in kg		
45-54 kg	13	16.25 %
55-64 kg	34	42.5 %
65-74 kg	28	35 %
75-84 kg	4	5 %
85-94 kg	1	1.25 %
BMI		
Underweight < 18.50	1	1.25 %
Normal range 18.50 - 24.99	32	40 %
Overweight ≥ 25.00	1	1.25 %
Obese ≥ 30.00	46	57.5 %
History of infertility		
Yes	1	1.25 %
No	79	98.75 %

Table number two reveals According to Gestational age at 1st visit in weeks most of the primiparous mothers 41(51.25%) were done 1st visit at gestational week between 26-34 weeks, 28(35%) were done 1st visit at gestational week between 8-16 weeks, 11(13.75%) were done 1st visit at gestational week between 17-25 weeks. According to Number of ANC visits most of the primiparous mothers 42(52.5%) were completed visits between 5-8 visit,

33(41.25%) were completed visits between 1-4 visits, 5(6.25%) were completed visits between 9-11 visits. As per height most of the primiparous mothers 36(45%) were having height between 154-162cm, 35(43.75%) were having height between 145-153cm, 9(11.25%) were having height between 163-171cm. As per weight most of the primiparous mothers 34(42.5%) were having weight between 55-64kg, 28(35%) were having weight between 65-74kg, 13(16.25%) were having weight between 45-54kg, 4(5%) were having weight between 75-84kg, 1(1.25%) were having weight between 85-94kg. According to BMI majority of primiparous mothers 46(57.5%) were from ≥30.00, 32(40%) were belonged to BMI between 18.50-24.99, 1(1.25%) were from ≥25.00, 1(1.25%) were from <18.50. Maximum primiparous mothers 79(98.75%) were not having history of infertility, 1(1.25%) were having history of infertility.

TABLE NO 3: Comparison of frequency and percentage distribution of pretest(prenatal breastfeeding self-efficacy) and posttest level(breastfeeding self-efficacy – short form) of breastfeeding self-efficacy among primiparous mothers.

N=80

Level of confidence	**Pretest**		**Posttest**	
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
Low confident	65	81.25 %	0	0
Moderate confident	12	15 %	1	1.25 %
High confident	3	3.75 %	79	98.75 %

Table 3 represents the comparison between frequency and percentage distribution of pretest(prenatal breastfeeding self-efficacy) and posttest level(breastfeeding self-efficacy – short form) of breastfeeding self-efficacy among primiparous mothers. In pretest maximum of 65 (81.25%) mothers were having low confident, 12 (15%) of them were having moderate confident and only 3 (3.75%) of them were having high confident. After nursing intervention (Informational booklet) in the posttest maximum 79 (98.75%) of mothers were had high confident, only 1 (1.25%) of mother had moderate confident and none of them had low confident it shows after nursing intervention there was increase in the level of confidence so nursing intervention was an effective measure to increase breastfeeding self-efficacy. It was not biologically possible that to compare the mean and standard deviation of prenatal breastfeeding self-efficacy and breastfeeding self-efficacy. As we have used two different scales for pretest and post test in that prenatal breastfeeding self-efficacy scale has 20 statement and breastfeeding self-efficacy scale-short form has 14 statement.

Table 4: Frequency distribution of pretest and posttest level of Breastfeeding self-efficacy among primiparous mothers

N=80

		Posttest			**Pretest level of confidence**
	Level of confidence	Low confident	Moderate confident	High confident	
Pretest	Low confident	0	1	64	65
	Moderate confident	0	0	12	12
	High confident	0	0	3	3

Table 4 represents the comparison between frequency and percentage distribution of pretest(prenatal breastfeeding self-efficacy) and posttest level(breastfeeding self-efficacy – short form) of breastfeeding self-efficacy among primiparous mothers. In pretest 65 mothers were having low confident but in posttest none of mother was having low

confident and one mother was having moderate confident, in pretest 12 of them were having moderate confident but in posttest 12 were having high confident and none of mother was having moderate and low confident, only 3 of them were having high confident in pretest and posttest also None of mother was having moderate and low confident.

Table 5: Association of pretest prenatal level of Breastfeeding self-efficacy among primiparous mothers with their selected demographic variables.

N=80

Sr.No.	Demographic variables	Pretest level of breastfeeding self-efficacy						$\chi 2$	P value	Result
		Low confident		Moderate confident		High confident				
		N	%	N	%	N	%			
1.	**Age in years**							**5.100**	**0.5311**	**NS**
	20-23 years	28	87.5	4	12.5	0	0			
	24-27 years	27	75	6	16.66	3	8.33			
	28-31 years	8	88.88	1	11.11	0	0			
	32-35 years	2	66.66	1	33.33	0	0			
2.	**Age at marriage in years**							**6.057**	**0.4169**	**NS**
	18-21 years	25	86.20	4	13.79	0	0			
	22-25 years	29	85.29	3	8.82	2	5.88			
	26-29 years	9	64.28	4	28.57	1	7.14			
	30-33 years	2	66.66	1	33.33	0	0			
3.	**Education**							**5.360**	**0.0686**	**NS**
	Secondary school	18	22.5	0	0	0	0			
	Degree	47	75.50	12	19.35	3	4.83			
4.	**Residency**							**2.048**	**0.3591**	**NS**
	Urban	20	74.07	5	18.51	2	7.40			
	Rural	45	84.90	7	13.20	1	1.88			
5.	**Socioeconomic class**							**4.319**	**0.1154**	**NS**
	Upper class	14	66.66	6	28.57	1	4.76			
	Upper middle class	51	86.44	6	10.16	2	3.38			
6.	**Source of Knowledge**							**5.628**	**0.6888**	**NS**
	News paper	12	92.30	0	0	1	7.69			
	Television	12	80	2	13.33	1	6.66			
	Healthworker	24	68.57	8	22.85	3	8.57			
	Friends	4	66.66	1	16.66	1	16.66			
	Family members	54	78.26	12	17.39	3	4.34			

Table 4 shows the association between pretest level of prenatal breastfeeding self-efficacy among primiparous mothers with their selected demographic variables. The analysis revealed that there was no significant association found between pretest on level of prenatal breastfeeding self-efficacy among primiparous mothers with their selected demographic variables.

DISCUSSION

One of the theoretically controllable characteristic that is consistently associated with successful BF results is maternal self-efficacy[8].

The results of the present study were compatible with the hypothesis$_1$ thatsignificant increase in the mean post-test score of Breastfeeding Self-efficacy among primiparous mothers regarding breastfeeding.

Present study In pretest 65 (81.25%) mothers were having low confident, 12 (15%) of them were having moderate confident and only 3 (3.75%) of them were having high confident. In posttest none of mother was having low confident, 1 (1.25%) of them was having moderate confident and 79 (98.75%) of them were having high confident. This shows the impact of nursing intervention. This had increased the breastfeeding self-efficacy of primiparous mothers.

Many researches have supported to present study that prenatal BF interventions as being effective in increasing BSE regardless of the types of educational intervention[13, 14].

Similar findings were reported by a recent meta-analysis from Canada investigated the effect of education or support based interventions on improvement of BSE. The interventions were implemented in the postpartum, prenatal or perinatal period. The results indicated that the mothers in the intervention groups had significantly higher BSE score compared to the mothers in the control groups[15].

In contrast with present study results, in an evidence-based practice project, eight nulliparous pregnant women who were 14 to 18 years of age and were in high school, participated in a pre and post-intervention study. The results reported no significant differences in prenatal BSE scores in pre and post-intervention (an antenatal educational intervention)[16].

Aguirre, et al. (2018), noted that the effect of the prenatal intervention on BSE could be changed over time point. In this regard, they did not find a significant difference between intervention and control group at baseline or during the early days postpartum. However, differences in self-efficacy scores were considerable at week 6 and months 3 and 6[17].

Literature supports to present study findings that positive effectiveness of antenatal education on increasing BSE but, sometimes the context and circumstances may impact on the effectiveness of the interventions. In this regards, a Japanese study explored impact of a self-efficacy intervention on BSE and exclusive BF and assessed the difference in effect by hospital-routine type. The eligible pregnant women at third trimester were enrolled from non-Baby-Friendly Hospitals (nBFH) and “Baby-Friendly”-certified hospitals (BFH). A breastfeeding self-efficacy workbook was provided only for the participants in the intervention group from both types of hospitals. In BFHs, the intervention improved both BSE and exclusive BF at four weeks postpartum. But, in nBFHs, no positive result was observed on BSE or on the exclusive BF rate through four weeks postpartum[18].

CONCLUSION

The study concludes that nursing intervention on breastfeeding self-efficacy was an effective as the mothers had increase in the level of breastfeeding self-efficacy, increase ability to breastfeed her baby. In this study breastfeeding self-efficacy was found to be very high due to nursing intervention(informational booklet). It shows that nursing intervention (informational booklet) have important role to play to create positive breastfeeding experience among primiparous mothers.

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