

A study to evaluate the effectiveness of educational package on breastfeeding in terms of knowledge, attitude and practices among primi mothers in selected hospitals of district ambala, Haryana

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Abstract

Introduction: Breastfeeding is a special gift from a mother to her baby. It is the normal way of providing young infants with the nutrients they need for healthy growth and development. To achieve millennium development goals, it is expected to reduce the neonatal mortality by two third of present rate. A newborn baby has only three demands. They are warmth in the arms of its mother, food from her breasts and security in the knowledge of her presence. Breastfeeding satisfies all three.

Material and Method: A quasi experimental study using posttest comparison group design was conducted to evaluate the effectiveness of educational package on breastfeeding in terms of knowledge, attitude and practices among sixty primi mothers selected by using purposive sampling technique in selected Hospitals of District Ambala, Haryana. Assessment of knowledge, attitude and practice was done by using structured knowledge questionnaire, attitude scale, observational checklist and reliability was 0.65, 0.87, and 0.96 respectively. Educational package I was administered at latent phase of labour and educational package II was administered to the mother postnatal. Mother was supported for correct technique till the time she gained proficiency and gave one correct demonstration for breast feeding. Posttest for knowledge and attitude was taken on second day and posttest for practice was taken on third day after delivery. Follow up was done on 6th week through telephonic interview method.

Findings: Findings of the study indicated that mean knowledge score (20.63 ± 4.08), mean attitude score (38.57 ± 4.85) and mean practice score (16.73 ± 1.96) in the experimental group was significantly higher than mean knowledge score (11.53 ± 4.61), mean attitude score (28.83 ± 5.62), mean practice score (11.93 ± 4.06) respectively in the comparison group. Positive non-significant correlation was found between knowledge, attitude and practice score of primi mothers in the experimental group. Findings also indicated that period of gestation, type of family, income of family had impact on knowledge whereas type of family, place of residence, income of family had impact on attitude of primi mothers in experimental group. Results of the follow up showed that all of the mothers in the experimental group were still giving breast milk to the new born babies where as in the comparison group, 30% of the mothers had started giving top feeds to the new born babies stating the reason of non-suckling behavior of the baby and reduced lactation.

Keywords: Effectiveness, Educational Package, Primi mothers, Breastfeeding, Knowledge, Attitude, Practice.

Introduction

A newborn baby has only three demands. They are warmth in the arms of its mother, food from her breasts and security in the knowledge of her presence. Breastfeeding satisfies all three.

According to WHO and UNICEF, 1.5 million infants could be saved by following optimal feeding practices. In 2003, it was presented that exclusive breastfeeding, if universalized, could save 13% of all

under five deaths, (an estimated 1.3 million in the 42 high mortality countries).¹

India's early breastfeeding initiation rate is among the worst at less than a quarter of mothers that is just 24.5%. In India neonatal mortality rate is 32%, infant mortality rate is 48% and under five mortality rate is 63%.²

National health survey-3 of India has revealed that breastfeeding rate is 10% and that of children

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breastfed within an hour of birth is 18% in Haryana. Exclusive breastfeeding rate is (16.9%) compared with National Data (46%).³

Despite the worldwide propaganda about the advantages of breastfeeding among medical and lay people, many infants are still being bottle fed. Today there is also a decline of breastfeeding particularly in the developing countries.

There is increased number of women visit to clinic and indoor mothers with the complaints of inadequate secretion of breast milk, inability to feed the baby, not sucking properly, unable to maintain the position and duration of feed for the newborn baby. Mothers should be taught regarding breastfeeding in the antenatal period itself. Thus studies and teachings are necessary to create awareness among primi mothers as mothers for the first time need more support, education and awareness regarding breastfeeding.

Objectives

1. To assess and compare the knowledge, attitude and practices of primi mothers regarding breastfeeding in the experimental group and comparison group.
2. To determine the relationship between the knowledge and attitude; knowledge and practices; attitude and practices of primi mothers regarding breastfeeding in the experimental group and comparison group.
3. To determine the association of knowledge scores, attitude scores and practice scores of primi mothers with selected variables in the experimental group.

Hypotheses

Following hypotheses will be tested at 0.05 level significance

H₁: The mean post-test knowledge score mean post-test attitude score and mean posttest practice score of primi mothers in the experimental group regarding breastfeeding will be significantly higher than the mean post-test knowledge score of primi mothers in the comparison group.

H₂: There will be significant relationship between knowledge and attitude; knowledge and practices; attitude and practices regarding breastfeeding among

primi mothers in the experimental group and comparison group.

H₃: There will be a significant association of knowledge scores, attitude scores and practice scores of primi mothers regarding breastfeeding with selected variables in the experimental group.

Materials and Methods

The research approach used in the study was quasi experimental in nature and design used was post-test comparison group design with purposive sampling technique. The population of the present study comprised of 60 primi mothers (30 in the experimental group and 30 in the comparison group) admitted in the antenatal ward. Inclusion criteria was primi mothers who are at term gestation (completed 37 weeks), in latent phase of labour, available at the time of data collection, willing to participate in the study, able to read and write Hindi and who have come for normal delivery or planned cesarean section. Exclusion criteria included primi mothers who are undergoing emergency cesarean section, who will have still birth in the present pregnancy and any medical condition in which primi mother cannot feed the newborn baby. Content validity of the tools and educational package were established by submitting it to seven experts.

Data was collected from MMIMS&R Hospital, Mullana and Civil Hospital, Ambala using

1. Structured knowledge questionnaire (included 30 items under three domains: knowledge items (13), understanding items (8), practice items (9))
2. Attitude scale (comprised of 15 items which included the content areas of concept of breastfeeding (11) and benefits of breastfeeding (4))
3. Observational checklist (included 23 items under the 3 headings: practices before initiation of breastfeeding (6) practices during breastfeeding (14), Practices after breastfeeding (3))
4. Reliability was 0.65, 0.87, and 0.96 respectively.

Ethical consideration

1. Ethical approval was obtained from the Institutional Ethical Committee for conducting the study.

- Written permission was obtained from the Medical Officer, Civil Hospital, Ambala and MMIMS&R Hospital, Mullana, Ambala.
- Written informed consent was taken from each subject.

Data collection procedure

Demographic data was collected by giving data sheet to primi mother and clinical data sheet was filled by the researcher. One to one teaching was given to the primi mothers at latent phase of labour in the experimental group. Teaching included power point presentation and videos regarding breastfeeding (educational package I in Hindi and English). Teaching was withheld at the time of contraction.

On day 1, after delivery educational package II (in hindi and english) was administered to the primi mothers in the experimental group when the mother

was able to understand. Primi mother was supported for correct latch on and technique for breastfeeding till the time she gained proficiency and gave one correct demonstration.

On day 2 and 3 knowledge and attitude was assessed by administering a structured knowledge questionnaire and attitude scale on 2nd day in the experimental group and comparison group. On 3rd day, three practices were assessed during three subsequent feedings by observational checklist.

Follow up was done on 6th week and expressed practices were assessed by telephonic interview method in the experimental group and comparison group. The response rate was 67% and 77% in the experimental and comparison group respectively. Both inferential and descriptive statistics were used in the study.

Table 1: Frequency and percentage distribution of primi mothers in terms of knowledge scores N = 60

Levels of Knowledge	Experimental group (n = 30)		Comparison group (n = 30)	
	Frequency	(%)	Frequency	(%)
Excellent	11	37	0	0
Good	10	33	2	7
Average	7	23	7	23
Below Average	2	7	21	70

Findings in table 1 indicated that in the experimental group most of the primi mothers (37%) had excellent knowledge, 33% had good knowledge, 23% had average knowledge and 7% had below average knowledge where as in the comparison group majority of the primi mothers (70%) had below average knowledge, 7% had good knowledge, 23% had average knowledge and none of the primi mothers had excellent knowledge.

Table 2: Mean, Mean Difference, Standard Deviation of Difference and Standard Error of Mean Difference and 't' Value of Post-Test Knowledge Scores of Primi Mothers N = 60

Group	Mean	M _D	SD _D	SE _{MD}	't' value
Experimental Group (n = 30)	20.63	9.1	6.402	1.45	8.08*
Comparison Group (n = 30)	11.53				

't'(58) = 2.00 at 0.05 level of significance

*Significant (P ≤ 0.05)

Data in table 2 revealed that the mean knowledge score of primi mothers in the experimental group (20.63) was higher than the mean knowledge score of primi mothers in the comparison group (11.53) with the mean difference of 9.1. The obtained mean difference was found to be statistically significant as evident from the 't' value of 8.08 at 0.05 level of significance.

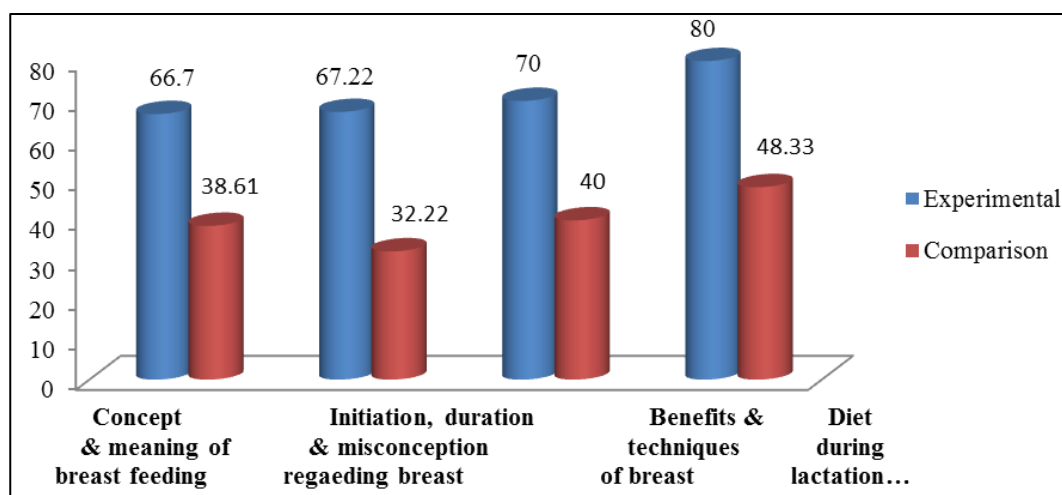


Fig. 1: Area wise mean percentage of knowledge score

Data presented in figure 1 revealed that in all the areas primi mothers had more knowledge scores in the experimental group than that of the comparison group. Thus, it can be inferred that Educational package was effective in enhancing the knowledge of primi mothers in all the areas regarding breastfeeding in the experimental group.

Table 3: Frequency and percentage distribution of primi mothers in terms of attitude scores N= 60

Levels of attitude	Experimental group (n = 30)		Comparison group (n = 30)	
	Frequency	(%)	Frequency	(%)
Highly favorable	25	83	7	23
Moderately favorable	5	17	19	63
Unfavorable	0	0	4	13

Findings in table 17 indicated that in the experimental group, majority of the primi mothers (83%) had highly favorable attitude and in the comparison group majority of the primi mothers (63%) had moderately favorable attitude towards breastfeeding. Moreover, 17% of primi mothers had moderately favorable attitude and none of primi mothers had unfavorable attitude in the experimental group where as in the comparison group, 23% of primi mothers had highly favorable attitude and 13% of primi mothers had unfavorable attitude towards breastfeeding.

Table 4: Mean, mean difference, standard deviation of difference and standard error of mean difference and 't' value of post-test attitude scores of primi mothers N = 60

Group	Mean	M _D	SD _D	SE _{MD}	't' value
Experimental group (n = 30)	38.57	9.74	7.13	1.94	7.17*
Comparison Group (n = 30)	28.83				

't'(58) = 2.00 at 0.05 level of significance

*Significant (P ≤ 0.05)

Table 4 revealed that the mean post-test attitude score of primi mothers in the experimental group (38.57) was higher than the mean post-test attitude score of primi mothers in the comparison group (28.83) with the mean

difference of 9.74. The obtained mean difference was found to be statistically significant as evident from the 't' value of 7.17 at 0.05 level of significance.

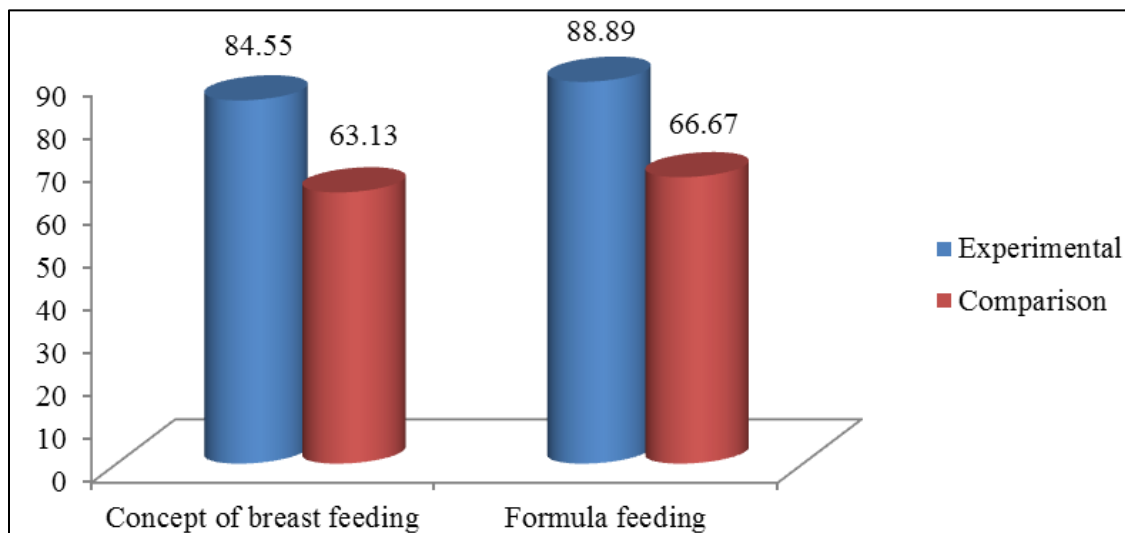


Fig. 2: Areas Wise Mean Percentage of Attitude Score

Data presented in figure 2 revealed that in both the areas primi mothers had more favorable attitude in the experimental group than that of the comparison group. Thus, it can be inferred that educational package was effective in enabling the primi mothers to develop more favorable attitude in all the areas regarding breastfeeding in the experimental group.

Table 5: Frequency and percentage distribution of primi mothers in terms of practice scores N = 60

Levels of Practices	Experimental group (n = 30)		Comparison group (n = 30)	
	Frequenc y	(%)	Frequenc y	(%)
Good	13	43	5	17
Average	17	57	12	40
Below Average	0	0	13	43

Findings in table 5 indicated that in the experimental group, majority of the primi mothers (57%) had average level of practices and in the comparison group most of the primi mothers (43%) had below average level of practices regarding breastfeeding. Moreover, 43% of primi mothers had good level of practices and none of the primi mother had below average level of practices in the experimental group where as in the comparison group, 17% of primi mothers had good level of practices and 40% of primi mothers had average level of practices.

Table 6: Mean, mean difference, standard deviation of difference and standard error of mean difference and 't' value of post test practice scores of primi mothers N = 60

Group	Mean	M _D	SD _D	SE _{MD}	't' value
Experimental Group (n = 30)	16.73	4.80	4.49	0.90	5.83*
Comparison Group (n = 30)	11.93				

't'(58) = 2.00 at 0.05 level of significance

*Significant (P ≤ 0.05)

Findings in table 6 revealed that the mean post-test practice score of primi mothers in the experimental group (16.73) was higher than the comparison group (11.93) with the mean difference of 4.80. The mean difference was statistically significant as evident from the 't' value of 5.83 at 0.05 level of significance.

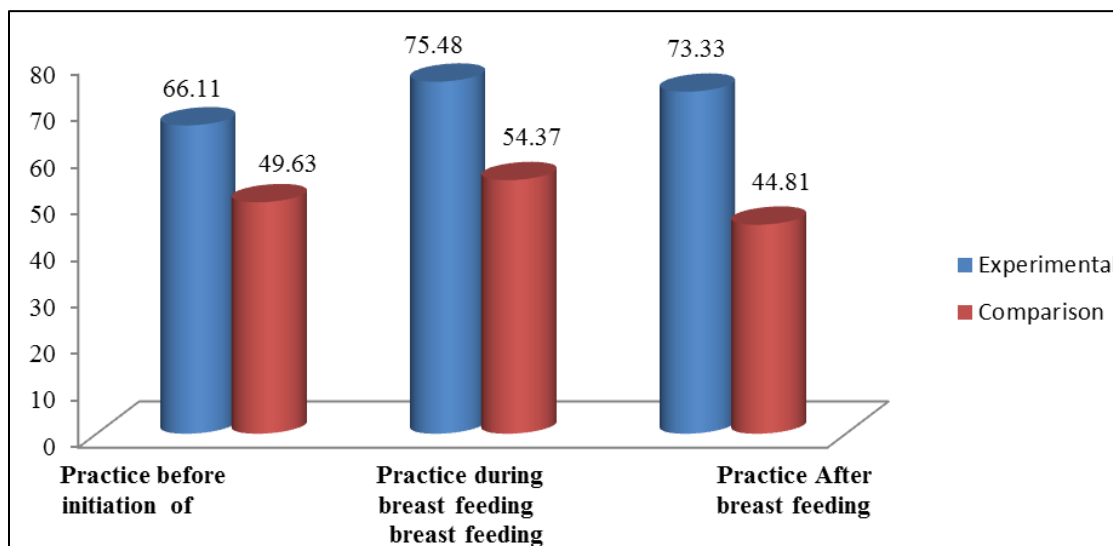


Fig. 3: Areas wise mean percentage of practice score

Data presented in figure 3 revealed that in all the areas primi mothers had good level of practices in the experimental group than that of the comparison group. Thus, educational package was effective in developing good level of practices in primi mothers in all the areas regarding breastfeeding in the experimental group.

Table 7: Correlation between knowledge scores, attitude scores and practice scores of primi mothers N = 60

		Attitude	Practice	Knowledge
Knowledge	Experimental group (n = 30)	0.24 ^{NS}	-	-
	Comparison group (n = 30)	-0.23 ^{NS}	-	-
Attitude	Experimental group (n = 30)	-	0.16 ^{NS}	-
	Comparison group (n = 30)	-	0.28 ^{NS}	-
Practice	Experimental group (n = 30)	-	-	0.13 ^{NS}
	Comparison group (n = 30)	-	-	0.07 ^{NS}

'r' (28) = 0.36, at 0.05 level of significance

NS = Not Significant (P > 0.05)

Findings in the table 7 indicated that there was very low positive correlation between knowledge scores, attitude scores and practice scores obtained by primi mothers regarding breastfeeding, which was not found to be significant at 0.05 level of significance. It indicated that there was no significant co-relation between knowledge, attitude and practices in the experimental group.

Findings further revealed that there was no significant co-relation between knowledge, attitude and practices in the comparison group.

Table 8: Chi-Square value showing association of knowledge scores, attitude scores and practice scores with demographic variables in the experimental group

S. No.	Variables	χ^2		
		Knowledge	Attitude	Practice
1.	Period of gestation	6.13*	--	--
2.	Type of family	4.82	4.82	--
3.	Income of family (monthly)	6.00	8.45*	--
4.	Place of residence	--	7.06*	--

Findings in the table 8 revealed that period of gestation, type of family, family income had association with knowledge scores of primi mothers and type of family, place of residence, family income had influence on the attitude scores of the primi mothers in the experimental group. Findings further revealed that demographic variables had no impact on practice scores of primi mothers in the experimental group.

Discussion

Findings of the present study revealed that mean knowledge score (20.63) primi mothers in the experimental group was higher than the mean knowledge score (11.53) of primi mothers in the comparison group with significant 't' value (8.08) at 0.05 level of significance. These findings were consistent with the study conducted by Chandrashekhar R., Shashidhar Basagoudar, Sujata Muneshwar (2012) on effectiveness of health education on increasing knowledge about breastfeeding which showed that average knowledge score in the experimental group was (14.25) and in the control was (18.40) with significant increase ($p=0.000$) in the knowledge after administration of health education.⁴

The data of the present study further revealed that the mean attitude score of primi mothers (38.57) in the experimental group was significantly higher than the mean attitude score (28.83) of primi mothers in the comparison group. The study findings were found to be consistent with the study conducted by Lin SS, Chien LY, Tai CJ, Lee CF (2008) on effectiveness of a prenatal education programme on breastfeeding outcomes. The results of the study show that the

subjects of the experimental group exhibited a more positive breastfeeding attitude ($t = 7.40, p < 0.001$).⁵

The findings of the present study further showed that in the experimental group majority of the primi mothers (57%) had average level of practice and in the comparison group most of the primi mothers (43%) had below average level of practice regarding breast feeding. The findings of the present study were found to be consistent with another study conducted by MD Santhi, Kokilavani (2013) which showed that in the experimental group all the mothers (100%) had fully adoptive practice on breastfeeding whereas in the control group, all the mothers (100%) had partially adoptive practice of breastfeeding. Mean post-test practice score of mothers in the experimental group (26) was higher than mean post-test practice score of mothers in control group (11.73) with significant value (42.59) at 0.05 level of significance.⁶

Conclusion

From the findings it can be concluded that educational package enhanced the knowledge of the primi mothers, enabled them to develop a more favorable attitude towards breastfeeding, and improved the practices of primi mothers regarding breastfeeding in the experimental group. Thus the educational package regarding breastfeeding among primi mothers was effective in bringing about a change in Knowledge, attitude and practices of primi mothers regarding breastfeeding.

Implications of the study

The educational package can be used as a teaching aid to student nurses, and primi mothers. Nursing students must be taught about guidelines of Breastfeeding Promoting Network of India (BPNI) and Essential

Newborn Care (ENBC) module. Nurse administrator should ensure for the availability of the materials like pamphlets, posters, charts, modules, guidelines related to breastfeeding in antenatal OPDs, antenatal and postnatal ward which helps in imparting education to the mothers.

Limitations

1. The study was limited to a small number (60) of primi mothers only.
2. The study was limited to only selected hospitals; hence it was difficult to make broad generalization of the findings.
3. Hawthorne effect was present while observing the practices of primi mothers regarding breastfeeding.
4. Swallowing reflex of newborn baby was not assessed.

Recommendations

1. The study can be replicated on a larger sample.
2. Another study can be conducted using mother to mother approach for teaching primi mothers regarding breastfeeding.
3. A similar study can be conducted using non participatory observation or technology (video camera) to observe the practices of mothers regarding breastfeeding to overcome Hawthorne effect.

Source of Funding

None.

Conflict of Interest

None.

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