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## A study to assess the effectiveness of information, education, communication (IEC) package on knowledge of postnatal care among mothers

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### Abstract



The postnatal period is a crucial phase for the health of both mother and newborn, necessitating focused care to prevent complications and promote well-being. Key components of postnatal care include a balanced diet, breastfeeding techniques, personal hygiene, exercise, newborn care, and family welfare. Providing mothers with adequate information is vital to ensuring optimal health outcomes. A study evaluated the effectiveness of an Information, Education, and Communication (IEC) package on postnatal care knowledge and practice among 60 mothers at a selected hospital in Thiruvallur, using a quantitative pre-experimental one-group pre- and post-test design. Results showed a significant increase in knowledge, with mean scores improving from 20.80 to 36.70 (38.07%,  $p < 0.001$ ), and practice scores rising from 12.68 to 21.16 ( $t = 27.254$ ,  $p < 0.001$ ). A positive correlation ( $r = 0.356$ ,  $p < 0.001$ ) demonstrated that improved knowledge enhanced practices. Post-intervention, no mothers had inadequate knowledge. Conclusion: IEC education significantly improves postnatal care knowledge and practices, emphasizing the importance of maternal education.

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### INTRODUCTION

Child Birth is a biological process which gives joy to the mother and family. Motherhood is a beautiful experience whereby the mother safely delivers a child. Care must be given to ensure safe child birth.

The health of women actually represents the health of the country she comes from. Women are the primary care takers, first educators, beavers and nurturers of the next generation.

The postnatal period or puerperium (from the Latin Pure "Child" and "to bring forth") refers to a period of six week after child birth. The immediate postpartum period most often occurs in the hospital setting, where the majority of women remain for approximately 2 days after a vaginal delivery and 3-5 days after a cesarean delivery and are beginning to care for a new born. This is used to make sure the mother is stable and to educate her in the care of her baby. Postnatal care is reached if complete care is given to mothers. It is the comprehensive or total health care that can be offered to women.

The National Health Policy (NHP) 2017 lay down the target to bring the MMR in India below 100/lakh live births by 2020. Owing to ceaseless efforts by the Government, India has successfully achieved the major milestone of bringing down its MMR to 97/lakh live births in 2018-20. The Sustainable Development Goals (SDG) set by the United Nations in 2015 is to reduce the global MMR to less than 70/ lakh live births by 2030

Ministry of Women and Child Development (2020) "Trends in maternal mortality 2000 to 2020", MMR of India has declined from 384 in 2000 to 103 in 2020 whereas Global MMR has declined from 339 in 2000 to 223 in 2020.

Namerirakpam Bindiya and Fathima.I (2015) had conducted to assess the knowledge and attitude of mothers on postnatal care at a selected hospital, research approach is non-experimental descriptive approach with 60 mothers of sample selected by Non probability convenience sampling technique. The study concluded that among the selected mothers 75% were having moderate knowledge and 25% of them were having inadequate knowledge, 70% of mothers were having moderately favorable attitude, 30% of them were having unfavorable attitude, so emphasize the need for postnatal care .

Dakshayini K.P (2014) had conducted a descriptive study to assess knowledge, attitude and practice (KAP) regarding breastfeeding in teaching hospitals among 100 mothers using non probability convenient sampling technique. Result showed that 46% were having inadequate practice 27% were having adequate practice, 27% were having moderately adequate practice. This study concluded that the knowledge of mothers regarding breastfeeding was not completely adequate and this was reflected on the practice and attitude. This would require appropriate education regarding breastfeeding for the success of the healthy growth and development of the child which would help in preventing the morbidity and mortality of the children due to infection and malnutrition.

### **STATEMENT OF THE PROBLEM**

A study to assess the Effectiveness of Information, Education, Communication (IEC) package on Knowledge of Postnatal Care among Mothers at selected hospital, Thiruvallur.

### **OBJECTIVES**

The study is to assess the pre test and post test level of knowledge and practice of postnatal care among mothers. determine the effectiveness of Information, Education, Communication (IEC) package on post test level of knowledge and practice of postnatal care among mothers.

correlate the post test level of knowledge with post test level of practice of postnatal care among mothers.

associate the post test level of knowledge and practice of postnatal care among mothers with selected demographic variables.

### **RESEARCH METHODOLOGY**

A quantitative research approach and Pre experimental one group pre-test and post-test research design was used to assess the effectiveness of Information, Education, Communication (IEC) package on Knowledge of Postnatal Care among Mothers. The 60 students were chosen by non-probability convenient sampling technique. The level of knowledge score was assessed by structured self-administered questionnaire. Structured self-administered questionnaire consists of 45 questions. Each correct answer carried 1 mark. Each question had only one right answer. The total score of the tool was & the scores were interpreted as below,

75% - 100% - Adequate knowledge

50% - 74% - Moderately adequate knowledge

<50% - Inadequate knowledge

Rating scale for identifying the practice of postnatal care among mothers. Total 13 questions, Total score was 26, minimum score was 0 and maximum score was 26.

#### Level of practice:

<50% -Inadequate Practice

50-75%-Moderately adequate Practice

>75%-Adequate Practice

#### Results

The **Table 1(a)** shows that with respect to age, majority 31(51.7%) were in the age group of 21 – 25 years. Regarding educational status, majority 23(38.33%) were educated up to higher secondary. With considering the occupation, majority 51(85%) were housewives. The income of the family revealed that, majority 43(71.7%) had a family monthly income of above 5000. With regard to religion, majority 51(85%) were Hindus. With respect to type of family majority 33(55%) belonged to nuclear family. Regarding food habits, majority 57(95%) were non-vegetarian.

Considering the mothers parity, majority 36(60%) were primi gravid mothers. With regard to previous knowledge of mothers revealed that, majority 35(58.3%) had no previous knowledge about postnatal care. Out of 25 mothers who had history of knowledge of postnatal care majority 9(36%) had previous knowledge of postnatal care by media.

**Table 2** The overall pretest level of knowledge in pre test revealed that the majority 36(66%) had inadequate knowledge and 24(40%) had moderately adequate knowledge. Whereas the post test revealed that the majority 44(73.3%) had adequate knowledge and 16(26.7%) had moderately adequate knowledge, of postnatal care among mothers.

**Table 3** The overall pretest level of practice in pre test revealed that the majority 38(63.3%) had inadequate practice and 22(36.7%) had moderately adequate practice. Where the post test revealed that the majority 46(76.7%) had adequate practice and 14(23.3%) had moderately adequate practice, of postnatal care among mothers.

The **Table 4** shows that in the pretest, the mean score of knowledge was 20.80 with S.D 3.81 whereas in the post test the mean score of knowledge was 36.70 with S.D 2.75. The calculated paired 't' value of  $t = 38.07$  was found to statistically significant at  $p < 0.001$  level. This clearly shows that improved significantly in the post test level of knowledge of postnatal care among mothers after Information, Education and Communication (IEC) package.

The **Table 5** shows that in the pretest, the mean score of practice was 12.68 with S.D 2.31 where as in the post test the mean score of practice was 21.16 with S.D 2.50. The calculated paired 't' value of  $t = 27.254$  was found to statistically significant at

**Table 1 Frequency and percentage distribution of mothers based on demographic variables such as age and educational status**

S.No	Demographic Variables	Mothers	
		n	%
1.	Age (in years)		
a.	15-20	14	23.3
b.	21-25	31	51.7
c.	26-30	8	13.3
d.	31-35	4	6.7
e.	Above 35	3	5
2.	Educational status		
a.	Illiterate	1	1.7
b.	Primary school	11	18.3
c.	Middle school	07	11.7
d.	High school	13	21.7
e.	Higher secondary	23	38.3
f.	Graduate and above	05	8.3
3.	Occupation		
a.	Housewife	51	85
b.	Employed	9	15
4.	Income		
a.	Below 5000	17	28.3
b.	Above 5000	43	71.7
5.	Religion		
	Hindu	51	85
	Christian	8	13.3
	Muslim	1	1.7
	Others	0	0
6.	Type of family, Nuclear	33	55
	Joint	27	45
7. a.	Vegetarian	03	5
b.	Non-vegetarian	57	95
8.	Mothers parity		
a.	Primi mothers	36	60
b.	Multi mothers	24	40
9.	Previous Knowledge		
a.	Yes	25	41.7
b.	No	35	58.3
10.	If Yes,		
a.	Media	9	36.0
b.	Health care	7	28.0
c.	Family members	7	28.0
d.	Other sources	1	4.0

**Table 2 Frequency and percentage distribution of overall pretest and post test level of knowledge of postnatal care among mothers**

Level of Knowledge	Pretest		Posttest	
	n	%	n	%
Inadequate knowledge (<50%)	36	60	0	0
Moderately Adequate Knowledge (50-75%)	24	40	16	26.7
Adequate Knowledge (>75%)	0	0	44	73.3

**Table 3 Frequency and percentage distribution of pretest and post test level of practice of postnatal care among mothers**

Level of Practice	Pretest		Post-test	
	n	%	n	%
Inadequate Practice (<50%)	38	63.3	0	0
Moderately Adequate Practice (50-75%)	22	36.7	14	23.3
Adequate Practice (>75%)	0	0	46	76.7

**Table 4 Comparison of pretest and post test level of knowledge of postnatal care among mothers**

S.No.	Knowledge	Mean	S.D	Paired 't' Value
1.	Pretest	20.80	3.81	t = 38.07*** p = 0.000 Significant
2.	Post Test	36.70	2.75	

\*\*\*p<0.001, S – Significant

**Table 5 Comparison of pretest and post test level of practice of postnatal care among mothers.**

S.No.	Practice score	Mean	S.D	Paired 't' Value
1.	Pretest	12.68	2.31	t =27.254*** p = 0.000 Significant
2.	Post Test	21.16	2.50	

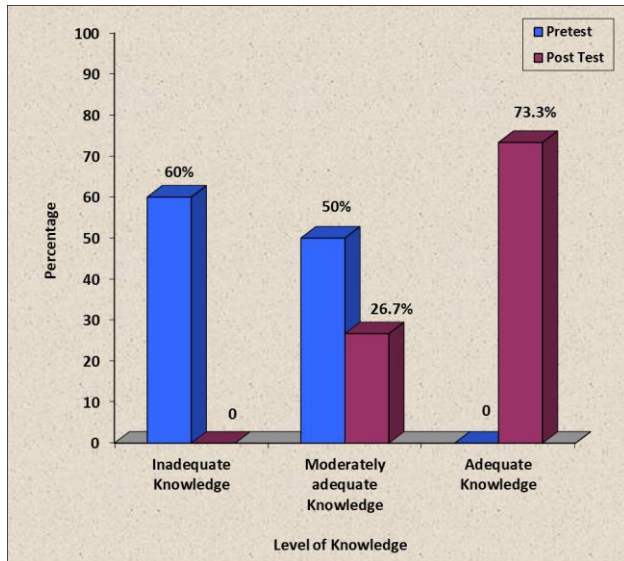
\*\*\*p<0.001, S – Significant

**Table 6 Correlation of post test level of knowledge with post test level of practice of postnatal care among mothers**

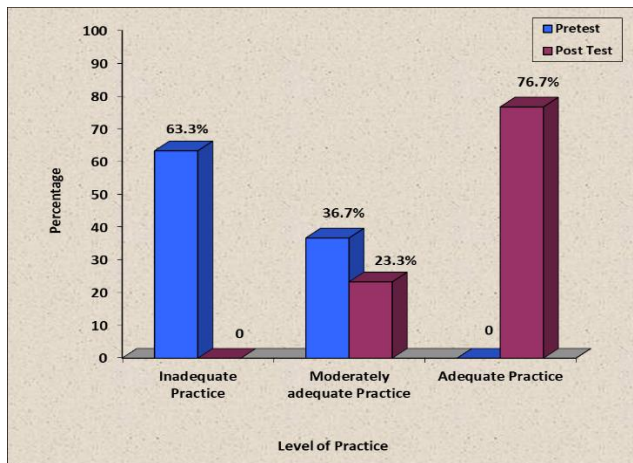
S.No.	Variables	Mean	S.D	'r' Value
1.	Knowledge	36.70	2.75	r = 0.356** p = 0.005 Significant
2.	Practice	21.16	2.50	

\*\*p<0.01, S – Significant

$p < 0.001$  level. This clearly shows that improved significantly in the post test level practice of postnatal care among mothers after Information, Education and Communication (IEC) package.



**Figure 1 Percentage distribution of overall pretest and post test level of knowledge of postnatal care among mothers**



**Figure 2 Percentage distribution of pretest and post test level of practice of postnatal care among mothers**

The **Table 6** shows that the post mean score of knowledge was 36.70 with S.D 2.75 and the post test practice score was 21.16 with S.D 2.50. The calculated Karl Pearson's Correlation value of  $r = 0.356$  shows a fair positive correlation knowledge and practice variables

which was found to be statistically significant at  $p < 0.01$  level. This clearly indicates that when the knowledge of postnatal care increases, their practice level also increases.

**DISCUSSION**

The overall pretest level of knowledge in pre test revealed that the majority 36(66%) had inadequate knowledge and 24(40%) had moderately adequate knowledge. Whereas the post test revealed that the majority 44(73.3%) had adequate knowledge and 16(26.7%) had moderately adequate knowledge, of postnatal care among mothers. The overall pretest level of practice in pre test revealed that the majority 38(63.3%) had inadequate practice and 22(36.7%) had moderately adequate practice. Where the post test revealed that the majority 46(76.7%) had adequate practice and 14(23.3%) had moderately adequate practice, of postnatal care among mothers. The mean score of knowledge was 20.80 with S.D 3.81 whereas in the post test the mean score of knowledge was 36.70 with S.D 2.75. The calculated paired 't' value of  $t = 38.07$  was found to statistically significant at  $p < 0.001$  level. This clearly shows that improved significantly in the post test level of knowledge of postnatal care among mothers after Information, Education and Communication (IEC) package, the pretest, the mean score of practice was 12.68 with S.D 2.31 where as in the post test the mean score of practice was 21.16 with S.D 2.50. The calculated paired 't' value of  $t = 27.254$  was found to statistically significant at  $p < 0.001$  level. This clearly shows that improved significantly in the post test level of practice of postnatal care among mothers after Information, Education and Communication (IEC) package.

**CONCLUSION:**

In the pre test 36% of mother had inadequate knowledge and in the post test after education

no one was inadequate knowledge. So adequate education in IEC is effective.

### IMPLICATIONS

As a Nursing personnel need to teach all the females and create awareness about Postnatal care among pregnant mother & women. And show them the ways to identify the risks at the earliest and provide them prompt treatment.

### RECOMMENDATIONS

A replication of the present study can be conducted postnatal care among mothers in the urban setting.

A similar study can be conducted with an intervention for 6 weeks.

The community health nurses have a great responsibility to guide the family members, relatives and neighbors. They have to be educated regarding difference aspects of postnatal care.

The same study can be done prospectively.

Embarrassment misconception, false beliefs, ignorance should be removed from the society by proper education with scientific basis.

A similar study can be conducted by using experimental design

### Ethical Approval

No ethical approval was necessary for this study.

### Author Contribution

All authors made substantial contributions to the conception, design, acquisition, analysis, or interpretation of data for the work. They were involved in drafting the manuscript or revising it critically for important intellectual content. All authors gave final approval of the version to be published and agreed to be

accountable for all aspects of the work, ensuring its accuracy and integrity.

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