

A study to develop and evaluate the effectiveness of information booklet on Emergency Contraception in terms of knowledge of women and to seek its relationship with selected factors in selected residential apartments in Andhra Pradesh

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Abstract

A study to develop and evaluate the effectiveness of information booklet on Emergency Contraception in terms of knowledge of women and to seek its relationship with selected factors in selected residential apartments in Andhra Pradesh. The main objective of the study was to develop an information booklet for women on EC, to evaluate their knowledge before and after the administration of booklet, to seek relationship between post test knowledge scores and selected factors and to determine the acceptability and utility of the informational booklet by the women. Multistage sampling technique was used to select the sample of 50 women from residential apartments. Independent variable was information booklet and dependent variable comprised knowledge scores and opinion scores of women regarding acceptability and utility of information booklet. Questionnaire consisted of five domains namely, general information, methods, side effects and management and important points to keep in mind and opinionnaire consisted of 10 points. Findings of the study showed highest post test knowledge scores among women in age group of 36-40 years (83.75%), post graduates (84.2%), married (82.1%). Majority of women (95.2%) fully agree with all the items listed in the opinionnaire, thus the information booklet was found to be highly acceptable and useful to enhance to knowledge of women on Emergency Contraception.

Key words: Information booklet, Emergency Contraception, opinionnaire

1. Introduction

India has a population of over one billion and with an annual growth rate of 1.9% (year 2004), is expected to double its population in 37 years. India's population has more than doubled during the last 30 years; a baby is born every 1.25 seconds (year 2004). World over, there are number of pregnancies resulting from rape and millions of unwanted pregnancies each year. Many of them end in unsafe abortions. This is specially felt in developing countries like India. Annually, 11 million abortions occur in India (year 2004), killing almost 20,000 women. Family Planning is not only an emergency measure to control the rapid population rise, but also a social policy regarding family welfare. In India about 275 million people (about 30% population) are in ages of 10-24 years of which 90 million are between 15-19 years, only 19% are between 15-24 years who use any form of contraception, as a result 17% of teenagers start childbearing who contribute to 1-4.4 million induced abortions.

Mittal S. (2000) states 25% of pregnancies in India are unwanted and quite a few end up in induced abortions. The current ratio of abortions in India is 452 per 100 live births, i.e. almost half of the total live births and 50% of these abortions are unsafe, killing 20,000 women in our country annually. Can these abortions be prevented and women rescued from clutches of untimely deaths? Surely, use of effective contraception is an answer to avoid these unwanted pregnancies, but none of the currently available contraceptives is 100% effective. In such situations judiciously used Emergency contraceptives can prevent unwanted pregnancies to 75-99%. Emergency Contraceptive Pills (ECPs) provide a short, high dose of combined estrogen and progestin, or progestin alone and are 75% effective in preventing pregnancy within 72 hours after unprotected intercourse.

2. Objectives of the study

The objectives of the study are to:

- 1) Develop an information booklet for women on Emergency Contraception.
- 2) Evaluate the knowledge of women before and after the administration of information booklet on Emergency Contraception.
- 3) Seek the relationship between post test knowledge scores and the selected factors.
- 4) Determine the acceptability and utility of the informational booklet on Emergency Contraception by the women.

3. Hypothesis

H₁= The mean post test knowledge scores of women completing the information booklet on Emergency Contraception will be significantly higher than their mean pre-test knowledge scores.

H₂= There will be significant relationship between post test knowledge scores of the women and selected factors after the administration of information booklet.

3. Methodology

An Experimental study was carried out in selected residential apartments in Secunderabad, Andhra Pradesh state, India. Sample consisted of 50 women and they were selected by purposive sampling technique. Inclusion criteria was women residing in the apartments, age between 18-40 years, married or unmarried, educated minimum up to 10 standard and who are willing to participate in the study. Exclusion criteria include women who are not willing to participate, who do not know to read and write English. Data was collected by structured knowledge questionnaire which includes four domains namely, information, methods, side effects, important points to keep in mind and structured opinionnaire with 10 items to determine the acceptability and utility of information booklet.

3.1 Data Analysis

Data was analyzed using Statistical Package for Social Sciences version (SPSS) 17.0. Descriptive and inferential statistics were used to analyze the demographic data.

4. Results

4.1 Table 1 shows the distribution of sample according to their demographic data:

The data presented in Table 1 shows frequency and percentage distribution of women by demographic characteristics. Most (50%) of women were in age group of 31-35 years, (58%) were graduates, (70%) married, (60%) non working, (50%) have family income of Rs. 10,001-15,000/month, (90%) have no previous knowledge of Emergency Contraception.

4.2 Table 2 shows area wise Mean, Mean percentage of pre and post test knowledge scores and mean % gain obtained by women on EC, this Table also shows maximum possible scores and mean pre and post test knowledge scores. Highest Mean % gain (64.4%) was seen in Methods of EC and lowest (48.5%) in Side effects of ECP. Table 3 shows area wise Mean, Mean Difference, Median, Standard Deviation of Difference, Standard Error of Mean and 't' value of Pretest and Post test knowledge scores of women on Emergency Contraception. Data presented in Table 3 showed that the obtained mean differences from pre test to post test in all the knowledge content areas i.e. Area A – 7.18, Area B – 10.96, Area C – 3.88, and Area D – 6.58 were found to be statistically significant as evident from 't' value for df(49) i.e. 33.98, 46.19, 24.53, 36.84 respectively at 0.05 level of significance. Thus it shows that the obtained mean difference in all the knowledge content areas were true difference and not by chance. This suggests that information booklet on Emergency Contraception was effective in enhancing the knowledge of women.

4.3 Table 4 shows the Mean, Median, Mode, Standard Deviation for pre test was 1.96 and post test 4.45 and range of obtained scores for pre test were 6-14 and post test 27-44 which suggests knowledge gain by women. Table 5 enumerates Mean, Mean Difference, Standard Deviation of Difference, Standard Error of Mean Difference from Pre test and Post test knowledge scores and 't' value. The data presented in Table 5 shows that the obtained 't' value is significant at 0.05 level. The computed 't' value $df(49)=47.51P,0.05$ indicates a significant difference between the mean pre test knowledge scores and post test knowledge scores. Therefore, it can be said that the difference observed in the mean pre test and post test knowledge score was true difference and not by chance. Hence null hypothesis (H_{01}) was rejected and research hypothesis (H_1) accepted indicating that the information booklet on Emergency Contraception was effective in enhancing the knowledge of women.

4.4 Table 6 enumerates the Mean Post test knowledge scores of women in relation to selected demographic variables. The data presented in Table 6 suggests that highest mean % knowledge scores of women (83.75%) were in age group of 36-40 years, it is also evident that as age of women increases mean % post test knowledge scores were increasing. The highest mean % post test knowledge scores were seen among post graduates (84.2%), married women (82.1%), working women (83%), in the monthly family income group of > Rs. 15,000 (80.4%) and women who had previous knowledge on Emergency Contraception (79.2%).

4.5 The data presented in table 7 shows the chi-square value showing relationship between post test knowledge scores and selected factors of women on Emergency Contraception. The computed chi-square values of post test knowledge scores and selected demographic variables like age, education, marital status, occupation, monthly family income were significant at 0.05 level therefore, null hypothesis was rejected and research hypothesis was accepted. The data presented in table 7 shows that the computed chi-square values of post test knowledge scores with selected variable like previous knowledge on EC was not significant at 0.05 level therefore, null hypothesis was accepted and research hypothesis was rejected.

4.6 Table 8 describes the response of women with regard to acceptability and utility of information booklet on Emergency Contraception in frequency and percentage. The data presented in table 8 shows that there is 100% agreement on item 4 and 6 "fully agree". There was 98% agreement on item 9, 96% agreement on item 3 and 7, 94% agreement on item 8 and 10, 92% agreement on item 2 and 5 and 90% agreement on item 1. On an average 95.2% women agreed on all items which indicate that information booklet regarding Emergency Contraception had high acceptability and utility.

4.7 Table 9 Describes Mean and Standard Deviation of Acceptability and Utility scores of women about information booklet on EC

The data presented in Table 9 describes the Mean scores which were calculated as Range of scores which ranged from 25-30 and Mean of 29.32 are close to the maximum score of 30. This indicates high level of Acceptance of the Information Booklet. Moreover the S.D. was 1.11 depicting that there was not much variation of opinion among women about acceptability and utility of the Information Booklet.

5. Conclusion

Findings of the study showed that knowledge deficit existed in all the areas of EC among women, the information booklet was found to be effective in enhancing the knowledge of women on EC through the Mean Difference of 28.6 in Pre and Post test Knowledge scores. The findings indicate that the booklet developed by the investigator was effective in enhancing the knowledge of women regarding EC and holds high acceptability and utility (Agree 95.2%) among women. Thus the booklet can be used for larger population.

6. Limitations

The study was confined to a number of 50 women only which limits the generalization of findings. Study results are limited to Indian population.

7. Recommendations:-

The following recommendations are made based on the present study for future study; the study can be replicated on a large sample. Booklet can be prepared in various local languages. A comparative study can be conducted to find out the knowledge and attitude of men and women in rural and urban population. A study could be undertaken with a control group to compare gain in knowledge and change in attitude.

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Table 1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF WOMEN BY DEMOGRAPHIC CHARACTERISTICS

N=50

Sl. No.	Sample Characteristics	Frequency (50)	Percentage (100)
1.	Age: <ul style="list-style-type: none"> • <20 years • 21-25 years • 26-30 years • 31-35 years • 36-40 years 	5 5 5 25 10	10 10 10 50 20
2.	Education: <ul style="list-style-type: none"> • 10-12th standard • Graduation • Post Graduation 	5 29 16	10 58 32
3.	Marital Status: <ul style="list-style-type: none"> • Unmarried • Married 	15 35	30 70
4.	Occupation: <ul style="list-style-type: none"> • Non working • Working 	30 20	60 40
5.	Monthly Family Income: <ul style="list-style-type: none"> • <Rs. 5,000 	-	-

	<ul style="list-style-type: none"> • Rs. 5,001-10,000 • Rs. 10,001-15,000 • >Rs. 15,000 	8 25 17	16 50 34
6.	Previous Knowledge on EC: <ul style="list-style-type: none"> • Yes • No 	5 45	10 90
7.	Source of information on EC: <ul style="list-style-type: none"> • Health personnel • Attended a course • Mass media 	- - 5	- - 10

Table 2: AREA WISE MEAN, MEAN PERCENTAGE OF PRE & POST TEST KNOWLEDGE SCORES OBTAINED BY WOMEN ON EMERGENCY CONTRACEPTION
 N=50

Knowledge Areas	Maximum possible score	Pre test		Post test		Mean % gain
		Mean score	Mean % Score	Mean Score	Mean % Score	
A. General information about EC	12	2.48	20.7	9.66	80.5	59.8
B. Methods of EC	17	2.78	16.4	13.74	80.8	64.4
C. Side Effects of ECP	8	1.46	18.25	5.34	66.75	48.5
D. Important points to keep in mind	11	2.44	22.2	9.02	82	59.8

Table 3: AREA WISE MEAN, MEAN DIFFERENCE, MEDIAN, STANDARD DEVIATION OF DIFFERENCE, STANDARD ERROR OF MEAN AND 't' VALUE OF PRE TEST AND POST TEST KNOWLEDGE SCORES OF WOMEN ON EMERGENCY CONTRACEPTION

N=50

Sl. No.	Knowledge Areas	Pre test Mean	Post test Mean	Mean Difference	Post test Median	SD _D	SE _{MD}	't' Value
1.	A. General information about EC	2.48	9.66	7.18	10.00	1.49	0.21	33.98
2.	B. Methods of EC	2.78	13.74	10.96	14.00	11.68	0.24	46.19.
3.	C. Side Effects of ECP	1.46	5.34	3.88	5.50	1.12	0.16	24.53
4.	D. Important points to keep in mind	2.44	9.02	6.58	9.00	1.26	0.18	36.84

Table 4: MEAN, MEDIAN, MODE, STANDARD DEVIATION AND RANGE OF PRE TEST AND POST TEST KNOWLEDGE SCORES SECURED BY WOMEN
 N=50

Knowledge Test	Mean	Median	Mode	Standard Deviation	Range of Obtained Score
Pre test	9.16	9.00	8.68	1.96	6-14
Post test	37.76	39.00	41.5	4.45	27-44

Table 5: MEAN, MEAN DIFFERENCE, STANDARD DEVIATION OF DIFFERENCE, STANDARD ERROR OF MEAN DIFFERENCE FROM PRE TEST AND POST TEST KNOWLEDGE SCORES AND 't' VALUE
 N=50

Knowledge Test	Mean	Mean Difference	SD of Difference	SE _M of Difference	't' Value (significant at 0.05 level)
Pre test	9.16	28.6	4.26	0.60	47.51
Post test	37.76				

Table 6: MEAN POST TEST KNOWLEDGE SCORES OF WOMEN IN RELATION TO SELECTED VARIABLES

N=50

Sl. No.	Sample Characteristics	Mean Post test knowledge scores	Mean % Post test knowledge scores
1.	Age:		
	• <20 years	27.6	57.5
	• 21-25 years	32.4	67.5
	• 26-30 years	36.8	76.7
	• 31-35 years	39.8	82.9
2.	Education:		
	• 10-12 th standard	32	66.7
	• Graduation	37.9	79
	• Post Graduation	40.4	84.2
3.	Marital Status:		
	• Unmarried	33.5	69.8
	• Married	39.4	82.1
4.	Occupation:		

	<ul style="list-style-type: none"> • Non working • Working 	36.1 40	75.2 83
5.	Monthly Family Income: <ul style="list-style-type: none"> • <Rs. 5,000 • Rs. 5,001-10,000 • Rs. 10,001-15,000 • >Rs. 15,000 	- 36.4 37.4 38.6	- 75.8 77.9 80.4
6.	Previous Knowledge on EC: <ul style="list-style-type: none"> • Yes • No 	38 37.6	79.2 78.3
7.	Source of information on EC: <ul style="list-style-type: none"> • Health personnel • Attended a course • Mass media 	- - 38	- - 79.2

Table 7: CHI-SQUARE VALUE SHOWING RELATIONSHIP BETWEEN POST TEST KNOWLEDGE SCORES AND SELECTED FACTORS OF WOMEN ON EMERGENCY CONTRACEPTION

N=50

Sl. No.	Selected Variables	Knowledge Scores		Chi-Square	df	Significant/not significant at 0.05 level
		Below Median	Above Median			
1.	Age: <ul style="list-style-type: none"> • <20 years • 21-25 years • 26-30 years • 31-35 years • 36-40 years 	5 5 4 6 0	0 0 1 19 10	27.67	4	Significant
2.	Education: <ul style="list-style-type: none"> • 10-12th standard • Graduation • Post Graduation 	5 13 2	0 16 14	12.83	2	Significant
3.	Marital Status: <ul style="list-style-type: none"> • Unmarried • Married 	12 8	3 27	14.28	1	Significant
4.	Occupation: <ul style="list-style-type: none"> • Non working • Working 	16 4	14 16	5.55	1	Significant
5.	Monthly Family Income: <ul style="list-style-type: none"> • <Rs. 5,000 • Rs. 5,001-10,000 • Rs. 10,001-15,000 • >Rs. 15,000 	- 7 10 3	- 1 15 14	11.06	2	Significant
6.	Previous Knowledge on EC: <ul style="list-style-type: none"> • Yes • No 	2 20	3 25	0.03	1	Not Significant

TABLE 8: RESPONSE OF WOMEN WITH REGARD TO ACCEPTABILITY AND UTILITY OF INFORMATION BOOKLET ON EMERGENCY CONTRACEPTION IN FREQUENCY AND PERCENTAGE

N=50

Sl. No	Criteria statement	Fully Agree (3)		Partially agree (2)		To some extent (1)	
		f	%	f	%	f	%
1	My knowledge regarding Emergency Contraception improved through this information booklet.	45	90%	3	6%	2	4%
2	I feel that information provided is adequate and up to date.	46	92%	2	4%	2	4%
3	I find that information provided is easy to understand.	48	96%	2	4%	0	0%
4	I find that language used in the booklet is simple.	50	100%	0	0%	0	0%
5	I find that information given in the booklet is very essential for most of the women.	46	92%	2	4%	2	4%
6	It is interesting to read.	50	100%	0	0%	0	0%
7	I find that illustrations are helpful in understanding the content.	48	96%	1	2%	1	2%
8	I feel this booklet is helpful for getting awareness about EC and prevent unwanted pregnancies.	47	94%	2	4%	1	2%
9	I believe most women will be in need of this booklet.	49	98%	0	0%	1	2%
10	I feel this booklet can be used without anybody's help.	47	94%	2	4%	1	2%
	Mean	47.60	95.20%	1.40	2.80%	1.00	2.00%

TABLE 9: RANGE, MEAN AND STANDARD DEVIATION OF ACCEPTABILITY AND UTILITY SCORES OF WOMEN ABOUT INFORMATION BOOKLET ON EMERGENCY CONTRACEPTION

N=50

Group	Range	Mean	Standard Deviation
Women	25.30	29.32	1.11

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