

Effectiveness of Educational Package Regarding Knowledge, Attitude and Utilization of Selected Contraceptive Methods among Postnatal Mother at Selected PHC of Kheda District Gujarat

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Abstract

Background: India is the second most populated country across the world. Around the world 3, 85,000 babies are born per day. In India the current population are 140 crore. To overcome the growth of population the health care system also delivers the family planning methods in community to stabilize the population. The programmes like Reproductive Child Health Programme, Maternal Child Health Programme and Family Welfare Programme also have taken a recommendation to improve the health of mothers, children and also family members and also they educate about the Family Planning Method. India has adopted the goal of two children norms. In Gujarat there are 6.55 crore population and per 1000 people there are 17.163 births.

Aim: The main aim of this study was to assess the effectiveness of education package regarding selected contraceptive methods and to control the growth of population by educating the community peoples at some extent.

Objectives: To assess the pre-test and post-test knowledge, attitude and utilization score regarding selected contraceptive methods among postnatal mothers.

To evaluate the effectiveness of educational package.

To correlate the relationship between knowledge, and attitude.

To associate the mean difference before and after the level of knowledge, and attitude.

Methodology: The pre-experimental one group pre-test and post-test design was adopted. The 60 postnatal mothers were selected as a sample from various selected PHC of Kheda District by non-probability convenient sampling technique.

The written setting permission was taken from the medical officer of PHC for data collection. The prior consent form was also signed by the postnatal mothers for the study.

The tool was developed by four sections:

Section I: Socio-Demographic Data.

Section II: Structured Knowledge Questionnaires.

Section III: Likert Attitude Scale.

Section IV: Checklist Questionnaires for Utilization.

The data were analyzed by using the SPSS Software. The frequency and percentage distribution are used to assess the demographic variables and the mean and standard deviation are used to describe the knowledge, attitude and utilization regarding contraceptive methods. The paired t-test was used to compare pre and post test score, Karl Pearson correlation formula was used to correlate the pre-test level and Chi-square test was used to determine the association between mean differences.

Results: Out of 60 samples, 41.7% (25) belong to age 18-22 years, 100% (60) belong to Hindu religion, 48.3% (29) was not formal educated, 90.0% (54) was housewife, 31.7% (19) belong to 4-6 years duration of marriage, 50.0% (30) have one child, 86.7% (52) have no history of abortion, 75.0% (45) got information related to contraceptive method from Health Personnel. The paired t-test value was 15.14, 9.26 and 13.13. Hence, there exists significance effectiveness on level of knowledge, and attitude before and after administration of educational package among postnatal mothers. There was positive correlation between knowledge, and attitude ($r = 0.65$), and found no significant relationship between all the variables regarding selected contraceptive methods after educational package among postnatal mothers.

Conclusion: The study concludes that after the intervention, 47% (28) mothers had moderately adequate knowledge, none of them had inadequate knowledge and 53% (32) had adequate knowledge regarding contraceptive method. 37% (22) mother had moderately favourable attitude, none of them had unfavourable attitude, and 63% (38) mother had favourable attitude regarding contraceptive method.

Keywords: Education Package, Knowledge, Attitude, Utilization, Contraceptive Methods, Postnatal Mothers, Primary Health Center.

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INTRODUCTION

Indian's population is increasing very explosive. It contributes one fifth of the world population by having more than one billion people. Family planning is defined by WHO as "A way of thinking and living that adopted voluntary, upon the basis of knowledge and attitude and responsible decisions by individuals and couples, in order to promote and the health and family welfare groups and thus contribute effectively to social development of the country[1]. The contraceptive methods are preventive methods to help women to avoid unwanted pregnancy[2].

Using modern Contraceptive method is widely approved as an important intervention towards achieving national and international goals, as it has proven to reduce maternal and child mortality and morbidity [3]. Population Explosion is found to be main reason for short ages of resources and neutralization of the impact of progress made in various developmental sectors. Hundreds and millions of people are still very poor, illiterate and unhealthy[4].

Family Planning Services are defined as "Educational comprehensive medical and social activities which enable individuals, including minors to determine freely the number of their children a woman wishes to have, including the choice to have them[5].

The number of women desiring to use family planning has increased markedly over the past two decades, from 900 million in 2000 to nearly 1.1 billion in 2020. Consequently, the number of women using a modern contraceptive method increased from 663 million to 851 million and the contraceptive prevalence rate increased from 47.7 to 49.0 per cent. An additional 70 million women are projected to be added by 2030[6].

Objectives

To assess the pre-test and post-test knowledge, attitude and utilization regarding contraception methods among postnatal mothers.

To evaluate the effectiveness of educational package regarding contraceptive methods among postnatal mothers.

To correlate the relationship between knowledge, and attitude regarding contraception methods among postnatal mothers.

To associate the mean difference before and after the level of knowledge, and attitude regarding contraception methods among postnatal mothers with their demographic variables.

Hypotheses

H1: There will be significant difference between pre-test and post-test knowledge, attitude and utilization score regarding contraception methods among postnatal mothers.

H2: There will be significant correlation between pre-test and post-test knowledge, and attitude score regarding contraception methods among postnatal mothers.

H3: There will be significant association between the mean difference levels of knowledge, and attitude score regarding contraceptive methods among postnatal mothers with selected demographic variables.

Material And Method

Research Approach: Quantitative research approach.

Research Design: Pre - Experimental research design. (One group pre-test and post-test.)

Research Variables:

Independent Variable: Educational Package regarding selected contraception methods.

Dependent Variable: Knowledge, attitude, and utilization of selected contraceptive methods.

Demographic Variable: Age, Religion, Educational Status, Occupation, Family Monthly Income, Duration of Marriage, Number of Pregnancy, Numbers of living Children, Sources of information health personnel, Age at Marriage, No. of Child, No. of Pregnancy.

Population: Postnatal mothers.

Research Setting: The present study was conducted at PHC of Kheda district.

Sampling Technique: Non-probability convenient sampling technique.

Sample Size: 60 postnatal mothers.

Sample Criteria

Inclusion Criteria:

Postnatal mothers who:

Are willing to participate in the study.

Are available at the time of data collection.

Those who can understand Gujarati or English or Hindi language.

Exclusion Criteria:

Postnatal mothers who have adopt permanent contraception method.

Tool for Data Collection

Section-I: Consist of Demographic variables.

Section-II: Consist of structured knowledge questionnaires related to contraceptive methods.

Section-III: Consist of 3 point likert attitude scale to assess attitude of postnatal mothers.

Section-IV: Consist of checklist utilization questionnaires related to contraceptive methods.

Statistical Analysis

Statistical data were analyzed by Statistical Package for the Social Sciences (SPSS) software[7]. The frequency and percentage distribution are used to assess the demographic variables and the mean and standard deviation are used to describe the knowledge, attitude and utilization regarding contraceptive methods. The paired t-test was used to compare pre test and post test score, Karl Pearson correlation formula was used to correlate the pre-test level and Chi-square test was used to determine the association between mean differences.

Result

Section I: Analysis of Socio-demographic characteristics of postnatal mothers.

Table 1: Analysis of the socio demographic variables of the postnatal mothers.

DEMOGRAPHIC DATA	F	%
Age		
18 - 22 Years	25	41.7 %
23-27 Years	15	25.0 %
28 -32 Years	14	23.3 %
Above 32 Years	6	10.0 %
Religion		
Hindu	60	100 %
Muslim	0	0.0%
Christian	0	0.0%
Others	0	0.0%
Education Status of Mother		
Not Formal education	29	48.3%

Primary education	14	23.3%
Secondary and high secondary	9	15.0%
Diploma		
Degree and above	5	8.3%
	3	5.0%
Education Status of Husband		
Not Formal education	8	13.3 %
Primary education	16	26.7 %
Secondary and high secondary	16	26.7 %
Diploma	10	16.7 %
Degree and above	10	16.7 %
Occupation of Mother		
House wife	54	90.0 %
Private job	3	5.0 %
Government Job	0	0.0%
Labour and agriculture	3	5.0 %
Business and other	0	0.0%
Family Monthly Income in Rupees		
Below 15000 Rupees		
15001-20000 Rupees	45	75.0%
20001-25000 Rupees	15	25.0%
Above 25000 Rupees	0	0.0%
	0	0.0%
Duration of Marriage		
1-3 Years	18	30.0%
4-6 Years	19	31.7%
7-9 Years	14	23.3%
Above 9 Years	9	15.0%
Age at Marriage		
18 - 22 years	53	88.3%
23 - 27 years	1	1.7%
28 - 32 years	4	6.7%
Above 32 years	2	3.3%
Number of live children		
One	30	50.0%
Two	18	30.0%
Three	9	15.0%
Four and above	3	5.0%
History of Abortion		
Yes	8	13.3%
No	52	86.7%
Sources of Information about Contraception Method		
Health Personnel	45	75.0%
Newspaper / booklet	7	11.7%
Television	4	6.7%
Others	4	6.7%

(F = Frequency and % = Percentage)

Section II: Analysis of knowledge, attitude and utilization of selected contraceptive methods among postnatal mother before administration of educational package.

Table 2: Range, Mean, Standard Deviation and Mean Percentage of Pre-test knowledge, attitude and utilization regarding selected contraceptive methods among postnatal mothers.

	Max	Pre-test Score				
		Min-Max	R	M	SD	V
Knowledge	20	5-16	11	9.80	2.32	5.417
Attitude	60	23-53	30	39.55	5.904	34.86
Utilization	10	1-10	9	5.60	1.915	3.66

(Max=Maximum, Min=Minimum, R=Range, M=Mean, SD=Standard Deviation, V=Variance)

Section III: Analysis of knowledge, attitude and utilization of selected contraceptive methods among postnatal mother after administration of educational package.

Table 3: Range, Mean, Standard Deviation and Mean Percentage of Post-test knowledge, attitude and utilization regarding selected contraceptive methods among postnatal mothers.

	Max	Post-test Score				
		Min-Max	R	M	SD	V
Knowledge	20	12-20	8	15.71	1.915	4.308
Attitude	60	12-20	8	47.18	1.915	4.308
Utilization	10	5-10	5	7.90	1.361	1.8

(Max=Maximum, Min=Minimum, R=Range, M=Mean, SD=Standard Deviation, V=Variance)

Section IV: Analysis of knowledge, attitude and utilization of selected contraceptive methods among postnatal mother before and after administration of educational package.

Table 4: Frequency and percentage distribution of postnatal mothers according to Pre-test and Post-test level of knowledge regarding selected contraceptive methods.

Level of knowledge	Before Educational Package		After Educational Package	
	No.	%	No.	%
Inadequate (<50%)	28	47.0	00	0.0
Moderately adequate (50-75%)	32	53.0	28	47
Adequate (>75%)	00	00.0	32	53
Total	60	100	60	100

(No. =Number, % = Percentage)

Table 5: Frequency and percentage distribution of postnatal mothers according to Pre-test and Post-test level of attitude regarding selected contraceptive methods.

Level of attitude	Before Educational Package		After Educational Package	
	No.	%	No.	%
Unfavourable (<50%)	4	7.0	00	0.0
Moderately favourable (50-75%)	48	80.0	22	37
Favourable (>75%)	8	13.0	38	63
Total	60	100	60	100

(No. =Number, % = Percentage)

Section V: Analysis of effectiveness (Paired t test) of educational package on knowledge, attitude and utilization regarding selected contraceptive methods among postnatal mothers.

Table 6: Paired t-test analysis for the significance of pre-test and post-test knowledge, and attitude regarding selected contraceptive methods among postnatal mothers.

	Max	Enhancement		Paired t test	P-value
		Mean	SD		
Knowledge	20	5.916	3.026	15.141** S df= 59	p<0.05 Sig.= 0.00
Attitude	60	7.633	6.380	9.267** S df= 59	p<0.05 Sig.= 0.00

(Max=Maximum, SD=Standard Deviation, Note: *= denotes significant at 0.05 level at (i.e. p<0.05))

The outcome of paired t-test analysis carried over to assess the statistical significance of pre-test and post-test mean score of knowledge, attitude and utilization regarding selected contraceptive methods. Hence the above table shows that there was significance effectiveness on level of knowledge, attitude and utilization before and after administration of educational package among postnatal mothers.

Section VI: Analysis of correlation between knowledge, attitude and utilization.

Table 7: Correlation between knowledge, and attitude regarding selected contraceptive methods before and after educational package among postnatal mothers.

Variables	Mean	SD	Pearson Correlation	P-Value
Pre-test Knowledge	9.80	2.327	0.490	P>0.05
Pre-test Attitude	39.55	5.90		
Post-test Knowledge	15.71	2.075	0.340	P>0.05
Post-test Attitude	47.18	4.788		

Section VII: Analysis of association of post-test knowledge, attitude & utilization scores of postnatal mothers with their selected demographic variables.

Table 8: Association between post-test knowledge score regarding selected contraceptive methods among postnatal mothers with their selected demographic variables.

DEMOGRAPHIC DATA	Level of Knowledge			χ^2 - Value	Tabulated Value P-Value
	Inadequate	Moderate	Adequate		
Age				1.332 df= 3 NS	P>0.05 Sig 0.772 7.82
18 - 22 Years	0	12	13		
23-27 Years	0	6	9		
28 -32 Years	0	8	6		
Above 32 Years	0	2	4		

Religion				Invalid data	
Hindu	0	28	32	No statistics are computed because Religion is a constant.	
Muslim	0	0	0		
Christian	0	0	0		
Others	0	0	0		
Education Status of Mother					
Not Formal Education	0	13	16	0.691df = 4NS	P>0.05 Sig 0.952 9.49
Primary	0	7	7		
Secondary and High	0	4	5		
Secondary	0	3	2		
Diploma	0	1	2		
Degree and Above	0				
Education Status of Husband					
Not Formal Education	0	4	4	6.211df = 4NS	P>0.05 Sig 0.184 9.49
Primary	0	9	7		
Secondary and High	0	6	10		
Secondary	0	2	8		
Diploma	0	7	3		
Degree and Above	0				
Occupation of Mother					
House wife	0	25	29	0.699 df= 2 NS	P>0.05 Sig 0.705 5.99
Private job	0	1	2		
Government Job	0	0	0		
Labour and Agriculture	0	2	1		
Business and other	0	0	0		
Family Monthly Income in Rupees					
Below 15000	0	19	26	1.429df = 1NS	P>0.05 Sig 0.232 3.84
Rupees15001 – 20000	0	9	6		
20001 – 25000 Rupees	0	0	0		
Above 25000 Rupees	0	0	0		
Duration of Marriage					
1-3 Years	0	10	8	1.268df = 3NS	P>0.05 Sig 0.737 7.82
4-6 Years	0	9	10		
7-9 Years	0	5	9		
Above 9 Years	0	4	5		
Age at Marriage					
18 - 22 years	0	24	29	2.215 df= 3 NS	P>0.05 Sig 0.529 7.82
23 - 27 years	0	0	1		
28 - 32 years	0	3	1		
Above 32 years	0	1	1		
Number of live children					
One	0	15	15	4.643 df= 3 NS	P>0.05 Sig 0.200 7.82
Two	0	7	11		
Three	0	5	3		
Four and above	0	0	3		
History of Abortion				4.329	P<0.05

Yes				df= 1	Sig
No	0	1	7	S	0.037
	0	27	25		3.84
Sources of Information					
Health Personnel					P<0.05
Newspaper / Booklet	0	19	26	10.153	Sig
Television	0	5	2	df= 3	0.017
Others	0	4	0	S	7.82
	0	0	4		

(df= Degree of Freedom, NS=Non significant, S=Significant)

Table 9: Association between post-test attitude score regarding selected contraceptive methods among postnatal mothers with their selected demographic variables.

DEMOGRAPHIC DATA	Level of Attitude			χ^2 - Value	Tabulated Value P-Value
	Un – Favou rable	Modera te Favoura ble	Favou rable		
Age					
18 - 22 Years	0	4	21	7.889	P<0.05
23-27 Years	0	7	8	df= 3	Sig 0.048
28 -32 Years	0	8	6	S	7.82
Above 32 Years	0	2	4		
Religion				Invalid data No statistics are computed because Religion is a constant.	
Hindu	0	21	39		
Muslim	0	0	0		
Christian	0	0	0		
Others	0	0	0		
Education Status of Mother					
Not Formal Education	0	10	19		
Primary	0	3	11		
Secondary and High	0	4	5	2.867	P>0.05
Secondary	0	2	3	df= 4	Sig 0.580
Diploma	0	2	1	NS	9.49
Degree and Above					
Education Status of Husband					
Not Formal Education	0	3	5		
Primary	0	6	10		
Secondary and High	0	6	10	0.330	P>0.05
Diploma	0	3	7	df= 4	Sig 0.988
Degree and Above	0	3	7	NS	9.49
Occupation of Mother					
House wife	0	20	34		
Private job	0	0	3		
Government Job	0	0	0	1.718	P>0.05
Labour	0	1	2	df= 2	Sig 0.424
Business and other	0	0	0	NS	5.99

Family Monthly					
Below 15000 Rupees	0	16	29		
15001 – 20000 Rupees	0	5	10	0.024	P>0.05
20001 – 25000 Rupees	0	0	0	df= 1	Sig 0.876
Above 25000 Rupees	0	0	0	NS	
Duration of Marriage					
1-3 Years					
4-6 Years	0	4	14	7.930	P<0.05
7-9 Years	0	11	8	df= 3	Sig 0.047
Above 9 Years	0	5	9	S	7.82
	0	1	8		
Age at Marriage					
18 - 22 years					
23 - 27 years	0	19	34	3.127	P>0.05
28 - 32 years	0	1	0	df= 3	Sig 0.373
Above 32 years	0	1	3	NS	7.82
	0	0	2		
No. of live children					
One	0	12	18		
Two	0	4	14	2.955	P>0.05
Three	0	3	6	df= 3	Sig 0.399
Four and above	0	2	1	NS	7.82
History of Abortion					
Yes		4	4	0.913	P>0.05
No		17	35	df= 1	Sig 0.339
				NS	3.84
Sources of Information					
Health Personnel	0	16	29	2.746	P>0.05
Newspaper / Booklet	0	3	4	df= 3	Sig 0.433
Television	0	2	2	NS	7.82
Others	0	0	4		

(df= Degree of Freedom, NS=Non significant, S=Significant)

Table 10: Association between post-test utilization score regarding selected contraceptive methods among postnatal mothers with their selected demographic variables.

DEMOGRAPHIC DATA	Level of Utilization			χ^2 - Value	Tabulated Value P-Value
	Poor	Average	Good		
Age					
18 - 22 Years	6	17	2	8.779	P>0.05
23-27 Years	2	9	4	df= 6	Sig 0.186
28 -32 Years	7	5	2	NS	12.59
Above 32 Years	2	4	0		
Religion				Invalid data No statistics are computed because Religion is a constant.	
Hindu	17	35	8		
Muslim	0	0	0		
Christian	0	0	0		
Others	0	0	0		

Education Status of Mother					
Not Formal Education	11	14	4		
Primary	5	8	1		
Secondary and High	1	7	1		
Secondary	0	4	1	7.456	P>0.05
Diploma	0	2	1	df= 8	Sig 0.488
Degree and Above				NS	15.51
Education Status of Husband					
Not Formal Education	3	5	0		
Primary	5	8	3		
Secondary and High	5	9	2		
Secondary				3.132	P>0.05
Diploma	2	6	2	df= 8	Sig 0.926
Degree and Above	2	7	1	NS	15.51
Occupation of Mother					
House wife	16	32	6		
Private job	0	4	1		
Government Job	1	1	1	3.274	P>0.05
Labour	0	0	0	df= 4	Sig 0.513
Business and other	0	0	0	NS	9.49
Family Monthly					
Below 15000 Rupees	16	24	5		P>0.05
15001 – 20000 Rupees	1	11	3	4.752	Sig 0.093
20001 – 25000 Rupees	0	0	0	df= 2	5.99
Above 25000 Rupees	0	0	0	NS	
Duration of Marriage					
1-3 Years	7	9	2		
4-6 Years	3	13	3	3.800	P>0.05
7-9 Years	5	8	1	df= 6	Sig 0.704
Above 9 Years	2	5	2	NS	12.59
Age at Marriage					
18 - 22 years	17	30	6		
23 - 27 years	0	1	0	5.504	P>0.05
28 - 32 years	0	3	1	df= 6	Sig 0.481
Above 32 years	0	1	1	NS	12.59
No. of live children					
One	7	21	2		
Two	5	10	3	5.711	P>0.05
Three	4	3	2	df= 6	Sig 0.456
Four and above	1	1	1	NS	12.59
History of Abortion					
Yes	2	5	1	0.08	P>0.05
No	15	30	7	df= 2	Sig 0.966
				NS	5.99
Sources of Information					
Health Personnel	15	25	5	4.803	P>0.05
Newspaper / Booklet	1	4	2	df= 6	Sig 0.569

Television	0	3	1	NS	12.59
Others	1	3	0		

Conclusion

This study was concluded that the education package regarding contraceptive methods was effective for postnatal mothers and there was changes in the pre-test and post-test knowledge, attitude and utilization score of postnatal mothers[8]. The study consisted of 60 samples that were selected on the basis of non-probability convenient sampling technique. The data analysis was done by calculating the mean, percentage, standard deviation, paired t-test and Karl's Pearson correlation coefficient method[9]. The midwifery and community health nursing curriculum needs to be strengthened to enable nursing students to know about contraceptive methods and the need for spacing and to provide supportive educative care [10].

Conflict of Interest

The author had declared that there was no conflict of interest.

Sources of Funding

Self.

Ethical Clearance

The study was approved by the Institutional Ethical Committee of Dinsha Patel College of Nursing, Nadiad. There were total 15 members in the committee from various fields. The Ethical approval reference number is DPCN/2ndIEC/2020-21/12 and a formal written permission was gathered from the authority of PHC of Kheda District.

Statement of Informed Consent

The informed consent form was taken from the postnatal mothers prior to the data collection of the study.

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