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A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding the Prevention of Abortion among Women of Reproductive Age Groups at Selected Rural Areas of the City: A Pre-Experimental Study

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Abstract: ***Background: Abortion is the termination of pregnancy either spontaneously or intentionally. Abortion is the expulsion or extraction of the fetus before the 28th week of pregnancy. The incidence of clinically evident abortions ranges from 10 to 15 % of all pregnancies. In most of the spontaneous abortions, silent miscarriages occur without the women noticing it. In general, the incidence varies from 10-15 percent. Approximately 80% of abortions occur in the first 12 weeks of pregnancy, and of this 75% of 1 occur before 8 weeks of pregnancy. The Etiology of spontaneous abortion is often complex and obscure. The potential causes are genetic factors, endocrine and metabolic factors, anatomic factors, infection, immunological, and others. Abortion can be classified into spontaneous, and induced. Objective: 1) To assess the effectiveness of structure teaching program on knowledge regarding the prevention of abortion among women of reproductive age groups at selected areas of the city. 2) To assess the knowledge regarding the prevention of abortion among women of reproductive age groups at selected areas of the city. 3) To find out the association between pretest and posttest knowledge score selected demographic variables of women of reproductive age groups at selected areas of the city. Material and method: This study was based on quantitative research approach. The research design was used A pre experimental one group pre and post-test design. Sampling technique was used Non-probability convenient sampling technique. Analysis and interpretation were used descriptive and inferential statistics. The population was the population of the study were women of reproductive age group (18-37) in selected rural areas of the city. The sample consisted of 60. The tool was structured knowledge questionnaires. Result: Good level of knowledge score, (33.3 %) of them had very good level of knowledge, (53.3 %) had excellent level of knowledge score only (13.3 %) had poor and average none of the sample (0%) Overall, both Pre and Post groups were 60 each, making a combined total of 120 participants. This study given association between knowledge level with demographic variables. Conclusion: After detailed analysis, it was found that there is significant association of level of knowledge score in relation to their previous knowledge about prevention of abortion and source of information. The finding it was concluded undoubtedly that the written prepared material by the researcher helped to improve the knowledge of prevention abortion.***

Keywords: prevention of abortion; knowledge; structured teaching program; reproductive age groups

1. Introduction

According to the World Health Organization, Abortion is defined as the expulsion or extraction from the mother of an embryo or fetus weighing 500g or less when it is not capable of independent survival. Abortion can be considered a major problem worldwide. It's one of the most important causes of mother morbidity and mortality. In some countries, it's fairly accepted, and in others, it isn't accepted at all for any reason. In India, it can be performed on colorful grounds until 20 weeks of pregnancy. Abortion may also beget complications like severe haemorrhage, shock, sepsis, uterine perforation, cervical injury, severe anemia, severe infection, and renal failure. [1]

2. Background of the study

Pregnancy among the Reproductive age group are usually unintended which again results in illegal abortion. In order to fill the knowledge gap and remove negative attitude regarding abortion proper sex education and healthy mindset should be inculcated among the youth.[2]

Abortion is the termination of pregnancy either spontaneously or intentionally. Abortion is the expulsion or extraction of the fetus before the 28th week of pregnancy. The incidence of clinically evident abortions ranges from 10 to 15 % of all pregnancies. In most of the spontaneous abortions, silent miscarriages occur without the women noticing it. In general, the incidence varies from 10-15 percent. Approximately 80% of abortions occur in the first 12 weeks of pregnancy, and of this 75% of 1 occur before 8 weeks of pregnancy.[3]

3. Need of the study

An estimated 73 million induced abortions occur annually, with 6 out of 10 unintended pregnancies and 3 out of 10 of all pregnancies ending in induced abortion. Approximately 45% of these abortions are considered unsafe. In India 2015, an estimated 15.6 million abortions occurred in India, with a rate of 47.0 abortions per 1000 women aged 15–49 years. A significant portion (73%) of abortions were medication abortions outside of health facilities, while 22% were obtained in health facilities and 10 women die every day in India due to unsafe abortions.[4]

In India in 2015–2019, there were a total of 48,500,000 pregnancies annually. Of these, 21,500,000 pregnancies were unintended and 16,600,000 ended in abortion. Abortion in India is legal on broad social or economic grounds.[5]

Abortion rate in the State of Maharashtra was found to be 7.6%, in the DLHS-3 carried out in 2007–08. The same survey recorded that 61.6% of pregnancies were registered in the first trimester of gestation; meaning that 38.4% of pregnancies were registered after the maximum risk of abortion was almost over.[6]

4. Objectives of the study

Primary objectives

- To assess the effectiveness structure teaching program on knowledge regarding the prevention of abortion among women of reproductive age groups at selected rural areas of the city: A pre-experimental study.

Secondary objectives

- To assess the knowledge regarding the prevention of abortion among women of reproductive age group in selected rural areas of the city.
- To find out the association between pre-test and post test knowledge score and selected demographic variables of women of reproductive age group at selected rural areas of the city.

Assumptions

- Women of reproductive age group will not have adequate knowledge regarding prevention of abortion.
- Health education will help mothers to prevent abortion.

Hypothesis

This hypothesis was tested at 0.05 level of significance

H_0 (Null Hypothesis): There is a no significant association between the pre-test and post-test knowledge scores regarding the prevention of abortion.

H_1 (Research Hypothesis): There is a significant different between pre-test and post test knowledge score and selected demographic variable among women of reproductive age group in selected rural areas of the city.

5. Limitation:

1) The study is limited to women of reproductive age group already done with family planning.
2) The study is limited to the rural areas.
3) The study is limited to the 60 samples.
4) The study period is limited to 18 months.

Inclusion Criteria

- Women who are willing to participate in the study.
- Women who are married and plan to conceive.
- Women who are easily read and understand English and Marathi were included in the study.

Exclusion Criteria

- Women of age less than 18 years and more than 37 years were excluded
- Women who having more than 1 child.
- Women who are not willing to participate in the study.

6. Conceptual Frame Work

The conceptual frame work deals with the interrelated concepts that assembled together in some relational schemes by virtue of relevance to a common theme.

The conceptual framework of the present study is modified Dorothy Johnson's (1980) open system theory.

According to the general system theory a system consists of a set of interacting components that are regulated by biological, psychological and sociological factors. An individual composed of open and interactive subsystem. An open system consists of input, throughput and output.

According to the theorist view the information, matter and energy that the system receives from the environment are called as input for the system. The system uses, organizes transforms the input in a process called as throughput and releases information, matter and energy as output into the environment. Output that returns to the system as input is called as feedback.

Input

Women of reproductive age group involved with the demographic variable

- Age
- Religion
- Education
- Occupation
- Monthly Income
- Family Type
- Sources Of Information Regarding Abortion.

Through Put

Through put is an intervention phase. The women of reproductive age group are adequate knowledge by Structure teaching program regarding prevention of abortion. During this phase transformation of knowledge regarding prevention of abortion to the Women of reproductive age group.

Output

Output refers to the outcome that has occurred as result of transformation during throughput. The posttest has to assess the knowledge regarding prevention of abortion. The structured teaching programme is an effective method for adequate knowledge regarding prevention of abortion.

Feedback

It is the process by which information is received from each level of the system and feedback as input and guides evaluation of the input. This feedback would suggest that there is improvement in the knowledge regarding the prevention of abortion among women of reproductive age groups at selected rural areas of the city.

Review Of Literature

The literature review will be classified into the following sections:

1) Literature regarding structured teaching programs on abortion.

2) Literature on knowledge regarding abortion.
3) Literature on prevention and management of abortion.

7. Materials and Methods

This study was based on quantitative research approach. The research design was used A pre experimental one group pre and post-test design. Sampling technique was used Non-probability convenient sampling technique. Analysis and interpretation were used descriptive and inferential statistics. The population was the population of the study were women of reproductive age group (18-37) in selected rural areas of the city. The sample consisted of 60. The tool was structured knowledge questionnaires. The reliability of structured knowledge questionnaires was done by Cochran's formula. The investigator conducted a pilot study on 04 November 2024 in rural area as per laid down criteria 10 sample were selected. And then conducted a main study began from 21 December 2024 to 28 December 2024 in rural area. Consent was obtained from each one of them for participant in the study. `

8. Results

The analysis and interpretation of the observations are given in the following section:
Section A: Distribution of women of reproductive age group with regards to demographic variables.
Section B: Assessment of level of pre test and post test knowledge regarding the prevention of abortion among women of reproductive age group at selected rural area of the city.
Section C: Assessment of effectiveness of Structured Teaching Programme on knowledge regarding the prevention of abortion among women of reproductive age group at selected rural area of the city.
Section D: Association of pre test knowledge score regarding the prevention of abortion among women of reproductive age group at selected rural area of the city with their selected demographic variables.

Percentage wise distribution of Women according to their demographic characteristics, n=60

Demographic Variables	No. of Women	Percentage (%)
Age(yrs)		
18-22 yrs	20	33.3
23-27 yrs	25	41.7
28-32 yrs	15	25.0
33-37 yrs	0	0
Religion		
Hindu	28	46.7
Muslim	32	53.3
Buddhism	0	0
Christian	0	0
Other	0	0
Educational Status		
Primary/Illiterate	41	68.3
Secondary	5	8.3
Higher Secondary	14	23.3
Graduate and above	0	0
Occupation		
Worker/Labor	0	0
Housewife	53	88.3
Private Worker	7	11.7
Govt Worker	0	0
Other	0	0
Monthly family income (Rs)		
Below 10000 Rs	32	53.3
10001-15000 Rs	21	35.0
15001-20000 Rs	7	11.7
>20000 Rs	0	0
Type of family		
Nuclear	42	70.0
Joint	18	30.0
Information regarding abortion		
Yes	27	45.0
No	33	55.0
Source of information		
Health Personnel	11	18.3
Family	27	45.0
Friends	10	16.7
Mass Media	12	20.0

Section B: Assessment of Level of the Knowledge Regarding Prevention of Abortion among Women of Reproductive Age Group at Selected Rural Area of the City

This section deals with the assessment of level of the knowledge regarding prevention of abortion among women of reproductive age group at selected rural area of the city. The level of knowledge score is divided under following heading of poor, average, good, very good and excellent respectively.

Table 2: Assessment with level of pretest knowledge score, n=60

Level of Pre Test Knowledge Score	Score Range	Level of Pre- Test Knowledge Score	
		No. of women	Percentage
Poor	0-5	0	0
Average	6-10	5	8.3
Good	11-15	28	46.7
Very Good	16-20	22	36.7
Excellent	21-25	5	8.3
Minimum score		7	
Maximum score		24	
Mean Knowledge score		15.08±3.42	
Mean % Knowledge score		60.33±13.68	

The above table shows that each 8.3% of women in reproductive age group in pretest had average and excellent level of knowledge score, 46.7% had good level of knowledge score and 36.72% of women had very good level of knowledge score. Minimum knowledge score in pretest was 7 and maximum knowledge score in pretest was 24. Mean knowledge score in pretest was 15.08±3.42 and mean percentage of knowledge score in pretest was 60.33±13.68.

Table 3: Assessment with level of post test knowledge score, n=60

Level of Post Test Knowledge Score	Score Range	Level of Post Test Knowledge Score	
		No. of women	Percentage
Poor	0-5	0	0
Average	6-10	0	0
Good	11-15	20	33.3
Very Good	16-20	32	53.3
Excellent	21-25	8	13.3
Minimum score		11	
Maximum score		24	
Mean Knowledge score		17.05±2.87	
Mean % Knowledge score		68.20±11.51	

The above table shows that 33.3% of women in reproductive age group in post test had good level of knowledge score, 53.3% had very good and 13.3% of women had excellent level of knowledge score. Minimum knowledge score in posttest was 11 and maximum knowledge score in post test was 24. Mean knowledge score in posttest was 17.05±2.87 and mean percentage of knowledge score in post test was 68.20±11.51.

Significance of difference between Knowledge Score in pre and post test of Women in reproductive age group, n=60

Overall	Mean	SD	Mean Difference	t-value	p-value
Pre Test	15.08	3.42	1.96±1.40	10.86	0.0001 S, p<0.05
Post Test	17.05	2.87			

This table shows the comparison of pretest and post test Knowledge score regarding the prevention of abortion among women of reproductive age group at selected rural area of the city. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=60-1 i.e. 59 degrees of freedom was 2.00. The calculated 't' value i.e. 10.86 are much higher than the tabulated value at 5% level of significance for overall knowledge score of women of reproductive age group which is statistically acceptable level of significance. Hence it is statistically interpreted that Structured Teaching Programme on knowledge regarding the prevention of abortion among women of reproductive age group at selected rural area of the city was effective. Thus, the H_1 is accepted.

Table 3: Overall Association of Level of Pre Test Knowledge Score Regarding Prevention of Abortion among Women of Reproductive Age Group at Selected Rural Area of the City in Relation to their Demographic Variables, n=60

Demographic Variable	Group	Degrees of freedom	Chi Square	P value	Significance
Age in years	18-22 yrs	6	32.37	0.0001	Significance
	23-27 yrs				
	28-32 yrs				
	33-37 yrs				
Religion	Hindu	3	0.46	0.92	Not Significance
	Muslim				
	Buddhism				
	Christian				
	Other				
Educational Status	Primary/Illiterate	6	33.08	0.0001	Significance
	Secondary				
	Higher Secondary				
	Graduate and above				
Occupation	Worker/Labor	3	4.48	0.21	Not Significance
	Housewife				
	Private Worker				
	Govt Worker				
	Other				
Monthly Family Income (Rs)	Below 10000 Rs	6	6.78	0.34	Not Significance
	10001-15000 Rs				
	15001-20000 Rs				
	>20000 Rs				
Type of family	Nuclear	3	5.62	0.13	Not Significance
	Joint				
Source of Information regarding abortion	Health Personnel	9	6.59	0.67	Not Significance
	Family				
	Friends				
	Mass Media				

9. Discussion

The findings of the study have been discussed with reference to the objectives. As per the findings of the study it provides the description related to demographic variable, which shows majority of knowledge score among women of reproductive age groups at selected rural areas.

Study involved total 60 participants selected with simple randomization method to minimize the biasness in the study, The knowledge levels (categorized as Poor, Average, and Good) before (Pre) and after (Post) an intervention, using a chi-square test to evaluate the differences. Overall, the total frequencies for both Pre and Post groups were 60 each, making a combined total of 120 participants. As per the analysis of data Majority of women of reproductive age groups having average knowledge of prevention of Abortion.

10. Conclusion

After the detailed analysis, this study leads to the conclusion that knowledge score among women of reproductive age groups at selected rural areas. found to be effective in improving the knowledge of the subjects. The knowledge levels (categorized as Poor, Average, and Good) before (Pre) and after (Post) an intervention, using a chi-square test to evaluate the differences.

The comparison of pretest and post test Knowledge score regarding the prevention of abortion among women of reproductive age group at selected rural area of the city. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=60-1 i.e. 59 degrees of freedom was 2.00. The calculated 't' value i.e. 10.86 are much higher than the tabulated value at 5% level of significance for overall knowledge score of women of reproductive age group which is statistically acceptable level of significance. Hence it is statistically interpreted that Structured Teaching Programme on knowledge regarding the prevention of abortion among women of reproductive age group at selected rural area of the city was effective.

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