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Effectiveness of self instructional module on knowledge regarding spontaneous abortion among married women

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Abstract

Introduction: Spontaneous abortion is one of the most common pregnancy related adverse outcomes, it is defined as premature loss of fetus and fetal attachments -completely or partially from the uterus- up to 20 weeks of pregnancy during the early weeks after conception. The highest percentage (14 percent) of total abortions was reported in the youngest age group (below the age of 20 years) in India.

An experimental study was conducted to assess the effectiveness of Self Instructional Module on knowledge regarding spontaneous abortion among married women in selected areas of Pune city. Purpose of the study was to assess the effectiveness of Self Instructional Module (SIM) on knowledge regarding spontaneous abortion among married women in selected areas of Pune city

Material and method: A Quasi-experimental Pre test – post test control group design with Non probability Purposive Sampling method. The tool consisted of section I (demographic data), and section II structured knowledge questionnaire to assess the knowledge on spontaneous abortion

Result: Out of 100 participants, Majority of married women 41 (41 %) were in the age group of 24-29 years. (51 %) have secondary education, 41(41 %) have two children, 74 (74%) have no history of abortion and 64 (64%) have no information about abortion. post- test statistical analysis done using the t- value was 4.96 with 98 degrees of freedom corresponding p-value was .000 is <.05 level of significance. The t- test result reveals that there is significant difference between the two means of post test knowledge scores in both the group experimental and control. It showed significant effectiveness of Self Instructional Module in improving the knowledge regarding spontaneous abortion among married women.

Conclusion: The analysis reveals that Self Instructional Module was helpful to improve the knowledge regarding spontaneous abortion among married women.

Keywords: Self instructional module, knowledge regarding, spontaneous abortion, married women

Introduction

Spontaneous abortion is the most common adverse outcomes of pregnancy, it is defined as premature expulsion of fetus -completely or incompletely from the uterus- up to twenty weeks of pregnancy during the early weeks after conception. It is expected that 8% of pregnancies finished in clinically documented spontaneous abortion and this rate is estimated up to one third in clinically unrecognized pregnancies. These rates extended up to 14% in national data. Due to its high incidence and identification of a less potential for prevention, spontaneous abortion has major impact on public health [1].

According to the Journal of Obstetrics & Gynecology of India researcher Ameet Patki (2015) conducted a study in five cities which reveals that 32% from the 2400- odd samples had suffered spontaneous abortion. The main findings of studies were recurrent abortion was high 7.5% in Indian women. The main causes for these continual abortion were because of genetic and infectious history such as tuberculosis, or women's uterus with structural defects [2].

There was a meta-analysis on maternal exposure to tobacco smoke and miscarriage during pregnancy (2013 by Beth L. Pintes *et al.*) in this study researcher found that any active smoking related to miscarriage the risk ratio was 1.23 at 95% of confidence interval. The risk of abortion increase with amount smoke (1% increased in relative risk / cigarette smoke daily). Therefore these findings strengthen that all women of reproductive age group should be warned that smoking raise the risk of miscarriage [3].

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Barsharani Maharana 2011 researcher revealed that spontaneous abortion in a big issue. It may be because of the fact that at early age women are not physically prepared to become pregnant. Education is found to play a large role in minimizing spontaneous abortion. In all the selected states education of women and spontaneous abortion are significantly related. Increased spontaneous abortion is observed in women with the increase in the age at first birth. Women whose age at first birth is 31-49 year are more susceptible for spontaneous abortion than those whose age at first birth is less than 31 year, because women face pregnancy complications at higher ages., In Bihar, Uttar Pradesh, Tamil Nadu, Maharashtra, and Orissa, working women are more prone to practice spontaneous abortion in relation to non-working women. Women's age of marriage, women's education, age at first birth and any death of children are the strong determinants of spontaneous abortion in all the selected states where high percentage of spontaneous abortion is shown. Government should support the program pertaining to enhance health care and utilization education so that the risk of spontaneous abortion will be reduced [4].

Dr. D. Paul Sullins, found that abortion during 13 years of age raised a woman's possibility of psychiatric disorders by 45 percent. Involuntary miscarriage was associated with a 24 percent increased possibility of psychiatric disorder, during childbirth was "weakly associated" with reduced possibility of psychiatric disorder [5].

A meta-analysis (2011) from 22 studies, in the research it was found that female who had history of miscarriage were 81 % more prone to experience following psychological problems. The maximum increases have been seen in relation to substance abuse and suicidal risks. Result showed that female who have history of miscarriage was faced higher incidence of anxiety (34 percent more) and depression (37 percent more), excessive alcohol use (110 percent higher) and marijuana intake (230 percent higher), and incidence of suicidal tendency found to be higher (155 percent) [5].

Abolghasem Pourreza. revealed that after abortion women have experienced psychological adverse effects. dominant psychological consequences of abortion among women were reported as like Depression, worrying for not being capable to conceive again and also abnormal eating behaviors. Loss of self-esteem, nightmare, guilt, and regret and may lead to depression [6].

Researches shows that Early miscarriage may lead to the symptoms of grief as like sorrow, social isolation, yearning. Sense of loss is very common after the spontaneous abortion if any women experience anger and guilt. The partner and family members also may be experience psychological distress problems. In some, mourning can result as complicated problems like grief and depression [7].

Every female not experience psychological consequences after the spontaneous abortion. In case if women with the past depression history, women who have no child, have poor social background or pre-existing relationship problems are at the risk to have severe grief & depression.⁸

According to the researches it shows that spontaneous abortion rate is becoming too high and women face physical as well as psychological consequences after spontaneous abortion.

On the basis of reviews and researches findings revealed that women are not aware regarding causes and

consequences of spontaneous abortion therefore the rate of spontaneous abortion are much higher, so the researcher want to create awareness regarding causes and consequences of spontaneous abortion.

Materials and methods

A quantitative research approach and quasi experimental pre test post test research design was adopted to conduct study. Non probability Purposive Sampling technique was used to select 100 women - 50 in experimental and 50 in control group and women were since 10 years of marriage from selected areas of Pune city. Structured knowledge questionnaire was used to assess the knowledge of married women regarding spontaneous abortion. Level of knowledge was graded into Poor, Satisfactory, Very Good and Excellent. Pre test was taken on first day followed by Administration of Self Instructional Module to experimental group on the same day and then post test was taken after seven days of Administration of Self Instructional Module from both the groups. To collect socio demographic information there were 5 variables such as age, level of education, number of children, history of abortion, information related to abortion. To assess knowledge of women 19 items in structured knowledge questionnaire were used.

Research objectives

1. To assess the knowledge among the married women regarding spontaneous abortion before administration of Self Instructional Module (SIM) in experimental group and control group.
2. To assess the knowledge among the married women regarding spontaneous abortion after administration of Self Instructional Module (SIM) in experimental group; and control group.
3. To determine the effectiveness of Self-Instructional Module on knowledge regarding spontaneous abortion among married women.
4. To find out the association between pre-test knowledge regarding spontaneous abortion with selected demographic variables.

Results

The data findings have been organized and presented under the following sections:

Section I: Description of socio demographic variables

Section II: Description of evaluation of the effectiveness of Self Instructional Module in terms of knowledge of married women regarding spontaneous abortion.

Section III: Description of the association of pre-test knowledge of married women with selected demographic variables

Section – I

Description of socio demographic variables

The distribution of study participants according to their age. Among 100 participants, majority 41 participants fall into age group of 24 years to 29 years, which is considered as appropriate childbearing age. Sizable number 51% participants were obtained secondary education almost all participants have received Education between primary to

post graduation level. Majority 41% participants have two children. Majority 74% participant have never experienced abortion but 26% participants had history of abortion and Majority 64% participants had no information related to abortion.

Section II
Description of evaluation of the effectiveness of Self Instructional Module in terms of knowledge of married women regarding spontaneous abortion.

Table 1: Comparison of descriptive statistics of experimental group and Control on Pre-test knowledge of the married women regarding spontaneous abortion before administration of Self Instructional Module (SIM), n=100

Knowledge Scores (pre-test)	Experimental group (n=50)		Control group (n=50)	
	f	%	f	%
0-5 (Poor)	19	38	23	46
6-11 (satisfactory)	29	58	27	54
12-15(Very good)	2	4	0	0
16-19 (Excellent)	0	0	0	0

From above table of pre-test knowledge scores of experimental group and control group shows, that from experimental group and control group not a single participant scored above 16 marks. However, in an

experimental group 2(4%) participants scored marks in the range of 12 to 15 marks. 23 (46%) participants from Control group have obtained poor score where as in experimental group the 19 (38%) participants scored below five marks.

Table 2: Comparison of descriptive statistics of experimental group and Control on Post-test knowledge of the married women regarding spontaneous abortion after administration of Self Instructional Module (SIM) n=100

Knowledge Scores (post-test)	Experimental group (n=50)		Control group (n=50)	
	f	%	f	%
0-5 (Poor)	4	8	26	52
6-11 (satisfactory)	34	68	21	42
12-15(Very good)	11	22	3	6
16-19 (Excellent)	1	2	0	0
Total	50	100	50	100

Above table depicts knowledge of married women regarding spontaneous abortion after administration of Self Instructional Module (SIM). In descriptive analysis it was found that there is change occurred in knowledge level of experimental group participants as 1 (2%) scored above 16 marks, 11 (22%) score in the range of 12 marks to 15 marks,

where as in control group none of the participant obtained marks above 16 marks and only 3 (6%) participant score in the range of 12 to 15 marks. Maximum that is 26 (52%) participants from control group found to be in the range of poor score where as only 4(8%) participant from experimental group scored in the range of 0-5marks.

Table 3: Comparison of pre-test and post- test scores of experimental group.

Groups	Knowledge scores	Mean	SD	Df	t	P Value
Experimental	Pre-test	6.18	2.49	49	-7.67	.000
	Post-test	9.04	2.90			

n=50

Table above depicts the comparison of descriptive statistics of experimental group pre- test and post-test knowledge scores. Statistical t test was applied for comparison of pre-test and post-test knowledge scores of subjects within the experimental group. The t test of significance reveals that t= -7.67, the p=.000 is < than .05. The ‘t’ test result implies

that there is highly significant difference between the pre-test mean and post-test mean scores of subjects within experimental group. This can be concluded that the knowledge scores of married women have significantly improved after the administration of Self Instructional Module (SIM) regarding spontaneous abortion.

Table 4: Comparison of pre-test and post- test scores of control group.

Groups	Knowledge scores	Mean	SD	df	t	P Value
Control	Pre-test	5.70	2.04	49	-1.007	.319
	Post-test	6.04	3.13			

n=50

Table above shows the comparison of descriptive statistics of control group pre- test and post-test knowledge scores. Statistical t test was applied for comparison of pre-test and post-test knowledge scores of subjects within the group. The

t test of significance reveals that t= -1.007, the p=.319 is > than .05. The ‘t’ test result implies that there is no significant difference between the pre-test mean and post-test mean scores of subjects within control group.

Table 5: Comparison of pre-test and post- test scores of experimental and control group, n= 100

Groups	Knowledge scores	Mean	SD	df	t calculated value	pValue
Experimental	Pre-test	6.18	2.49	98	1.052	.295
Control	Pre-test	5.70	2.04			
Experimental	Post-test	9.04	2.90	98	4.96	.000
Control	Post-test	6.04	3.13			

Table above depicts the comparison of descriptive statistics in experimental group and control group pre- test and post- test knowledge scores. Statistical *t* test was applied for comparison of pre-test and post-test knowledge scores of subjects in the two groups. The pre-test score mean of experimental group 6.18 and control group was 5.70. The standard deviation for experimental group was 2.49 and for control group 2.04. The standard deviation for experimental group was 2.90 in post-test and 3.13 SD for control group in post-test. The ‘*t*’ test of significance reveals that $t = 1.052$, the $p = .295$ is $>$ than $.05$. The ‘*t*’ test result implies that there is no significant difference between the two means of pre- test knowledge scores of the women regarding spontaneous abortion in experimental group and control group,

The standard deviation (SD) for experimental group 2.90 and for control group 3.13 in the post-test. Post-test mean difference between experimental and control group is significant as $p = .000$ which is $<$ $.05$ at the level of significance.

The above finding thus establish that the two groups are homogeneous and do not differ significantly in their pre-test knowledge level and the mentioned analysis concludes that experimental group and control group are equivalent in the pre-test knowledge scores. The finding of this analysis taken together leads to acceptance of the null hypothesis namely;

there is no significant difference in knowledge scores before administration of Self Instructional Module (SIM) regarding spontaneous abortion among married women at 0.05 level of significance.

Post-test statistical analysis done using the *t* test of significance reveals that $t = 4.96$, the $p = .000$ is $<$ than $.05$. The *t*-test result implies that there is highly significant difference between the two means of post-test knowledge scores of the subjects in experimental group and control group. The above findings thus establish that the two groups are different significantly in their post-test knowledge level. The finding of this analysis taken together leads to rejection of null hypothesis. And hence the researcher of this study accepts the H_1 that is there is significant difference in the post-test knowledge scores in between experimental group and control group. The above finding thus establishes that the two groups are different significantly in their post-test knowledge scores after administration of Self Instructional Module (SIM) regarding spontaneous abortion among married women at 0.05 level of significance.

Section III

Description of the association of pre-test knowledge of married women with selected demographic variables.

Table 6: Association between pretest knowledge scores and selected demographic variables, n=100

Variables	χ^2 Value	P
Age	163.305	0.74
Education	44.838	0.44
Number of children	39.207	0.67
History of abortion	7.555	0.75
Information about abortion	12.235	0.34

The results presented in above table indicates that there is no statistically significant relationship between the pretest knowledge score with selected demographic variables; such as age the probability of the chi-square test statistic (chi-square=163.305) was $p = 0.74$, more than the alpha level of significance of 0.05 ; education (chi-square=44.838) was $p = 0.44$; number of children (chi-square=39.207^a) was $p = 0.67$;history of abortion (chi-square=7.555^a) was $p = 0.75$ and information related to abortion (chi-square=12.235) was $p = 0.34$. Hence, the Chi square findings accept the null hypothesis that there is no significant association between the pre-test knowledge and age, education, number of children, history of abortion, information about abortion selected demographic variable at 0.05 level of significance.

Discussion

In the present study demographic variables were age, level of education, no of children, history of abortion and information about abortion. The demographic data findings were 41% participants was in age group of 24-29 years, 51% participants have secondary education and 21% participants were graduate, 74% participants have no history of abortion, 26% participants have history of abortion, 64%

have no any information about abortion, 36% have some information about abortion.

The present study undertaken to determine the effectiveness of Self Instructional Module on knowledge regarding spontaneous abortion among married women in selected areas of Pune city. 100 Participant who met the mentioned criteria were included in this study. Researcher has used unpaired *t*- test for comparison of pre-test and post-test knowledge score of participants in the two groups experimental and control. Post-test statistical analysis done by using *t*-test of significance reveals that $t = 4.69$, the $p = .000$ is $<$ 0.05. the *t*-test result implies that, there is significant difference between the two of post- test knowledge score of the participants in experimental group and control group. Self-Instructional Module was found to be significantly effective in enhancing the knowledge of married women regarding spontaneous abortion. To support present study, researcher intends to cite of the previous carried out study which is done by Mrs. Sinmayee Kumari Devi and Dr. Sikandar Kumar. Which is a experimental study to Assess the Effectiveness of Self Instructional Module on Knowledge about Identification and Management of High-risk Pregnancy, Bhubaneswar,

Odisha. Findings reveals that The overall pre-test mean score was 31% of the total score reveals poor knowledge where as it was 56% in post-test revealing 25% of enhancement knowledge score. Hence Self Instructional Module on Knowledge is considered as one of the effective teaching strategy in imparting knowledge About Identification and Management of High-risk Pregnancy among the ANM Student^[9].

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