

Effectiveness of Self-Instructional Module on Knowledge Regarding Natural Birthing Methods among Antenatal Mothers

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Abstract

Background: This study aims to assess the effectiveness of self-instructional module on knowledge regarding natural birthing methods among antenatal mothers of selected hospitals. It is quasi experimental research. Purpose of the study was to know the pre assessment knowledge regarding natural birthing methods followed by the intervention, which included administration of self-instruction-module, which was based on the content related to natural birthing methods. After administration post evaluation of the knowledge score was done to compare the effectiveness of the intervention.

Material and method: A quasi experimental research design was used while the approach utilized was quantitative. Pre-test- post-test control group research design was used for the study. The study was done at tertiary hospital of a cosmopolitan city, while the samples were antenatal mothers who were attending the OPD's. Data collection tool used was a structured questionnaire on natural birthing methods which included demographic questions and knowledge based questions. Analysis was done by using descriptive inferential statistics.

Result: Results revealed that experimental group knowledge score in pre-test was 9.2 as compared to 11.2 in the post-test for the p-value of 0.05. In control group, knowledge score in pre-test was 8 as compared to 8.5 in the post-test. Association was found with the demographic variable of education

Conclusion: Average mean difference in knowledge score in antenatal mothers in experimental group was significantly higher than that in control group hence It is evident that the self-instructional module is significantly effective in improving the knowledge among antenatal mothers regarding natural birthing methods.

1. Introduction

Pregnancy is a very crucial period for parents. In pregnancy antenatal mother faces variety of changes like hormonal, sensory, physiological and much more. It brings many changes in female physiology and anatomy also it makes various changes in pregnant women lifestyle. A woman undergoes numerous experiences of her gravidness where she feels the fetus in her womb and also she enjoy her pregnancy. Cultural practices and their

celebration make pregnancy delightful, where she gives attention towards fetus and accept the physiological changes and minor ailments.¹

Birthing is a painful process but it can be manageable to give mother a good experience during labor. To support the women during labor with nominal medical interventions are mainly focused in natural birthing process it has got natural forms of pain relief measures that can decrease the level of pain during labour and enhance the process of labor. Pharmacological measures are gas for pain control and intravenous opioid epidural analgesia. The non-pharmacological measures are music therapy, breathing technique, maternal stress and anxiety, massage, acupuncture.⁷

Since normal labour is supported by all midwifery practitioners and has been advocated by many international and national midwifery leaders it is equally important for women to adopt measures for natural birthing. If antenatal women are provided with education and learning material, they can adopt better practices during labour process. Hence it was thought that the researcher would study the effect of structured S-I-M on the knowledge of antenatal mothers regarding natural birthing methods. This would help the mothers to carry this S-I-M and refer to it as and when she requires, aiding in a stress-free environment to undergo the labouring process.

Aim And Objectives

1. To assess the Pre-Interventional knowledge regarding natural birthing methods among antenatal mothers in both experimental and control group before Intervention.
2. To assess the Post Interventional knowledge regarding natural birthing methods among antenatal mothers in both experimental and control group after the intervention in experimental group.
3. To determine the mean difference between pre and post interventional knowledge score regarding natural birthing methods in experimental group and control group.
4. To compare the post interventional level of knowledge between experimental and control group to determine the intervention effectiveness.
5. To associate the pre interventional knowledge score with selected demographic variables in both experimental and control group.

2. Materials And Methods

SAMPLING TECHNIQUE:

Non probability purposive sampling technique was employed.

SAMPLE SELECTION CRITERIA:

INCLUSION CRITERIA –

1. Antenatal primi-gravida mothers attending OPD's of selected hospitals.
2. Antenatal primi-gravida mothers in the 3rd trimester of pregnancy between 28 weeks-38 weeks of gestation.
3. Antenatal primi-gravida mothers who can read, write and understand Marathi or English language.
4. Antenatal primi-gravida mothers who are interested in the study.

EXCLUSION CRITERIA-

1. Antenatal primi-gravida mothers with high risk pregnancy like diabetes mellitus, pregnancy induced hypertension, cephalopelvic disproportion, etc.
2. Antenatal primi-gravida mothers with previous history of abortion.

Data Collection Tool And Technique:

Table No.1: Data collection tool and technique

Tool No	Tools	Variables To Be Measured	Technique/Method
Section I	Structured Questionnaire	Demographic Variable	Pen And Paper
Section II	Structured Questionnaire	Knowledge Level	Pen And Paper

Procedure Of Data Collection:

1. Permission from Institutional Research and Recommendation Committee
2. Obtain clearance from Institutional Ethical Committee
3. Permission from authority for data collection
4. Communication with samples and informed consent
5. Written consent from samples
6. Distribution of the samples into experimental and control group
7. Data will be collected from the experimental group.
 - Samples will be identified
 - Pre-test will be taken by administering the tool
 - Each sample would around 20 minutes to fill the questionnaire.
 - Self Instructional Module will be distributed on the same day of the pre-test.
 - Post-test will be taken after 7 days of the pre- assessment.
8. Data will be collected from the control group.
 - Samples will be identified
 - Pre-test will be taken by administering the tool
 - Each sample would around 20 minutes to fill the questionnaire.
 - Post-test will be taken after 7 days of the pre- assessment.

Development Of Tool :

The researcher made the tool to assess the effectiveness of S-I-M on natural birthing methods. Tool building started after scheming parameters from many researches and articles on areas connected to study. Guidelines was taken from guide, for the clarity of tool expert opinion was taken from teachers from the field of pediatric, obstetrics and gynecology, medical surgical, psychiatric nursing. Validation of tool was given to 25 experts and from that valuable suggestions were received back from 17 experts and also got comments on the study too. After collecting suggestions from experts final draft were prepared. Knowledge scoring were prepared. Content validity and reliability were done by test re-test method.

3. Results And Discussion

Table 1: Description of samples (antenatal mothers) based on their personal characteristics in terms of frequency and percentage

N=85, 85

Sr.No	Demographic variable	Experimental		Control	
		Freq	%	Freq	%
1.1	Age				
	18 to 22 years	20	23.5%	23	27.1%

	23 to 27 years	36	42.4%	31	36.5%
	28 to 32 years	17	20.0%	18	21.2%
	33 to 35 years	12	14.1%	13	15.3%
1.2	Education				
	Primary	26	30.6%	26	30.6%
	Secondary	43	50.6%	27	31.8%
	Higher secondary	10	11.8%	11	12.9%
	Graduation	4	4.7%	15	17.6%
	Any other	2	2.4%	6	7.1%
1.3	Occupation				
	Home maker	50	58.8%	42	49.4%
	Government job	2	2.4%	10	11.8%
	Private job	12	14.1%	18	21.2%
	Businesswomen	20	23.5%	8	9.4%
	Any other	1	1.2%	7	8.2%
1.4	Weeks of gestation				
	28 to 32 weeks	22	25.9%	25	29.4%
	32.1 to 36 weeks	53	62.4%	39	45.9%
	36.1 to 38 weeks	10	11.8%	21	24.7%
1.5	Previous knowledge regarding natural birthing process				
	Yes	20	23.5%	36	42.4%
	No	65	76.5%	49	57.6%

According to the age majority i.e. 42.4% in Experimental group & 36.5% from control group were in the age group of 23 to 27 years. The demographic variable for education reveals that majority of the samples i.e. 50.6% in the experimental group & 31.8% in the control group have studied up-to secondary school. Occupation showed that majority i.e. 58.8% in experimental group & 49.4% from control group were home makers. As per weeks of gestation majority 62.4 % of the samples from experimental group & 45.9% from control group were between 32.1 to 36 weeks of gestation. 76.5% in Experimental group & 57.6% from control group had Previous knowledge regarding natural birthing process.

Table 2: Frequency and percentage distribution Pre- Interventional knowledge regarding natural birthing methods among antenatal mothers in both experimental and control group before Intervention

N=85, 85

Knowledge	Experimental		Control	
	Freq	%	Freq	%

Poor (score 0-6)	18	21.2%	23	27.1%
Average (score 7-13)	58	68.2%	60	70.6%
Good (score 14-20)	9	10.6%	2	2.4%

N=85,85

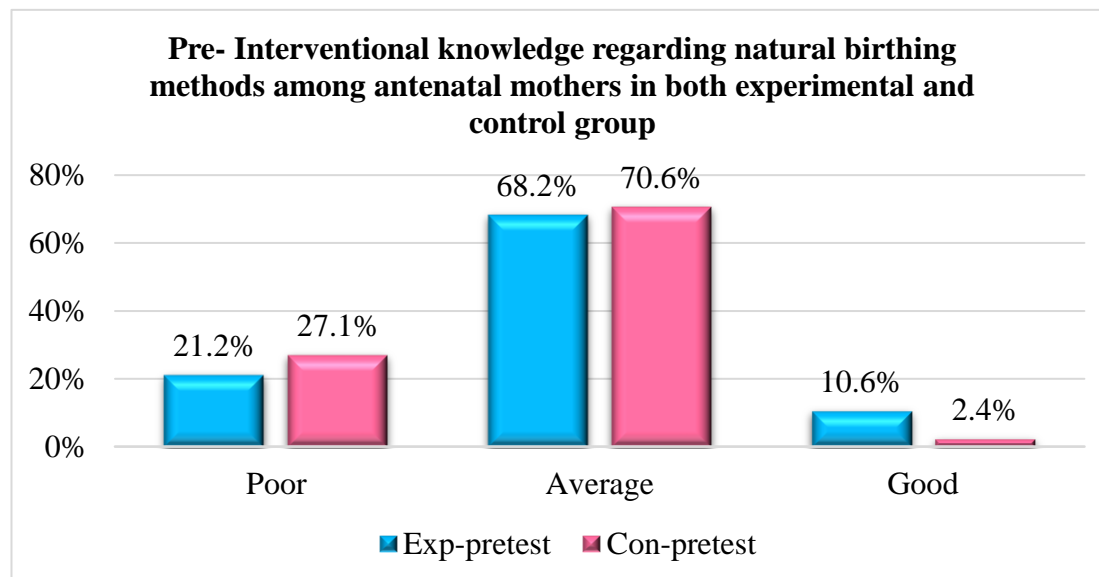


Figure No.1 Pre- interventional knowledge regarding natural birthing

Table no.2 and figure no.1 depict that the pre interventional knowledge score in both the groups i.e. experimental (68.2%) and control (70.6%) was in average category.

Table 3: Pretest and posttest knowledge regarding natural birthing methods among antenatal mothers in both experimental and control group

N=85, 85

Knowledge	Experimental				Control			
	Pretest		Posttest		Pretest		Posttest	
	Freq	%	Freq	%	Freq	%	Freq	%
Poor (score 0-6)	18	21.2%	5	5.9%	23	27.1%	20	23.5%
Average (score 7-13)	58	68.2%	52	61.2%	60	70.6%	62	72.9%
Good (score 14-20)	9	10.6%	28	32.9%	2	2.4%	3	3.5%

N=85,85

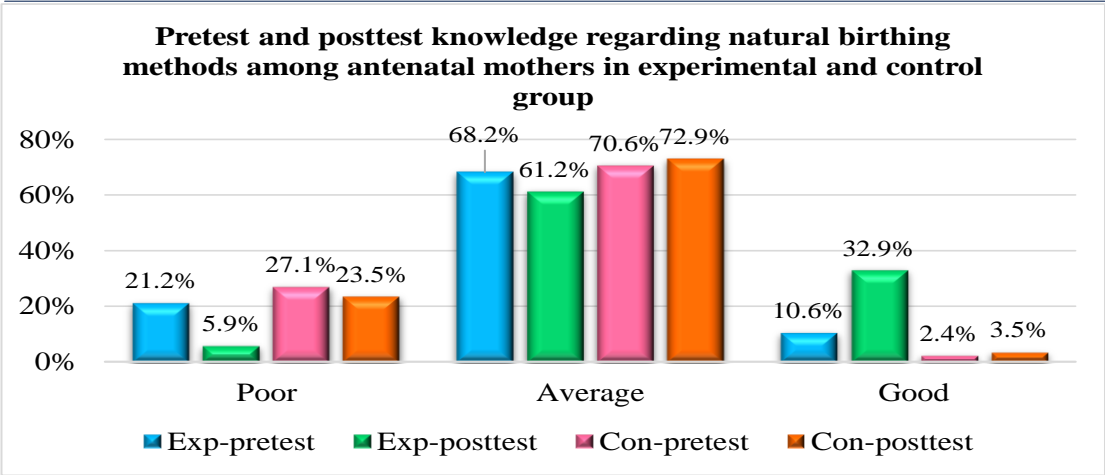


Figure No 2. Pretest and posttest knowledge regarding natural birthing

Table No.3,Figure No.2 Depicts that pretest, 21.2% of the antenatal mothers in experimental group had poor knowledge, 68.2% of them had average knowledge and 10.6% of them had good knowledge regarding natural birthing methods. In posttest, 5.9% of the antenatal mothers in experimental group had poor knowledge, 61.2% of them had average knowledge and 32.9% of them had good knowledge regarding natural birthing methods. In pretest, 27.1% of the antenatal mothers in control group had poor knowledge, 70.6% of them had average and 2.4% of them had good knowledge regarding natural birthing methods. In posttest, 23.5% of the antenatal mothers in control group had poor knowledge, 72.9% of them had average knowledge and 3.5% of them had good knowledge regarding natural birthing methods. This indicates that the knowledge regarding natural birthing methods among antenatal mothers improved remarkably after S-I-M

Table 4: Two sample z-test for the mean difference between pre and post interventional knowledge score regarding natural birthing methods in experimental group and control group

N=85, 85

Group	Mean	SD	z	p-value
Experimental	2.6	1.7	6.04	0.000
Control	0.4	2.9		

N=85,85

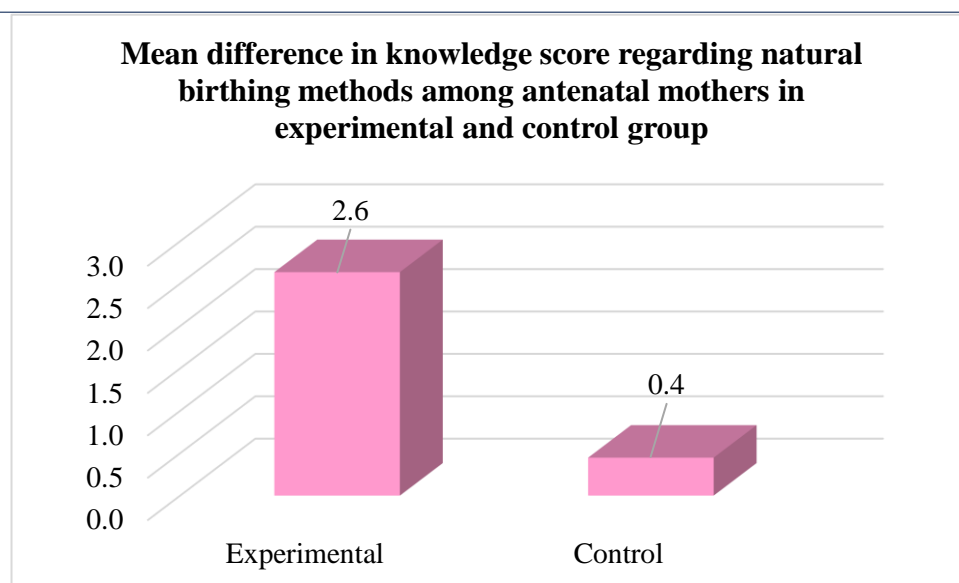


Fig No.3 Mean difference in knowledge score regarding natural birthing methods

In experimental group, average mean difference in knowledge score was 2.6 which was 0.4 in control group. z-value for this test was 6.04. Corresponding p-value was small (less than 0.05), there is no association between the pre-interventional knowledge score with selected demographic variables at 0.05 level of significance.

Average mean difference in knowledge score in antenatal mothers in experimental group was significantly higher than that in control group. It is evident that the self-instructional module is significantly effective in improving the knowledge among antenatal mothers regarding natural birthing methods.

Table 5: Paired t-test for the mean difference between pre and post interventional knowledge score regarding natural birthing methods in experimental group and control group

N=85, 85

Group	Test	Mean	SD	T	df	p-value
Experimental	Pretest	9.2	3.2	14.42	84	0.000
	Posttest	11.8	3.0			
Control	Pretest	8.0	2.5	1.42	84	0.080
	Posttest	8.5	2.4			

N=85,85

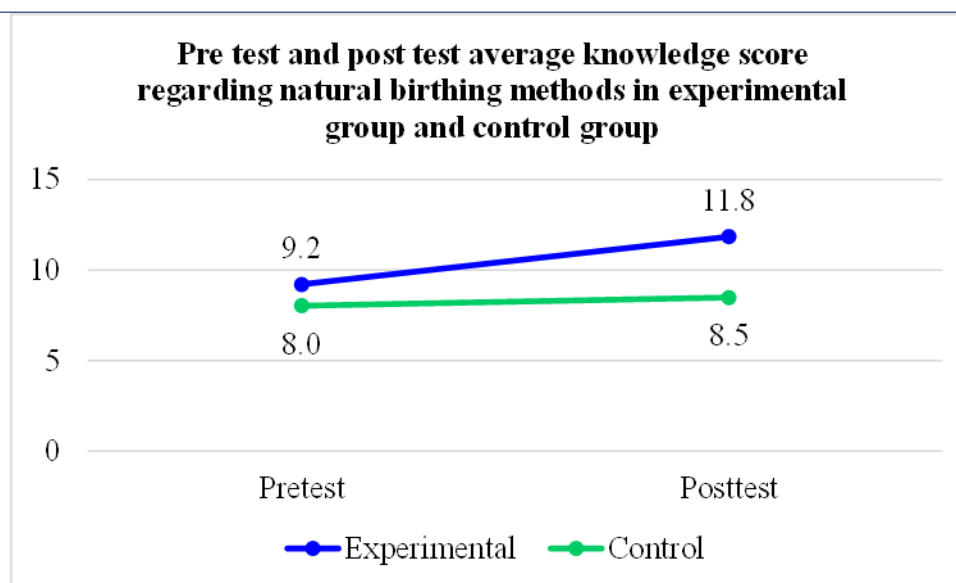


Fig No.4 Pre post comparison of level of knowledge regarding natural birthing

In experimental group, average knowledge score in pretest was 9.2 which increased to 11.2 in posttest. T-value for this test was 14.42 with 84 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. Antenatal mothers had significantly higher average knowledge score in posttest as compared to that in pretest. In control group, average knowledge score in pretest was 8 which increased to 8.5 in posttest. T-value for this test was 1.42 with 84 degrees of freedom. Corresponding p-value was large (greater than 0.05), there is no evidence against null hypothesis. The knowledge score in pretest and posttest is not significantly different in control group.

Table 6: Fisher's exact test for the association of knowledge among antenatal mothers regarding natural birthing methods with selected demographic variables

N=170

Demographic variable		Knowledge			p-value	Significant /Significant Not
		Poor	Average	Good		
Age	18 to 22 years	30	3	10	0.736	Not Significant
	23 to 27 years	45	6	16		
	28 to 32 years	26	0	9		
	33 to 35 years	17	2	6		
Education	Primary	35	6	11	0.192	Not Significant
	Secondary	53	2	15		
	Higher secondary	10	3	8		
	Graduation	14	0	5		

	Any other	6	0	2		
Occupation	Home maker	58	7	27	0.036	Significant
	Government job	12	0	0		
	Private job	25	3	2		
	Business women	17	1	10		
	Any other	6	0	2		
Weeks of gestation	28 to 32 weeks	30	2	15	0.070	Not Significant
	32.1 to 36 weeks	71	6	15		
	36.1 to 38 weeks	17	3	11		
Previous knowledge regarding natural birthing process	Yes	34	3	19	0.124	Not Significant
	No	84	8	22		

Association of knowledge reveals that p-value corresponding to occupation was small (less than 0.05), the demographic variable occupation was found to have a significant association with the knowledge among antenatal mothers regarding natural birthing methods.

THE MAJOR FINDINGS OF THE STUDY SUMMARIZED BELOW

- According to the age majority i.e. 42.4% in Experimental group & 36.5% from control group were in the age group of 23 to 27 years.
- According to the demographic variable for education 50.6% in the experimental group & 31.8% in the control group have studied up-to secondary school.
- Description of the occupational status majority 58.8% in experimental group & 49.4% from control group were home makers.
- Description as per weeks of gestation majority 62.4 % of the samples from experimental group & 45.9% from control group were between 32.1 to 36 weeks of gestation.
- According to previous knowledge regarding natural birthing process majority shows 76.5% in Experimental group & 57.6% from control group.

4. Discussion

This study has been conducted on to assess the effectiveness of self-instructional module on knowledge regarding natural birthing methods among antenatal mothers. This study was quasi experimental research design, pretest posttest control group research design to determine the effectiveness of self-instructional module on knowledge regarding natural birthing methods. Data related to the comparison of post interventional level of knowledge between experimental and control group to determine the intervention effectiveness showed that In experimental group, average knowledge score in pretest was 9.2 which increased to 11.2 in posttest. T-value for this test was 14.42 with 84 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. Antenatal mothers had significantly higher average knowledge score in posttest as compared to that in pretest. In control group, average knowledge score in pretest was 8 which increased to 8.5 in

posttest. T-value for this test was 1.42 with 84 degrees of freedom. Corresponding p-value was large (greater than 0.05), there is no evidence against null hypothesis. Study findings are relevant with the study conducted at a government hospital in Dehradun in 2018 on primigravida antenatal mothers to assess the effect of self-instructional – module on antenatal care. The t-paired test was used to find out the comparison between total pre-test attitude score and total post-test attitude score. The total mean difference was 3.339. The t value was 11.040 at df 61, the tabulated value at 0.05 level was 2.000, the calculated value was greater than tabulated value. It observed that there was difference between pre-test and post-test knowledge score.

Analysis of data related to the association of knowledge among antenatal mothers regarding natural birthing methods with selected demographic variables showed that the demographic variable occupation was found to have a significant association with the knowledge among antenatal mothers regarding natural birthing methods.

5. Conclusion

The motive of the study was to assess the effectiveness of the self-instructional-manual on natural birthing methods among antenatal mothers of selected hospitals of Pune city.

Where pretest posttest control group research design was used for the study. The tool is reliable after the content validity and reliability was done. Pilot study was conducted among 17 sample, analysis of the pilot study revealed that it was feasible to conduct the main study. 170 samples were recruited for final data collection where 85 samples from experimental group and 85 samples from control group. Analysis was done using descriptive and inferential statistics. The data analysis was done after computing the mean, standard deviation, frequency percentage, t test, **z- test** Fisher's exact test.

6. References

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