



Effectiveness of video assisted instructional module on antenatal, intranatal & postnatal care on the pregnancy outcome of pregnant women attending maternity hospitals, Bangalore

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Abstract

The present study was undertaken to evaluate the effectiveness of VAIM on antenatal care on the pregnancy outcome among pregnant women attending maternity hospitals, Bangalore. Post-test only control group with purposive sampling technique was used. Data was collected from 400(200 for experiment and 200 for control group) regarding pregnancy outcome using structured interview schedule and observational formats. VAIM was administered for experiment group to find the effectiveness on pregnancy outcome. Study findings showed that the post-test knowledge score in experiment group was high(37.75 SD 5.44) compared to control group(18.50 SD 3.76) and found positive pregnancy outcome in experiment group than control group which is significant at 0.01 level. Hence results have proved that VAIM was effective in improving the knowledge and positive outcome of pregnant women.

Keywords: VAIM=Video Assisted Instructional Module, SD=Standard Deviation, NS=Non significant, χ^2 = Chi-square

Introduction

Women have the right to enjoy the highest attainable standard of physical and mental health. Women are subject to particular health risks. Complications related to pregnancy and child birth are among the leading causes of mortality and morbidity in many parts of the developing world. Skilled care is necessary during antenatal, intranatal and postnatal period. Immediate and early postnatal care for mothers and new born will reduce the maternal mortality and perinatal deaths. Studies revealed that increased community awareness helps to improve maternal health and pregnancy outcome.

Pregnancy is the most important event in women's life. Systematic supervision of women during pregnancy is called antenatal care. A study conducted by McPherson R.A. Khaddar, Moore JM, Sharma M (2006) showed that the birth preparedness package promotes active preparation and decision making for births, including pregnancy / postpartum periods, by pregnant women and their families [6].

It is found that, education plays an important role in improving the maternal and child health. Nurse as an educator in the maternal and child health program, it is her responsibility to educate the antenatal mothers. Hence the investigator has selected video assisted instructional module to impart knowledge regarding antenatal, intranatal and postnatal care to the antenatal mothers, thereby complications related to pregnancy and childbirth can be prevented and improves pregnancy outcome.

The objectives of the study

1. To find the effectiveness of video assisted instructional module regarding knowledge on antenatal care.
2. To assess the effectiveness of video assisted instructional module on the pregnancy outcome of experiment and control group.
3. To find the association between the selected

demographical variables with post-test knowledge score.

Hypotheses

- H₁:** There will be a significant difference in knowledge of the subjects of experimental group after administration of video assisted instructional module regarding antenatal care compared to that of control group.
- H₂:** There will be a significant difference in pregnancy outcome of the study subjects in experimental group after administration of video assisted instructional module compared to that of control group.
- H₃:** There will be a significant association between the selected demographical variables and post-test knowledge score after administration of video assisted instructional module.

Assumptions

1. Pregnant mothers will have some knowledge regarding antenatal care.
2. VAIM can increase the knowledge of pregnant mothers regarding antenatal care and improves pregnancy outcome.

Variables of the study

Independent variable

VAIM on antenatal care

Dependent variable

Knowledge of pregnant mothers and pregnancy outcome.

Socio- demographic variables

Age, educational status, occupation, monthly family income, religion, type of family, and previous source of information, residence, marital life and type of marriage.

Delimitation

The study is delimited to 400 pregnant mothers of selected

maternity hospitals, Bangalore.

Conceptual framework

The conceptual framework of the study parameter is based on Pender's Health Promotion model. The study was aimed at developing and evaluating the effectiveness of VAIM on knowledge and pregnancy outcome. According to Pender, adequate knowledge and healthy life style improves the health of the mother and have positive pregnancy outcome.

Methodology

Research approach and design

An experimental study was conducted in two maternity hospitals. The experiment group was taken from Vanivilas Maternity Hospital and control group was taken from K.C. General Maternity Hospital in Bangalore. Both hospitals were similar in their setting, nature of patients seeking services. Four hundred pregnant mothers (200 for experimental and 200 for control group) were selected by purposive sampling technique.

An evaluative approach was adopted for this study. True experimental with post-test only control group design was used.

Criteria for selection of samples

Inclusion criteria

- Primigravidae with 10 – 16 weeks of gestation & seeking health services.
- Primigravidae who are willing to participate in the study.

Exclusion criteria

- Primigravidae with multiple pregnancies.
- Primigravidae with high risk pregnancies.

Tool used for the study

A structured interview schedule, assessment formats and observational check lists were prepared to collect the data to achieve objectives of the study. The tool was developed by the investigator after reviewing the related literature and guidance from the experts in the field.

Section I

Socio demographic schedule consists of 10 items which include Age, educational status, occupation, monthly family income, religion, type of family, and previous source of information, residence, marital life and type of marriage.

Section II

Structured interview schedule regarding Knowledge on antenatal care consists of 45 items of multiple choices.

Section III

Antenatal, intranatal & postnatal care assessment formats and observational checklists, consists of 26 items on maternal and fetal/ newborn parameters which is used to assess the maternal and fetal / newborn well-being and identify the possible complications and also to assess the pregnancy outcome. The scoring was done by using checklist.

Section IV

Video Assisted Instructional module (VAIM) consists of 4 components. They are Physiological changes during pregnancy, Antenatal care, Intranatal care and Postnatal care including new born care.

Procedure for data collection

Formal administrative permission obtained from the Medical superintendents of the K.C. General and Vanivilas hospitals and written consent from the subjects. Socio – demographic data was collected from both the experiment and control group through structured interview schedule. The facility for video screening of the module was arranged in the same room. Videos were projected with step by step explanation regarding Antenatal, Intranatal & Postnatal care to experimental group only and the same was withheld from the control group. Video Assisted instructional module was screened through projector for 40 minutes. After one week Post test was conducted for both the group simultaneously to assess the knowledge of subjects regarding Antenatal, Intranatal & Postnatal care through structured interview schedule. Further the mothers of experiment and control group were observed for maternal and fetal well being / pregnancy out come during their antenatal visit at eight weeks interval with the help of assessment format and observational check list. The mothers of both experiment and control group were requested to deliver in the same hospital. After the delivery, data related to delivery, maternal and new born condition/pregnancy outcome was collected by the Hospital records with the help of check list. The Mothers of both experiment and control group were observed for 24 hours after delivery for postnatal health status/pregnancy outcome with the help of check list. The Mothers of both the groups were told to come after 15 days to record the postnatal status/pregnancy outcome with the help of check list.

Results

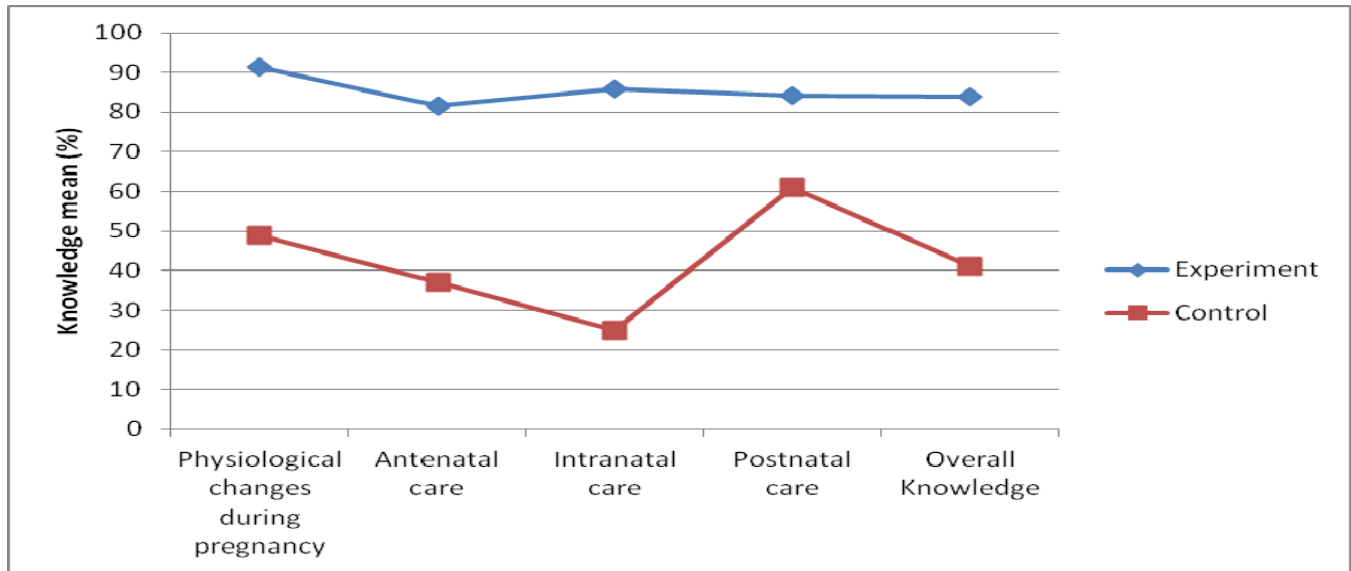


Fig 1: Area wise comparison of mean knowledge score

Table 1: Overall mean knowledge score

Overall Score	Experiment		Control		χ^2 value	P value
	n	%	N	%		
< 50%	2	1.0	169	84.5	334.369	P < 0.0001
50-75%	27	13.5	31	15.5		
> 75%	171	85.5	0	0.0		
Total	200	100.0	200	100.0		

*Significant at 1% level NS: Non significant

Table 2: Distribution of scores of pregnancy outcome findings during Antenatal period among experimental and control group, related to weight and Hb%.

	Group	n	Mean	SD	Min.	Max.	't' value	'p' value
Weight	Experiment	200	56.7	4.542	41.0	70.0	2.700	0.0072
	Control	200	55.3	5.756	35.0	65.0		
Hb%	Experiment	200	11.9	0.619	10.4	14.0	12.495	P<0.0001
	Control	200	11.0	0.809	8.9	13.0		

Table 3: Pregnancy outcome findings during antenatal period related to medication and pallor

	Group	Group				χ^2 value	P Value
		Experimental		Control			
		n	%	N	%		
Pallor.	Absent	189	94.5%	107	53.5%	90.798	P<0.01*
	Present	11	5.5%	93	46.5%		
Iron Tablet.	Absent	0	0.0%	81	40.5%	101.567	P<0.01*
	Present	200	100.0%	119	59.5%		
Folic Acid	Absent	0	0.0%	109	54.5%	149.828	P<0.01*
	Present	200	100.0%	91	45.5%		
Calcium	Absent	0	0.0%	175	87.5%	311.111	P<0.01*
	Present	200	100.0%	25	12.5%		
Inj. T.T.	Absent	0	0.0%	82	41.0%	1.003	NS
	Present	200	100.0%	118	59.0%		

Table 4: Pregnancy outcome findings of antenatal period regarding, Anemia, USG & Anomaly scan, fetal movements and Non stress test.

Parameters		Experiment		Control		χ^2 value	p value
		N	%	N	%		
Anemia.	Absent	176	88.0%	115	57.5%	69.208	P<0.01*
	Present	24	12.0%	85	42.5%		

Ultrasonography.	Absent	3	1.5%	58	29.0%	58.513	P<0.01*
	Present	197	98.5%	142	71.0%		
Anomaly scan.	Absent	6	3.0%	118	59.0%	111.823	P<0.01*
	Present	194	97.0%	82	41.0%		
Appreciation of Fetal movements	Absent	0	0.0%	185	92.5%	392.115	P<0.01*
	Present	200	100%	15	7.5%		

*Significant at 1% level NS: Non significant

Table 5: Pregnancy outcome findings of postnatal period of experiment and control group related to weight of the newborn and APGAR score

	Group	n	Mean	SD	Min	Max	t value	p value
Birth Weight	Experiment	200	2.948	0.1432	2.4	3.3	-9.063	P<0.0001
	Control	200	2.785	0.2102	2.3	3.2		
APGAR Score	Experiment	200	9.80	0.663	6	10	-9.237	P < 0.0001
	Control	200	8.67	1.598	4	10		

Table 6: Pregnancy outcomes during postnatal period of experimental & control group related to exclusive breast feeding, episiotomy wound healing, breast engorgement, retracted nipple, puerperal sepsis.

		Group				χ ² Value	P value
		Experimental		Control			
		n	%	n	%		
Exclusive Breastfeeding	Initiated	200	100.0%	3	1.5%	388.117	P<0.01*
	Not Initiated	0	0.0%	197	98.5%		
Episiotomy Wound Healing	Present	193	96.5%	126	63.0%	69.492	P<0.01*
	Absent	7	3.5%	74	37.0%		
Breast Engorgement	Present	19	9.5%	100	50.0%	78.483	P<0.01*
	Absent	181	90.5%	100	50.0%		
Retracted nipple	Present	21	10.5%	155	77.5%	182.183	P<0.01*
	Absent	179	89.5%	45	22.5%		
Puerperal sepsis	Present	17	8.5%	69	34.5%	48.769	P<0.01*
	Absent	183	91.5%	131	65.5%		

Table 7: Association between demographic variables and post-test knowledge score

Characteristic	Category	Overall knowledge				Chi square
		Median and below		Above median		
		N	%	n	%	
Age	<= 20	33	60.0	22	40.0	1.368 ^{NS} df=2
	21 – 24	47	51.1	45	48.9	
	25+	31	58.5	22	41.5	
Educational Status	Illiterate	5	100.0	0	0.0	20.929* df=4
	Primary School	18	78.3	5	21.7	
	High School	65	60.2	43	39.8	
	Pre University	21	38.9	33	61.1	
	Graduation and above	2	20.0	8	80.0	
Occupation of the Mother	Home Maker	49	59.0	34	41.0	6.395* df=2
	Daily Wages / coolie	35	64.8	19	35.2	
	Government Employee	0	0.0	0	0.0	
	Private Employee	27	42.9	36	57.1	
Family Monthly Income in Rupees	Below 1000	0	0.0	0	0.0	25.466* df=3
	1001-2000	0	0.0	0	0.0	
	2001-3000	8	80.0	2	20.0	
	3001-4000	21	84.0	4	16.0	
	4001-5000	38	69.1	17	30.9	
	above 5001	44	40.0	66	60.0	
Religion	Hindu	100	55.2	81	44.8	0.177 ^{NS} df=2
	Muslim	9	60.0	6	40.0	
	Christian	2	50.0	2	50.0	
	Others	0	0.0	0	0.0	
Type of Family	Joint Family	32	43.8	41	56.2	6.333* df=1
	Nuclear Family	79	62.2	48	37.8	
	Extended Family	0	0.0	0	0.0	
Previous Source of Information about pregnancy care.	Nil	26	78.8	7	21.2	14.059*

	Relatives / friends	61	55.0	50	45.0	df=4
	Print Media	8	57.1	6	42.9	
	Electronic media	6	54.5	5	45.5	
	Health Professional	10	32.3	21	67.7	
Residence	Rural	0	0.0	1	100.0	1.253 ^{NS} df=1
	Urban	111	55.8	88	44.2	
Marital life years.	1 and below	30	54.5	25	45.5	0.059 ^{NS} df=2
	1.0 to 2.0	48	56.5	37	43.5	
	Above 2	33	55.0	27	45.0	
Consanguinity	Consanguineous	38	50.7	37	49.3	1.135 ^{NS} df=1
	Non- Consanguineous	73	58.4	52	41.6	

Findings of the study

Majority of pregnant women were belonged to the age group of 21-24 years in both experiment and control group. Majority of subjects in experiment group completed their high school education 54%, and in control group 44% also completed their high school education. In both the groups, 57.5% in experiment group and 41% in control group were home makers. Majority of subjects in experiment group 55% had above Rs. 5001 and in control group 68% had Rs.4001- 5000 as their monthly income. In both the groups 90.5% in experiment group and 66.5% in control group were belonged to Hindu religion. Majority of the subjects in experiment group 63.5% belonged to nuclear family and in control group 77% subjects belonged to joint family. Previous source of information: Majority of subjects in experiment group 55.5% had information from their relatives / friends, where as 88.5% subjects in control group had no information regarding pregnancy care. In both the groups 99.5% in experiment group and 93.5% in control group subjects were from urban area. In both the groups 42.5% in experiment group and 45.5% in control group subjects were having 1 to 2 years of marital life. In both the groups 62.5% in experiment group and 70% in control group had non-consanguineous marriage.

The overall mean knowledge score of experiment group was 37.75 ± 5.4484 and overall mean knowledge score of control group was 18.50 ± 3.7670 .

The study results reveal that the video assisted instructional module on the pregnancy outcome was effective to have positive pregnancy outcome in experimental group during antenatal, intranatal and postnatal period and reducing the complications in the mothers, fetus and newborn. This was evident from the significance shown in post intervention scores and findings as revealed by the 't' test among experiment group than control group.

Conclusion

1. There was significant enhancement in the post test knowledge score among experimental group 171 (85.5%) respondents had above 75 % knowledge (adequate). In the control group 169 (84.5%) respondents had below 50% knowledge (Inadequate) regarding antenatal, intranatal & postnatal care. The difference observed was statistically significant ($p < 0.0001$) after administering the VAIM.
2. There was significant enhancement in positive pregnancy outcome in experiment group compared to control group.
3. There was significant association found between knowledge score and socio- demographic variables such as, educational status,(20.929), occupation, (6.395), family

monthly income,(25.466), type of family,(6.333), previous source of information about pregnancy care (14.059) at 0.01 level.

4. There was no significant association found between knowledge score and socio- demographic variables related to age, (1.368), religion, (0.177), residence, (1.253), marital life in years, (0.059) and consanguinity, the association was not observed at 0.01 level.

A Video assisted instructional module was administered to the subjects in group settings. The post test assessment indicated that the effect of Video assisted instructional module is statistically significant in experiment group compared to that of control group. The overall comparison of knowledge score and pregnancy outcome of the experiment group with the control group revealed that the experiment subjects improved in knowledge regarding antenatal, intranatal and postnatal care and positive pregnancy outcome was observed.

Recommendations

- The study can be replicated on larger samples, in different settings.
- The study can be conducted on family members of pregnant mothers.
- A comparative study can be done between Urban and Rural antenatal mothers.
- A study can be conducted as a longitudinal study / Retrospective study to assess the pregnancy outcome in different hospitals.

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