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To Evaluate the Effectiveness of Structured Teaching Programme on Knowledge Regarding Postnatal Complications and its Management among Antenatal Mothers Who Have Visits in Selected Primary Health Centers of Kalaburagi

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Abstract

Effectiveness of Structured Teaching Programme On Knowledge Regarding Postnatal Complications And Its Management Among Antenatal Mothers.

Objectives: To assess the knowledge of antenatal mothers on knowledge regarding selected postnatal complications and its management. To determine the effectiveness of planned teaching programme on knowledge regarding selected postnatal complications and its management among antenatal mothers and to find out the association between level of post-test knowledge scores of antenatal mothers on knowledge regarding selected post-natal complications and its management with their selected socio-demographic variables. **Hypothesis: H1:** There will be a significant difference between pre-test and post-test knowledge scores, of antenatal mothers regarding selected postnatal complications and its management. **H2:** There will be a significant association between posttest knowledge levels of antenatal mothers regarding selected postnatal complications and its management with their selected sociodemographic variables.

Methodology: The quasi-experimental design adopted a pre-test and post-test design in which an integrated educational programme was attempted. Convenience sampling was used with the participant being selected by ensuring the population. A structured questionnaire, which was designed and used for assessing the participants' knowledge before the intervention-test as well as after the intervention- test. Data from pre-test and post-test were analyzed as paired t-tests, comparing mean knowledge scores, which were considered significant when p < 0.05.

Results: The overall improvement in knowledge after the intervention is evident, with the mean post-test score being 28.0, compared to the pre-test score of 15.0. The greatest improvement was seen in the areas of Postpartum Mental Health and Other Postpartum Complications, where the scores improved by 100%.

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Tutor/Lecturer, Tutor/Lecturer, Department of Obstetrics and Gynecological Nursing, Shree Gopaldev Jadhav College of Nursing Kalaburagi Email: sgjcollegeofnursing@gmail.com Postpartum Hemorrhage and Postpartum Care also showed significant improvements, with an increase in scores of 83.3% each.

Interpretation and Conclusion: The overall findings of the study clearly showed that the

planned teaching programme among antenatal mothers was significantly effective in improving the knowledge on postnatal complication and its management.

Keywords: Evaluate Effectiveness, Structured Teaching Programme, Knowledge, Postnatal Complications, Management, Antenatal Mothers and Primary Health Centers.

Introduction

Mother and child health is one of the major concerns of public health throughout the world. Health education and increased knowledge of mothers in relation to their health is an important strategy for improving maternal health.

Even with the best possible antenatal screening, any delivery can become a complicated one requiring emergency intervention. Therefore, skilled assistance is essential to delivery care. In the absence of midwives or nurses, TBA's (who usually perform home deliveries, often as a source of income) should be trained to identify complications, provide immediate first aid, and know when and where to refer Mothers for additional care. It should also be remembered that the first priority for a delivery is to be safe; a traumatic and clean; and most maternal deaths are due to a failure to get skilled help in time for delivery complications.

Statement of the Problem

""A study to assess the effectiveness of structured teaching programme on knowledge regarding postnatal complications and its management among antenatal mothers who have visits in selected primary health centers of Kalaburagi."

Objectives of the Study

- To assess the knowledge of antenatal mothers on knowledge regarding selected postnatal complications and its management.
- To determine the effectiveness of planned teaching programme on knowledge regarding selected postnatal complications and its management among antenatal mothers.
- 3. To find out the association between level of post test knowledge scores of antenatal mothers on knowledge regarding selected post natal complications and its management with their selected socio-demographic variables.

Research Hypothesis

H1: There will be a significant difference between pre-test and post-test knowledge scores, of antenatal

mothers regarding selected post natal complications and its management.

H2: There will be a significant association between post test knowledge levels of antenatal mothers regarding selected postnatal complications and its management with their selected sociodemographic variables.

REVIEW OF LITERATURE RELATED TO PUERPERAL SEPSIS AND ITS MANAGEMENT

An observational prospective cohort study was conducted to determine the risk factors and complications of puerperal sepsis. From January 2011 to December 2011 at the obstetrics and gynecology department liquate university of medical and health sciences / Hyderabad. Sample size was 3316 postnatal mother and with the convenient sample technique. The result shown that during this period there were 3316 obstetrical admission and out of these 129(3.89%) women had puerperal sepsis. Most of these women 84(65.11%) were aged 31 years and above, multifarious101 (78.29%), and uncooked 98 (75.96%) cases. while 11(8.52%) of the women died. The study concluded that common risk factors were anemia; suboptimal personal hygiene as well as improper sterilization which resulted in severe health hazards such as septicemia, disseminated intravascular coagulation as well as death.

A descriptive study was conducted to assess the incidence of maternal morbidity among postnatal mothers after caesarean section and spontaneous vaginal delivery in selected hospitals of Rajasthan. A sample of 721 mothers who underwent caesarean section and 1741 mothers who had spontaneous on set of labour by with convenient sampling method. Data were collected from postnatal mothers who underwent caesarean section and who had spontaneous vaginal delivery from cases records. The study results showed that women undergoing Caesarean deliveries were more likely to have puerperal infections [95%CI, 1.1:4.5]. The study concluded to women undergoing spontaneous vaginal delivery was due to puerperal infections.

Methodology

This chapter deals with the description of research methodology adopted by the investigator. Methodology is a systematic way to solve research problems. It helps the researcher to project a blue print of the research undertaken. The methodology of research indicates the general pattern of gathering valid and reliable data and organizing the data for or the purpose of investigation.

The steps undertaken for gathering and organizing the data collected were; research approach, research design, setting, population, sample and sampling technique, criteria for selection of sample, development and description of tool, pilot study, data collection and plan for data analysis.

RESEARCH APPROACH

An **evaluative approach** was used to evaluate the effectiveness of Planned Teaching Programme on knowledge regarding postnatal complications and its management among antenatal mothers

RESEARCH DESIGN

The Research Design adopted for this study was pre experimental one group pretest-post test without control group design.

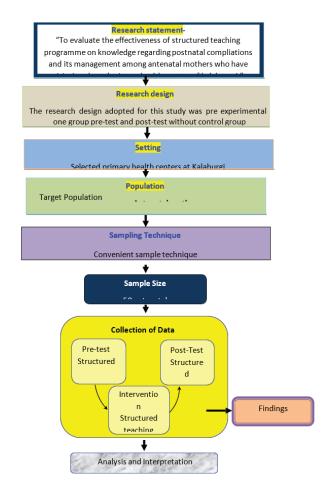


Fig 2: Schematic Representation of Research study

TABLE 1: DESCRIPTION OF THE RESEARCH DESIGN

Group	Pre-Test	Intervention	Post Test
Antenatal mothers in selected maternity hospitals at Kalburgi	postnatal complications and its	complications and its management	postnatal complications and its
	01	Х	02

Effectiveness of planned teaching programme. = O2 - O1

- O1: Assessment of knowledge on postnatal complications and its management among antenatal mothers before planned teaching programme
- O2 Conducting structured teaching programme on postnatal complications and its management among antenatal mothers
- X: Assessment of knowledge on postnatal complications and its management among antenatal mothers after planned teaching programme

Setting of the Study

The study was conducted at selected primary health centers at Kalburgi.

- Population: Population of study will be collected from antenatal mothers, who visit in selected primary health centres at Kalburgi.
- ii. Sample size and Sampling Technique: The sample size consists of 50 (fifty) antenatal mothers in selected primary health centers at Kalburgi. Convenient sampling technique was considered appropriate for the study.

Results

Statistical procedures enable researchers to summarize, organize, evaluate, interpret and communicate numerical information.

· Presentation of Data

S.N. Demographic Variable

- The data were entered in a master sheet, for tabulation and statistical processing.
- The findings were presented under the following headings.

- **Section I:** Distribution of respondents according to demographic variables.
- Section-II:

Frequency

- **A.** Component wise distribution of scores during pre-test and post-test.
- **B.** Association between pre-test and post-test knowledge scores.
- **C.** Association between knowledge levels with demographic variables.

Percentage (%)

Distribution of respondents according to demographic variables

TABLE 2: DISTRIBUTION OF RESPONDENTS ACCORDING TO DEMOGRAPHIC VARIABLES

Category

Divorced

3.14.	Demographic variable	Category	rrequericy	reiteiltage (/0)
1	Age	18-25 years	11	22%
		26-30 years	14	28%
		31-35 years	17	34%
		36+ years	8	16%
2	Gravida (Number of pregnancies)	Primigravida	14	28%
		2-3 pregnancies	21	42%
		4+ pregnancies	15	30%
3	Education Level	No formal education	7	15%
		Primary education	10	20%
		Secondary education	18	35%
		Graduate and above	15	30%
4	Occupation	Homemaker	12	25%
		Self-employed	8	15%
		Employed (private sector)	15	30%
		Employed (government sector)	10	20%
		Student	5	10%
S.N.	Demographic Variable	Category	Frequency	Percentage (%)
5	Family Income (₹/month)	Below ₹10,000	10	20%
		₹10,001-₹20,000	17	34%
		₹20,001-₹30,000	14	28%
		Above ₹30,000	9	18%
6	Residence	Urban	20	40%
		Rural	15	30%
		Semi-urban	15	30%
7	Family Type	Nuclear	25	50%
		Joint	17	35%
		Extended	8	15%
8	Marital Status	Married	45	90%
		Single	2	4%
			_	
		Widowed	2	4%

S.N.	Demographic Variable	Category	Frequency	Percentage (%)
9	Religion	Hindu	20	40%
		Muslim	17	35%
		Christian	10	20%
		Other	3	5%
10	Type of Delivery	Normal vaginal delivery	25	50%
		Cesarean section	15	30%
		Assisted delivery	10	20%

Section-II: A. Component wise distribution of scores during pre-test and post-test.

TABLE 3: DESCRIPTIVE STATISTICS OF AGE OVERALL KNOWLEDGE SCORE OF PRE TEST AND POST TEST

Age Group	Pre- test Range	Pre-test Median	Pre- test Mean	Pre- test SD	Post- test Range	Post-test Median	Post- test Mean	Post- test SD
18-25 years	7	18.0	16.91	2.47	7	31.0	29.91	2.47
26-30 years	8	13.5	14.00	2.96	8	26.5	27.00	2.96
31-35 years	8	14.0	14.06	2.79	8	27.0	27.06	2.79
36 years and above	10	13.5	14.38	3.38	10	26.5	27.38	3.38

The range, median, mean, and standard deviation of the descriptive statistics related to age groups and the cumulative knowledge score both in pre-test and post-test are depicted below. Among the age group between 18-25 years, the pre-test scores have shown the range of 7, median value is 18.0, mean score of 16.91, and a standard deviation (SD) of 2.47. This cohort had a post-test assessment variability of 7; the median was 31.0; the mean was 29.91, with a standard deviation of 2.47.

For the 26 to 30 years age cohort, the pre-test had a range of 8, the median was 13.5, the mean score was 14.00, and the SD was 2.96. The post-test for the same age group had a range of 8, a median of 26.5, a mean of 27.00, and a standard deviation of 2.96.

In the 31-35 year group, the pre-test range was 8, with a median of 14.0, mean of 14.06, and SD of 2.79, whereas in the post-test, the range was 8, the median was 27.0, the mean was 27.06, and the SD was 2.79.

In the cohort aged 36 years and older, the pre-test results exhibited a range of 10, a median value of 13.5, a mean score of 14.38, and a standard deviation of 3.38. In contrast, the post-test outcomes revealed a range of 10, a median of 26.5, a mean of 27.38, and an identical standard deviation of 3.38.

The findings suggest a enhancement in knowledge among all age categories, as evidenced by the elevated mean scores observed in the post-tests relative to the pre-test means.

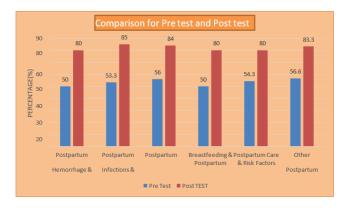


Figure 1: Comparison of pre test and post test knowledge scores.

The maximum score for the component in question was 5 for the aspect of Postpartum Hemorrhage & Complications. Mean pre-test score: 2.2 with a standard deviation of 0.8, post-test-4.0 with standard deviation 0.6. This reflects a mean percentage improvement from 44% to 80%, with a % enhancement of 36%.

In the realm of Postpartum Infections and Eclampsia, the maximum score attainable was 6. The mean pre-test score was 2.5, with a standard deviation of 1.1, while the post-test score averaged 5.1 with a standard deviation of 0.7. The percentage improved from 41.6% to 85% on the post-test, an increase of 43.4%.

The Postpartum Mental Health aspect had a maximum score of 5. The pre- test mean score was 2.1 with a standard deviation of 0.9, while the post-test mean was

4.2 with a standard deviation of 0.5. This led to an improvement in mean percentage from 42% to 84%, indicating a 42% enhancement.

For the Breastfeeding & Postpartum Recovery element, it had a maximum of 6, and in the pre-test phase, the mean was 2.6 with a standard deviation of 1.0. In the posttest phase, it increased to 4.8 with a standard deviation of 0.6. This element also showed a mean percentage increase from 43.3% to 80%, reflecting a 36.7% improvement.

Postpartum Care & Risk Factors had the maximum score of 7. The pre-test score was 2.7, with a standard deviation of 0.9, while the post-test score significantly increased to 5.6, with a standard deviation of 0.8. The

percentage increased from 38.6% to 80%, which means an improvement of 41.4%.

The last aspect was Other Postpartum Complications, which had a maximum of 6. The pre-test mean was 2.4 ± 0.8 while the post-test mean was 5.0 ± 0.7 . Percentagewise, it improved from 40% in the pre-test to 83.3% in the post-test, which is a 43.3% improvement.

Conclusively, the results indicate a consistent increase in knowledge for all the domains after the intervention, ranging from 36% to 43.4%. This would mean that the educational program designed was effective in enhancing the knowledge of the participants about postpartum care.

TABLE 5: ASPECT WISE ANALYSIS FOR POST TEST KNOWLEDGE SCORES

Aspect	Maximum Score	Mean Score	Standard Deviation (SD)	Median Score	Range (Min-Max)	Mean Percentage (%)
Postpartum Hemorrhage & Complications	5	4.0	0.6	4	3-5	80%
Postpartum Infections & Eclampsia	6	5.1	0.7	5	4-6	85%
Postpartum Mental Health	5	4.2	0.5	4	3-5	84%
Breastfeeding & Postpartum Recovery	6	4.8	0.6	5	4-6	80%
Postpartum Care & Risk Factors	7	5.6	0.8	6	4-7	80%
Other Postpartum Complications	6	5.0	0.7	5	4-6	83.3%

The post-test knowledge scores of the various elements of postpartum care were analyzed, indicating an overall significant improvement for each category. In the

category of Postpartum Hemorrhage & Complications, the maximum achievable score was 5; the participants scored on average 4.0 (SD = 0.6). The median for this category was 4, with scores ranging from 3 to 5, thus obtaining a calculated mean percentage of 80%.

In the domain of Postpartum Infections and Eclampsia, the highest score a participant could receive was 6; the mean score for participants was 5.1 (SD = 0.7). The median scores recorded were 5, ranging between 4 and 6. The mean percentage achieved in this domain was 85%, reflecting very good knowledge of the topic.

In the domain of the Postpartum Mental Health, the maximum score was 5 and the mean score was 4.2 (SD = 0.5).

The mean score received was 4 with a range from 3 to 5 and a mean percentage of 84%. Similarly, Breastfeeding and Postpartum Recovery had the highest score of 6 with a mean score of 4.8 (SD = 0.6), median score of 5, scores ranged from 4 to 6, which mean percentage scored 80%. In regard to Postpartum Care and associated Risk Factors, the maximum observable score was 7, the mean score was 5.6 with an SD of 0.8, while the median score observed was at 6, scores ranging between 4 and 7, thus providing a percentage of 80% on average. Finally, the dimension for Other Postpartum Complications presented a maximum of 6 points. The average score of the respondents was 5.0 (SD = 0.7), having a median of 5 and a score ranging between 4 and 6 points, reaching an average percentage of 83.3%.

Overall, the results of the posttest show a significant improvement; the participants scored higher mean percentages in all aspects of postpartum care.

B. Association between pre-test and post-test knowledge scores.

TABLE 6: COMPARISON BETWEEN DIFFERENT ASPECT OF KNOWLEDGE FROM PRE TEST AND POST TEST

Aspect	Max Score	Pre-Test Mean (SD)	Post-Test Mean (SD)	Pre Test SD	Post Test SD	Pre-Test Median	Post- Test Median	Pre-Test Range	Post- Test Range	Pre-Test %	Post- Test %	Enhancement %
Postpartum Hemorrhage & Complications	5	2.5	4.0	0.7	0.6	2	4	1 - 4	3 - 5	50%	80%	30%

Aspect	Max Score	Pre-Test Mean (SD)	Post-Test Mean (SD)	Pre Test SD	Post Test SD	Pre-Test Median	Post- Test Median	Pre-Test Range	Post- Test Range	Pre-Test %	Post- Test %	Enhancement %
Postpartum Infections & Eclampsia	6	3.2	5.1	0.8	0.7	3	5	2 - 5	4 - 6	53.3%	85%	31.7%
Postpartum Mental Health	5	2.8	4.2	0.6	0.5	3	4	2 - 4	3 - 5	56%	84%	28%
Breastfeeding & Postpartum Recovery	6	3.0	4.8	0.7	0.6	3	5	2 - 5	4 - 6	50%	80%	30%
Postpartum Care & Risk Factors	7	3.8	5.6	0.9	0.8	4	6	2 - 6	4 - 7	54.3%	80%	25.7%
Other Postpartum Complications	6	3.4	5.0	0.7	0.7	3	5	2 - 5	4 - 6	56.6%	83.3%	26.7%

C. Association between knowledge levels with demographic variables.

TABLE 7: ANALYSIS OF ASSOCIATION BETWEEN SELECTED DEMOGRAPHIC VARIABLES AND OVERALL PRE TEST KNOWLEDGE SCORES

Demographic Variable	Chi-square (χ²) Value	df	p-value	Inference
Age	3.56	2	0.168	Not Significant
Education Level	9.48	3	0.024	Significant
Gravida (No. of Pregnancies)	1.97	1	0.388	Not Significant
Family Income	6.29	3	0.043	Significant
Residence	2.45	2	0.294	Not Significant
Family Type	4.23	2	0.121	Not Significant
Marital Status	0.86	1	0.652	Not Significant
Occupation	7.32	3	0.039	Significant
Type of Delivery	2.89	2	0.157	Not Significant
Religion	1.22	2	0.541	Not Significant

The table above provides the association between selected demographic variables and the overall pre-test knowledge scores of respondents. Based on the Chisquare test, three demographic variables—education level (p=0.024), family income (p=0.043), and occupation (p=0.039)—show significant associations with pre-test knowledge scores. This suggests that respondents' educational background, income level, and occupation significantly influence their initial knowledge levels. Other variables, such as age, gravida, family type, marital status, and religion, do not show a statistically significant association with pre-test scores.

These findings highlight the impact of socioeconomic and educational factors on respondents' baseline knowledge before the intervention, providing insights into which demographic groups might benefit the most from educational programs.

TABLE 8: ANALYSIS OF ASSOCIATION BETWEEN SELECTED DEMOGRAPHIC VARIABLES AND OVERALL POST TEST KNOWLEDGE

Demographic Variable	Chi-square (χ²) Value	df	p-value	Inference
Age	2.87	2	0.238	Not Significant
Education Level	10.62	3	0.014	Significant
Gravida (No. of Pregnancies)	1.23	1	0.542	Not Significant
Family Income	7.81	3	0.035	Significant
Residence	3.14	2	0.210	Not Significant
Family Type	2.91	2	0.231	Not Significant
Marital Status	1.34	1	0.498	Not Significant

Demographic Variable	Chi-square (χ²) Value	df	p-value	Inference
Occupation	8.45	3	0.032	Significant
Type of Delivery	1.98	2	0.372	Not Significant
Religion	1.85	2	0.604	Not Significant

The table above analyzes the association between selected demographic variables and the overall posttest knowledge scores of respondents. The **Chi-square test** shows significant associations between post-test scores and three demographic variables: **education level** (p=0.014), family income (p=0.035), and occupation (p=0.032). This suggests that after the intervention, respondents' educational background, income level, and occupation continue to influence their knowledge levels.

Other variables, including age, gravida, family type, marital status, and religion, show no significant association with the post-test knowledge scores, indicating that these factors did not have a statistically significant impact on the knowledge improvement following the intervention. The significant association with education and occupation emphasizes the role of these factors in knowledge acquisition during the educational intervention.

CONCLUSION

This chapter presents the conclusions drawn, implications, limitations, suggestions and recommendations. The following conclusions were drawn on the basis of the findings of the study.

In this study, it was found that there was a significant improvement in the knowledge of antenatal mothers about postnatal complications and their management after the administration of the structured teaching program. From the results obtained, it is evident that the knowledge of the respondents regarding the key areas of postnatal care was very less and thereby improved significantly after the teaching program reflected by the post-test scores of the subjects. It also brought out that the knowledge scores are significantly associated with the selected demographic variables, thus indicating the use of tailored educational strategies. A structured teaching program was a useful tool to fill in the knowledge gaps, thus reiterating the incorporation of such educational intervention in routine antenatal care for improved maternal and new born health outcomes.

IMPLICATIONS OF THE STUDY

The findings of the study have implications in the field of nursing practice, nursing education, nursing administration and nursing research.

IMPLICATIONS FOR NURSING EDUCATION

Incorporation of Teaching Programs: The present study has advocated the incorporation of a structured teaching program regarding postnatal complications and their management within the nursing curriculum. This shall facilitate the ability of future nursing staff to educate expectant mothers regarding risks for postnatal complications and how these could be prevented or minimized.

The focus needs to be on the patient's education. Thus, the nursing education programs should emphasize the nurses' role concerning the patients' education, especially in maternal and child health. The positive impact of the structured teaching program proves that effective communication and education could have a great positive effect on the patients.

Training Programs for Nurses: Establishing multidimensional training programs with a concentration on teaching methodologies regarding patient education would add to the nurses' ability to deliver information in a manner that the mother realizes and identifies the importance of postnatal care.

IMPLICATIONS ON CLINICAL PRACTICE:

Improvement of Patient Outcome: The study has identified that educational interventions significantly impact maternal knowledge, which may lead to an improvement in the health outcomes of both the mother and the new born. Healthcare providers should offer a structured teaching program as a routine for antenatal and post-natal cares to enable mothers to recognize and manage any possible complications.

Preventing postnatal complications: Focused education regarding postnatal complications, such as hemorrhage, infection, and mental health, enables nurses to inform mothers about the early signs of complications so that worse outcomes can be averted.

Patient-centred Care: Nurses and midwives can add person-centred education sessions according to each mother's specific needs and levels of knowledge. This study has found that certain socio-demographic factors predispose individuals to variations at the baseline level of knowledge and, therefore, interventions will have to be planned with awareness of specific needs.

IMPLICATIONS FOR PUBLIC HEALTH:

Maternal Health Campaigns: The study stresses the importance of public health campaigns for maternal health, particularly postnatal care. Design health promotion activities that increase awareness about postnatal

complications to capture a wider audience in rural and underserved communities. Reducing Maternal Mortality and Morbidity: Since critical postnatal complications like hemorrhage and eclampsia are included in the structured teaching program, improved knowledge can have a positive impact on reducing maternal mortality and morbidity rates. Thus, maternal health education is an essential priority intervention that governments and healthcare organizations must pursue in order to bring improvement in public health outcomes.

Community-based health education: According to the outcome of this intervention, it is recommended that community health workers, including professional nurses and midwives, should be trained in conducting the structured education of mothers in community settings such as health camps, antenatal clinics, and during home visits. These will fill up gaps in healthcare access and provide sustained support to mothers.

IMPLICATIONS FOR NURSING RESEARCH:

Further Studies on Educational Interventions: This now sets the background for further studies into the long-term gains that structured teaching programs could realize about maternal and neonatal outcomes. Other future studies might consider other modes of delivery for education, such as the use of digital platforms, and assess their effectiveness in improving maternal knowledge.

Conflict of Interest: None
Ethical Clearance: Done

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