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To Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Self-Care Manageme of Pregnancy Induced Hypertension among Antenatal Mothers Attending the Antenatal Clinic in Selected Hospital of Srinagar Kashmir

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A B S T R A C T

Hypertensive conditions during pregnancy contribute greatly to maternal morbidity and mortality around the world. Hypertension complicates approximately one out of every ten pregnancies. Ten million women develop pre-eclampsia each year around the world. Worldwide about 76,000 pregnant women die each year from pre-eclampsia and related hypertensive disorders. In developing countries, a woman is seven times as likely to develop preeclampsia as a woman in a developed country. The increasing prevalence of the disease and hereby also increasing social costs combined with the fact that the disease is associated with increased morbidity and mortality of antenatal mothers emphasizes the importance of effective care. This study is aimed at assessing the effectiveness of structured teaching programme on self-care management of antenatal mothers with mild pregnancy induced hypertension.***Title of the study*:**"A Study To Assess The Effectiveness Of Structured Teaching Programme on Knowledge Regarding Self-Care Management Of Pregnancy Induced Hypertension Among Antenatal Mothers Attending The Antenatal Clinic In Selected Hospital Of Srinagar Kashmir. ***Objectives*: 1)** To assess the existing knowledge of antenatal mothers regarding self-care management of pregnancy induced hypertension.**2)** To assess the knowledge regarding self-care management of pregnancy induced hypertension among antenatal mothers after the implementation of structured teaching programme.**3)** To compare the pre-test and post-test knowledge scores regarding self-care management of pregnancy induced hypertension among antenatal mothers**. 4)** To determine the association of pre-test knowledge score regarding self-care management of pregnancy induced hypertension among antenatal mothers with their selected demographic variables i.e., age, education, occupation, type of family, residence, Family Income per month, gravidity. ***Hypothesis***:The Hypotheses are tested at a 0.05 level of significance**: 1)** Research hypothesis (H_1): There is significant difference between the mean pre-test and post- test knowledge scores of antenatal mothers regarding self-care management of pregnancy induced hypertension at $p \leq 0.05\%$ level of significance. **2)** Research hypothesis (H_2): There is significant association of pre-test knowledge scores of antenatal mothers with their selected demographic variables i.e. age, education, occupation, type of family, residence, gravidity, at $p \leq 0.05\%$ level of significance.***Methods*:** A quantitative approach with pre-experimental one group pre-test post-test design was used for the study. Sample size was 60 subjects with pregnancy induced hypertension, who attended the Antenatal clinic of Obstetric and Gynaecological of Sheri-I-Kashmir Institute of Medical Sciences Srinagar, were selected by using Purposive Sampling technique. Pre-test was conducted to assess the existing knowledge of the subjects by structured interview schedule, followed by structured teaching programme. Post test was conducted on 7th day by using same structured interview schedule. The data collected were analysed by descriptive &inferential statistics. ***Results***: Out of 60 subjects majority (70%) were in the age

group of 20-30 years, (61.6%) were educated. Majority of subjects (68%) were house wives. Majority of subjects (63.3%), had family income/month <Rs 20,000. Majority of the subjects (60%) were urban dwellers. Majority of the subjects (67%) were from nuclear family. Majority of subjects (60%) were primi-gravidea. overall mean post- test knowledge score i.e. (31.13) was apparently higher than mean pre-test knowledge score (15.33) ($p \leq 0.001$). The standard deviation of pre-test was (4.213) higher than and post-test (2.960) respectively. A significant association was found between pre-test knowledge score with three demographic variables i.e., education, occupation and family income per month ($p \leq 0.000$, 0.027 and 0.001) and no significant association was found between pre-test knowledge score with Age, residence, type of family and gravidity (0.170, 0.195, 0.469, and 0.683 respectively. ***Interpretation and conclusion*:** The study showed that there was a significant improvement in the knowledge scores after the administration of structured teaching programme. Hence it can be concluded that the structured teaching programme was effective in improving the knowledge of antenatal mothers regarding self-care management of pregnancy induced hypertension.
Keywords: Knowledge, antenatal mothers, PIH (pregnancy induced hypertension), structured teaching programme.

BACKGROUND OF THE STUDY

Pregnancy and childbirth are special events in women's lives and indeed, in the lives of their families. This can be a time of great joy and joy full anticipation. It can also be a time of fear, suffering and even death.

Singh M 2001 [1] Even though pregnancy is not a disease; but a normal physiological process, it is associated with certain risks to the health and survival both for mother and neonates, pregnancy induced hypertension is one among those complications.

Higgins and de Sweit, 2001; Medina Lomeli and Median Castro, 2005 [2]. Gestational hypertension is also called as pregnancy induced hypertension. In gestational hypertension there is appearance of hypertension after 20 weeks gestation without proteinuria and subsides after delivery within 12 weeks The term gestational hypertension or pregnancy induced hypertension (PIH) and pre-eclampsia are clinically more often considered as same with reference to management. The transition from pregnancy induced hypertension to pre eclampsia is ill defined so both are considered as one for management. But prognosis for pregnancy induced hypertension is better than pre-eclampsia.

Pregnancy-induced hypertension (PIH) known as toxaemia or preeclampsia is a form of high blood pressure (BP) in pregnancy. It is one of the leading causes of mortality and morbidity among pregnant women. As stated by the WHO, World Health Report (2005) "Make Every Mother and Child Count," the major causes of maternal deaths are severe bleeding/haemorrhage (25%), infections (13%), unsafe abortions (13%), eclampsia (12%), obstructed labour (8%), other direct causes (8%), and indirect causes (20%) [3].

The current Maternal Mortality Rate (MMR) of India is 178 per 100000 live births. The situation is worst in Assam and Uttar Pradesh. According to a survey released by Annual Survey Bulletin 2010-2011 in August 2011, the MMR of Faizabad division is 451 per lakh which is highest in the country, while Kerala has the lowest MMR of 81 per lakh. The national goal is to achieve the MMR of 109 per lakh by 2015 [4].

Hypertensive conditions during pregnancy contribute greatly to maternal morbidity and mortality around the world [5]. In the United States, preeclampsia accounts for 15% to 17.6% of maternal deaths [6]. Hypertension complicates approximately one out of every ten pregnanciesTen million women develop preeclampsia each year around the world. Worldwide about 76,000 pregnant women die each year from preeclampsia and related hypertensive disorders. And, the number of babies who die from these disorders is thought to be on the order of 3 500,000 per annum [7]. In developing countries, a woman is seven times as likely to develop preeclampsia as a woman in a developed country [8].

Pswarayi (2010) [9] pregnancy-induced hypertension occurs in about 5-8% of all pregnancies. Although the cause of PIH is unknown, certain factors are known to increase the risk of PIH, such risk factors include that PIH mostly affects young women with a first pregnancy, pregnant women younger than 20 years and those older than 40 years, women with multiple foetuses, pregnant diabetics, pregnant women with pre-existing hypertension or previous episodes of preeclampsia or PIH and pregnant women with pre-existing renal disease.

Vest AR, Cho LS (2012) [10] the complications of uncontrolled high blood pressure during pregnancy affects multiple organ systems and can be detrimental to both mother and foetus. Maternal complications of preeclampsia

include seizure activity, placental abruption, stroke, HELLP syndrome (hemolysis, elevated liver enzymes and low platelets), liver hemorrhage, pulmonary edema, acute renal failure, and disseminated intravascular coagulation (DIC).

Vreeburg SA, *et al*., (2004) [11] identified the factors associated with adverse pregnancy outcomes among women with hypertension during pregnancy. The perinatal data on 70386 live births were used in multivariate analysis. The risk for the four (neonatal, maternal, foetal, and infant) morbidities were all increased among women with hypertension compared with normotensive women. Among women with hypertension, older maternal age, null parity are at risk for more complications like operative deliveries and preterm birth, the Asian women, smokers and unemployed women had an increased risk for SGA (small for gestational age).

STATEMENT OF PROBLEM:

"A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Self- Care Management Of Pregnancy Induced Hypertension Among Antenatal Mothers In Selected Hospital Of Srinagar".

OBJECTIVES OF THE STUDY:

1. To assess the existing knowledge of antenatal mothers regarding self-care management of pregnancy induced hypertension.
2. To assess the knowledge regarding self-care management of pregnancy induced hypertension among antenatal mothers after the implementation of structured teaching programme.
3. To compare the pre-test and post-test knowledge scores regarding self-care management of pregnancy induced hypertension among antenatal mothers.
4. To determine the association of pre-test knowledge score regarding self-care management of pregnancy induced hypertension among antenatal mothers with their selected demographic variables i.e., age, education, occupation, type of family,residence, Family Income per month,gravidity.

HYPOTHESIS:

The Hypotheses are tested at a 0.05 level of significance

- Research hypothesis ($H_{1)}$: There is significant difference between the mean pre-test and post- test knowledge scores of antenatal mothers regarding self-care management of pregnancy induced hypertension at $p \leq 0.05\%$ level of significance.
- Research hypothesis ($H_{2)}$: There is significant association of pre-test knowledge scores of antenatal mothers with their selected demographic variables i.e. age, education, occupation, type of family, residence, gravidity, at $p \leq 0.05\%$ level of significance.

ASSUMPTIONS:

The study assumes that:

- Antenatal mothers may have previous knowledge about self-care management of pregnancy induced hypertension
- Knowledge on self-care management of pregnancy induced hypertension can be evaluated.
- Structured teaching Programme is an accepted strategy for enhancing the level of knowledge among antenatal mothers**.**

DELIMITATIONS:

- The study will be limited to the antenatal mothers with PIH attending the antenatal clinic Obstetrical and Gynecological Department of SKIMS Soura
- Those who are willing to participate.

OPERATIONAL DEFINITIONS:

Antenatal Mothers: In this study it refers to selected antenatal mothers diagnosed with mild Pregnancy Induced Hypertension (this includes cases of raised blood pressure of more than 140/90 mm Hg but less than 160 systolic or 110 diastolic without significant proteinuria.

Structured Teaching Programme: Structured Teaching Programme (STP) refers to a systematically developed instructional programme designed for antenatal mothers self-care knowledge on pregnancy induced hypertension to provide information regarding antenatal care, rest and sleep, exercise, dietary management, adhering to prescribed medication, and identification of warning signs of pregnancy induced hypertension.

Self-Care: In this study, it refers as the antenatal mothers ability to take care of themselves for diet, drug, exercise, regular check- and decide on responsible actions to take, so as to control blood pressure in PIH.

Self-Care Management: In this study, it refers to range of activities that antenatal mother who develops hypertension perform to promote her well-being such as adhering to prescribed diet, medications, exercise, rest.

Knowledge: In this study, it refers responses given by the antenatal mother regarding pregnancy induced hypertension and its self-care management as to identify with the help of structure interview schedule prepared by the investigator.

RESEARCH METHODOLOGY:

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically [12].

The present study aimed to assess the effectiveness of structured teaching programme on knowledge regarding self-care management of Pregnancy Induced Hypertension among the antenatal mothers attending the Antenatal clinic of SKIMS Soura Srinagar Kashmir.

RESEARCH APPROACH:

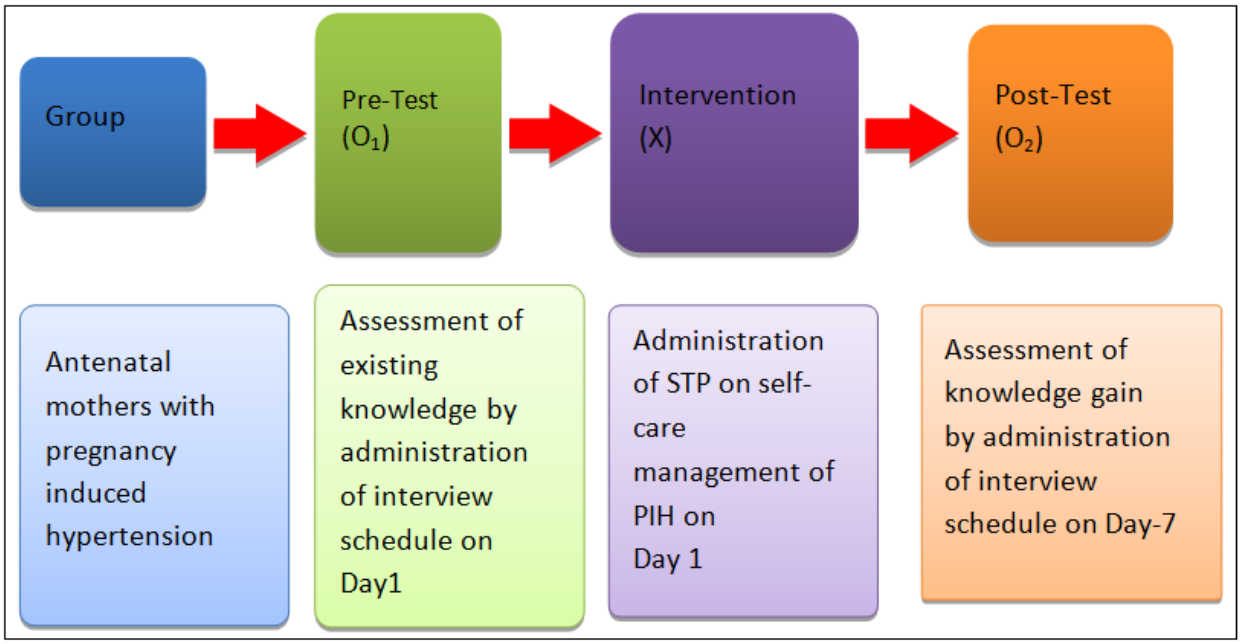
In order to accomplish the main objective of assessing the effectiveness of structured teaching programme on knowledge regarding self-care management of Pregnancy Induced Hypertension among the antenatal mothers, a quantitative approach was adopted.

A quantitative research is concerned with measurement of phenomena, characteristics, concepts or things. It seeks to describe how much of a characteristic is present. This research method is used to describe variables, examine relationships among variables and determine cause and effect interactions between variables [13].Its goal is to assess the effectiveness of structured teaching programme on self- care management of Pregnancy Induced Hypertension among the antenatal mothers in the Antenatal clinic of SKIMS Soura Srinagar

RESEARCH DESIGN

The research design is the overall plan for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process.

Pre-experimental one group pre-test post- test design was adopted for this study. The pre-test was carried out for assessing the knowledge of the antenatal mothers on self-care management of pregnancy Induced Hsypertension by structured interview schedule and individual structured teaching programme was administered on the same day. Post test was conducted on the 7th day following the pre-test. The design did not include any control group.



VARIABLES UNDER STUDY:

Dependent Variable: A dependant variable is what you measure in the experiment and what is affected during the experiment. The dependant variable responds to the independent variable. Therefore the dependant variable is the

presumed effect; in the present study the dependent variableis "knowledge gain of antenatal mothers regarding self-care management of pregnancy induced hypertension".

Independent Variable: An independent variable is a factor that can be varied or manipulated in an experiment. It is usually what will affect the dependant variable. Therefore the independent variable is the presumed cause; in the present study independent variable is the Structured Teaching Programme on self-care management pregnancy induced hypertension.

Demographic Variables: Demographic variables are age, education, occupation, familyincome per month, type of family, residence, and gravidity.

THE SETTING:

The investigator selected Antenatal clinic of Obstetrics and Gynaecological Department of Sheri-i-Kashmir Institute of Medical Sciences Soura Srinagar to conduct the study. As it is the part of tertiary care institute in Srinagar, Jammu and Kashmir. It is an educational institution cum research centre. Management and staff are very much concerned with the quality care of patients.

POPULATION:

Population is the total number of antenatal mothers who meet the criteria that the researcher has established for a study from whom subjects will be selected and to whom the findings will be generalized [13].

In this study population consisted of antenatal mothers with pregnancy induced hypertension, who attended the Antenatal clinic of Obstetric and Gynaecological of Sheri-I-Kashmir Institute of Medical Sciences Srinagar, during the time of data collection.

SAMPLE AND SAMPLING TECHNIQUE:

Sample is a subset of a population selected to participate in a research study. Sampling is the process of selecting a portion of the population to represent the entire population [13].

In this study the sample consisted of 60 of antenatal mothers with pregnancy induced hypertension, who attended the antenatal clinic of Obstetric and Gynaecological Department of Sheri-I-Kashmir Institute of Medical Sciences Srinagar.

In the present study purposive sampling technique was used to select the sample. Purposive sampling is a type of non-probability sampling method in which the researcher selects participants for the study on the basis of personal judgement about which one will be more representative or productive, also referred to as judgemental sampling [13].

DATA COLLECTION TOOLS AND TECHNIQUES:

Selection of the tool*:-*

Data collection tools are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem. A structured interview schedule was selected for the study to assess the knowledge of antenatal mothers on self-care management of pregnancy induced hypertension among. It was considered as the most appropriate tool to elicit response from the antenatal mothers.

Development of the tool:

The tool developed the investigator was based on:

- The objectives and conceptual framework
- Review of literature from books, journals, periodicals, unpublished research studies, published studies etc., which provided adequate content area and information.
- Opinion and suggestions from guide, experts from Mader-E-Maharban Institute of Nursing Sciences & Research. SKIMS Srinagar.
- Consultation and discussion with experts from of Obstetric and Gynaecological department and community medicine department of SKIMS Soura Srinagar.
- Investigator's own personnel experience in caring antenatal mothers with pregnancy induced hypertension

Description of Tool:

The interview schedule consisted of two sections:-

Section A: Comprises of Demographic data of antenatal mothers with mild pregnancy induced hypertension. It includes 7 items, viz. Age, education, occupation, residence, type of family, family income per month, gravidity.

Section B: Comprises of 40 items related to knowledge on self-care management of pregnancy induced hypertension among antenatal mothers. The items were categorized under the following seven areas; General information, Antenatal check-ups, Rest and sleep, Exercise, Dietary modification, Medication, Identification of warning signs (Annexure XV).

Scoring pattern:

The maximum score was 40 one score was allotted to each correct answer and zero for wrong response. To interpret level of knowledge the scores were distributed as follows;

- Inadequate knowledge ≤ 50%
- Moderate knowledge 51 – 75%
- Adequate knowledge > 75%

Development of criteria checklist:

A criteria rating scale for validation of tool was developed. It comprised of 7 items on demographic profile, 40 items on questions related to knowledge on self-care of pregnancy induced hypertension among antenatal mothers. The criteria for rating scale had 3 categories like, "strongly agree", "Agree", and "Disagree" remarks/suggestion columns to find out the appropriate and relevance of the content (Annexure VIII).

Description of Structured Teaching Programme:

A Structured Teaching Programme was prepared with the following areas:

- **Pregnancy Induced Hypertension** -, definition, classification, signs and symptoms, risk factors, pre-disposing factors,
- Self-Care Management of Pregnancy Induced Hypertension During Antenatal Period
  - Regular visit and check up
  - Periodic rest and adequate sleep
  - Proper exercises
  - Dietary modification
  - Regular medicine intake
  - Identification of warning signs

Development of criteria checklist:

A criteria rating scale (Annexure IX) was prepared to validate Structured Teaching Programme. It included:

- Formulation of objectives
- Selection of content
- Organization of content
- Teachings aids
- Feasibility and practicability.

TESTING OF THE INSTRUMENT

Content Validity of the Tool and Structured Teaching Programme:

Content validity refers to the degree to which an instrument measures what it is supposed to measure [13].

The prepared tool along with the objectives, blueprint, operational definitions, hypothesis, structured teaching programme, and criteria checklists was submitted to 13 experts Annexure IV. Three experts were from Obstetrics and Gynaecological department and community Medicine department of SKIMS, Srinagar and the rest of experts from the field of nursing.

There was a 100% agreement on all items, but suggestions were given to modify and use simple words of few items like 'hypertension' was changed to high blood pressure. Some of the items were deleted from section B, like do you know real cause of pregnancy induced hypertension is not known Based on the suggestions given by the experts, necessary modifications were done. The final tool consisted of demographic profile-7 items and knowledge assessment-40 items. The tool and structured teaching programme was translated into Kashmiri by language expert.

Try out of tool:

Try out of the interview schedule was carried out on 30/04/15 to 02/05/15 at Antenatal clinic of Obstetrics and Gynaecological department of SKIMS Soura Srinagar on five subjects to check the clarity, relevance & ambiguity of items and also to check the feasibility & practicability of the tool. It was found that the items of the interview schedule were clear, understandable & unambiguous. The average time taken by the interviewer to complete the interview of each

subject was 25-30 minutes. There were 42 items in the tool among which two (2) items were not understandable to the antenatal mothers, hence were deleted and also 2 items were modified.

RELIABILITY OF THE TOOL:

Reliability is defined as the extent to which the instrument yields the same results on repeated measures. It is then concerned with consistency, accuracy, stability and homogeneity[13].

The reliability of the tool was established by administering the tool to 6 subjects, attended the antenatal clinic of Obstetric and Gynaecological Department of Sheri-I-Kashmir Institute of Medical Sciences Srinagar, after obtaining permission from the hospital authorities. Reliability was established by using the spearman –Brown Prophecy Formula which was **0.804**, indicates that the tool was highly reliable.

ETHICAL CONSIDERATION:

Prior permission was obtained from the concerned authorities of MMINSR SKIMS SOURA Srinagar to conduct the study and also synopsis was presented to IEC Institute Ethical and Research committee of SKIMS SOURA SRINAGAR. Permission was also accorded from the head of the concerned area (Head of Department of Obstetrics and Gynaecological Department of Sheri-i-Kashmir Institute of Medical Sciences Srinagar. The researcher subjects were informed that the confidentiality of data will be maintained.

Analysis

SECTION I

DESCRIPTION OF DEMOGRAPHIC VARIABLES OF SUBJECTS:

Table 1: Frequency and percentage distribution of subjects with respect to age, N=60

Age (in years)	Frequency	Percentage (%)
<20 y	3	5.0
20-30 y	42	70.0
>30 y	15	25.0

The data presented in Table-1 shows that majority of the subjects i.e. 42 (70%) were in the age group of 20-30 years, 15 (25%) were in the age group of above 30yrs, and only 3 (5%) were in the age group ≤20yrs.

Table 2: Frequency and percentage distribution of subjects with respect to education, N=60

Education	Frequency	Percentage (%)
Illiterate	23	38.3
Secondary	23	38.3
Graduate and above	14	23.3

The data presented in Table 2 shows that majority of subjects i.e. 23(38.3%) were illiterates, 23(38.3%) had educational qualification up to secondary and only 14 (28.3%) of subjects were graduate and above.

Table 3: Frequency and percentage distribution of subjects with respect to occupation, N=60

Occupation	Frequency	Percentage (%)
Employee	12	20.0
Skilled	7	11.7
House Wife	41	68.3

The data presented in Table 3 shows that majority of subjects 41(68%) were house wives, 12(20%) of subjects were skilled workers and only 7(12%) of subjects were employee.

Table 4: Frequency and percentage distribution of subjects with respect to family income per month,N=60

Family Income/Month	Frequency	Percentage (%)
≤Rs. 20,000	38	63.3
Rs. 20,001 to Rs. 30,000	17	28.3
>Rs. 30,000	5	8.3

The data presented in Table4 shows that majority of subjects 38(63.3%) had family income per month ≤20000 Indian Rupees, 17 (33.3%) of subjects had family income per month in range of 20001-30,000, and only 5(8.3%) of subjects had family income per month>30,000 Indian Rupees.

Table 5: Frequency and percentage distribution of subjects with respect to place residence, N=60

Residence	Frequency	Percentage (%)
Rural	24	40.0
Urban	36	60.0

The data presented in Table 5 shows that majority of subjects 46(60%) were urban dwellers and only 24(40%) of subjects were rural dwellers.

Table 6: Frequency and percentage distribution of subjects with respect to type of family, N=60

Type of Family	Frequency	Percentage (%)
Joint	20	33.3
Nuclear	40	66.7

The data presented in table 6 shows that majority of subjects 46(67%) were from nuclear family and only 24(33%) of subjects were from nuclear family

Table 7: Frequency and percentage distribution of subjects with respect to gravidity, N=60

Gravidity	Frequency	Percentage (%)
Primi-gravidae	40	66.7
Multi-gravidae	20	33.3

The data presented in table 7 shows that majority of subjects i.e. 40(67%) were primigravida and only 20(33%) were Multi-gravida.

ASSESSMENT OF KNOWLEDGE LEVEL OF SUBJECT KNOWLEDGE REGARDING SELF-CARE MANAGEMENT OF PREGNANCY INDUCED HYPERTENSION BEFORE AND AFTER IMPLEMENTATION OF STRUCTURED TEACHING PROGRAMME:

Table 8: Level Of Knowledge Regarding Self-Care Management Of Pregnancy Induced Hypertension Among Subjects Before Administration Of Structured Teaching Programme, N=60

Knowledge Level	Pre Test	
	Frequency	Percentage (%)
Inadequate knowledge (≤50%)	53	88.3
Moderate knowledge (51-75%)	7	11.7
Highly Adequate knowledge (≥75%)	Nil	0.0

The data presented in Table 9 reveals that in pre-test knowledge score, majority of subjects 53(88.3%) had inadequate knowledge, 7(11.7%) had moderate knowledge and none of the subjects (0%) had adequate knowledge.

Table 1: Level of knowledge regarding self-care management of pregnancy induced hypertension among subjects after administration of structured teaching programme, N=60

Knowledge Level	Post Test	
	Frequency	Percentage (%)
Inadequate knowledge (≤50%)	Nil	0.0
Moderate knowledge (51-75%)	18	30
Adequate knowledge (≥75%)	42	70

The data presented in Table 10 reveals that in post-test knowledge score of subjects, majority of them 42(70%) had acquired adequate knowledge, 18(30%) had moderate knowledge and none of them 0(0%)had inadequate knowledge.

COMPARISON OF PRE-TEST AND POST-TEST KNOWLEDGE SCORES OF SUBJECTS

Table 2: Comparison between frequency and percentage distribution of knowledge scores of subjects regarding self-care management of pregnancy induced hypertension before and after the implementation of structured teaching program, N=60

Knowledge Level	Pre Test		Post Test	
	Frequency	Percentage (%)	Frequency	Percentage (%)

Inadequate Knowledge (≤50%)	53	88.3	Nil	0.0
Moderate Knowledge (51-75%)	7	11.7	18	30
Adequate Knowledge (≥75%)	Nil	0.0	42	70

In the Table 11 shows distribution of subjects according to their pre-test and post-test knowledge scores. The pre-test was conducted by administering a structured interview schedule. In which majority of subjects 53(88.3%) of them had inadequate knowledge, 7(11.7%) of them had moderate knowledge and none of them (0%) had adequate knowledge. The post-test was administered after the structured teaching programme. The post-test knowledge scores show a significant difference i.e., none of them were having inadequate knowledge, 18(30%) were having moderate knowledge and majority of them 42(70%) had acquired adequate knowledge from the structured teaching programme on self–care of management of pregnancy induced hypertension.

COMPARISON OF PRE-TEST AND POST-TEST KNOWLEDGE SCORES OF SUBJECTS REGARDING SELF-CARE MANAGEMENT OF PREGNANCY INDUCED HYPERTENSION

To test the statistical difference between pre-test and post-test knowledge score null hypothesis was framed.

Null Hypothesis (H_0):- There is no difference between mean pre-test & post-test knowledge score of subjects regarding self-care management pregnancy induced hypertension at p≤0.05% level of significance.

Table 3: Comparison of overall Pre-test and Post-test Knowledge Scores by using p-value

Knowledge Score	Mean	Standard Deviation	Mean Difference	p value	Inference
PreTest	15.33	4.21	15.80	<0.001	Significant
Post Test	31.13	2.96			

The above Table 12 shows the comparison between the pre-test and post-test knowledge score of subjects regarding self-care management of PIH. It is evident from the table that mean post-test knowledge score **(31.13)** was higher than the mean pre-test knowledge score (**15.33)** i.e. the mean difference was **15.80** and p-value comes out **<0.001** which indicates that there is high significant difference between mean pre- test and post-test knowledge score. So there is enough evidence that this change occurred due to intervention and not by chance.

Hence the null hypothesis (H_0) is rejected and research hypothesis (H_1) is accepted which states; that there is significant difference between mean pre- test and post-test knowledge score of subjects regarding self-care management of pregnancy induced hypertension at p≤0.05% level of significance. Therefore it can be interpreted that the structured teaching programme was effective in improving the knowledge of subjects regarding self-care management of pregnancy induced hypertension.

DESCRIPTIVE STATISTICS OF KNOWLEDGE SCORES OF SUBJECTS REGARDING SELF- CARE MANAGEMENT OF PREGNANCY INDUCED HYPERTENSION

MEAN, MEDIAN, RANGE AND STANDARD DEVIATION OF PRE-TEST AND POST-TEST KNOWLEDGE SCORE

Table 4: Comparison between overall pre and post mean knowledge scores regarding self-care management of pih

	Mean	Median	Range (Min- Max)	Standard Deviation
PRETEST	15.33	15.00	17 (9-26)	4.213
POST TEST	31.13	32.00	14 (23-37)	2.960

Data presented in the above Table 13 reveals that the mean post- test knowledge score i.e. (31.13) was apparently higher than mean pre-test knowledge score (15.33), median of pre-test and post-test knowledge score was 15.00 and 32.00, range (23-37) was higher than pre-test knowledge score range i.e., (9-26). The data also shows standard deviation of pre-test and post-test knowledge score was 4.213 and 2.960 respectively.

ASSOCIATION OF PRE-TEST KNOWLEDGE SCORE WITH SELECTED DEMOGRAPHIC VARIABLES (AGE, OCCUPATION, EDUCATIONAL STATUS, FAMILY INCOME PER MONTH, RESIDENCE TYPE OF FAMILY, AND GRAVIDITY)

Table 14: Association Between Pre-Test Knowledge Score With Selected Demographic Variables

S. No.	Variable	Knowledge Mean ±S D	p value	Inference

1.	AGE (IN YEARS): 1) <20 2) 20-30 2) >30	 11.33± 0.577 15.26±4.073 16.33±4.655	0.170	NS
2.	EDUCATION: 1) Illiterate 2) Up to secondary 3) Graduate & above	 12.30 ± 2.976 15.83 ± 2.367 19.50 ± 4.553	0.00*	S
3.	OCCUPATION: 1) Employed 2) Skilled 3) House wife	 17.75±4.115 16.86±3.824 14.37±4.128	0.027*	S
4.	TYPE OF FAMILY: 1) Nuclear 2) Joint	 15.75 ± 3.782 15.13 ± 4.446	0.469	NS
5.	RESIDENCE: 1) Rural 2) Urban	 13.79±3.323 16.37±4.467	0.195	NS
6.	INCOME / MONTH (RS): 1) ≤10000 2) 20000-30000 3) >30000	 14.13 ± 4.121 16.29± 3.118 21.26± 2.280	0.001*	S
7.	GRAVIDITY: 1) Primigravadae 2) Multigravidae	 15.58± 4.420 14.05 ± 3.829	0.683	NS

S: Significant*; NS: Not Significant

- The data in the table shows that a significant association was found between education, occupation and family income per month of subjects with mean pre-test knowledge score; (**p≤0.000, 0.027 and 0.001** respectively) with p-value (p≤0.005). While no significant association was found between age, residence, type of family and gravidity with pre-test knowledge score (0**.170, 0.195, 0.469, and 0.683** respectively), p-value >0.005.

Therefore research hypothesis is partially accepted which states that:

- **H_2-** There is significant association between the mean pre-test knowledge score and selected demographic variables of subjects such as Age, education status, occupation residence, type of family, family income per month and gravidity at p≤0.05% level of significance.

DISCUSSION

The findings of the study are discussed in accordance with the objectives as under:

Objective 1:

To assess the existing knowledge of antenatal mothers regarding self-care management of pregnancy induced hypertension

In the present study, the pre-interventional knowledge scores of total sample 60 antenatal mothers shows that majority of them **53 (88.3%)** had inadequate knowledge, **7 (11.7%)** of them had moderate knowledge and none of them had adequate knowledge with mean pre-test knowledge score **(15.33)**

The findings of this study were supported by an evaluative study conducted by P. Kavitha,in Asmara, Eritrea 2012.Study was conducted to assess the level of knowledge of antenatal mother regarding knowledge on prevention of pregnancy induced hypertension. The research design used for the study was Non-Experimental design. Purposive sampling technique was used to select 30 antenatal mothers' for the study. The tool used for the study was structured interview schedule. The data gathered were analyzed by using descriptive statistics. Findings shows that among 30 antenatal mother **0(0%)** were having adequate knowledge, **3(10%)** were having moderately adequate knowledge and **27(90%)** were having inadequate knowledge [14].

Objective 2:

To assess the knowledge regarding self-care management of pregnancy induced hypertension among antenatal mothers after the implementation of structured teaching programme.

In the present study, the post-interventional knowledge score shows that majority of the subjects **42(70%)** had acquired adequate knowledge, 18(30%) subject had moderate knowledge, none 0(0%) had having inadequate knowledge after implementation structured teaching programme.

The findings of the study were supported by an evaluative study conducted by P. Kavitha, in the Maternal and child Health centre, Dharapuramon the effectiveness of structured teaching Program on warning signs during Pregnancy In terms of knowledge among antenatal mothers. Findings showed that the structured teaching programme was effective in increasing the knowledge among antenatal mothers regarding warning signs during pregnancy. Thus structured teaching programme played an important role in improving the knowledge. The study findings revealed that there was a significant improvement in knowledge after implementation of STP among antenatal mothers. Based on the statistical findings ('t' calculated value of pre-test and post-test knowledge scores=**38.2** $p<0.05$) [15].

Objective 3:

To compare the pre-test and post-test knowledge scores regarding self-care management of pregnancy induced hypertension among antenatal mothers.

While comparing the knowledge score of subjects regarding self-care management of pregnancy induced hypertension the mean post-test knowledge score obtained by the antenatal mothers was improved to **31.13%** from a mean pre-test knowledge score of **15.33%.** With the intervention, **30%** antenatal mothers were found to have moderately adequate knowledge and **70%** had acquired highly adequate knowledge and **0(0%)** were having inadequate knowledge regarding self- care management of pregnancy induced hypertension with t-value (**44.23) and p-value (≤0.001)**

This gives an inference that intervention i.e., structured teaching programme was effective in improving the knowledge level of antenatal mothers regarding self-care management of pregnancy induced hypertension

The findings of the study were supported by an evaluative study conducted by Sr. Jolly Joseph, SabithaNayak, Philomena Fernandes&VandanaSuvarna (2013)on effectiveness of antenatal care package on knowledge regarding pregnancy induced hypertension among antenatal mothers. The pre-test knowledge data showed that maximum number of mothers 26(65.5%) scored between the range of 11-20% (average).The mean knowledge score was 14.88 whereas the maximum possible score was 30.Among seven areas, the mean percentage knowledge in the area of basic factors of PIH was 43.75%, clinical features 41%, diagnosis 44%, management 57.5%, diet 50%, complication 50%, and prevention 58%. The 't" value showed the significant difference in the post-test, ('t' calculated value of pre-test and post-test knowledge scores=14.22 $p<0.05$) which showed that antenatal care package was effective in improving the knowledge of antenatal mothers on pregnancy induced hypertension [16].

The findings of the study were supported by an evaluative study conducted by PassnlioA(2004), on effectiveness of health education programme in enhancing the self-care agency of pregnant women and to a define the role of their background characteristics in the success of this education. The success of given education was measured by pre and post-test that were applied before and after implementation of health education programme using "self -care agency scale". After the health education programme the self- care agency scores of pregnant women increased significantly **P<0.05**. It was defined that pregnant women with the least self- care agency score before health education, displayed the best progress after the education [17].

Objective 4:

To determine the association of pre-test knowledge score regarding self-care management of pregnancy induced hypertension among antenatal mothers with their selected demographic variables i.e., age, education, occupation, type of family, residence, Family Income per month, gravidity.

In the present study, it was found that there was significant association between pre-test knowledge score with three demographic variables i.e., education, and occupation and family income per month (**0.000, 0.027 and 0.001** respectively and was significant at **0.05** level) with p-value < 0.005.

However there was nosignificant association between pre-test knowledge score with demographic variables like Age, residence, type of family and gravidity (0**.170, 0.195, 0.469, and 0.683** respectively), p-value >0.005.

The findings of the study were supported by an evaluative study conducted on effectiveness of antenatal care package on knowledge of pregnancy induced hypertension for antenatal mothers. It was found that there was significant association between pre-test level of knowledge with educational status, occupation, monthly income< 0.005.

CONCLUSION:

- The main aim of the study was to assess the effectiveness of structured teaching programme on knowledge regarding self-care management of pregnancy induced hypertension among antenatal mothers with mild pregnancy induced hypertension in order to prevent the complications of mild of pregnancy induced hypertension like pre-eclampsia and eclampsia. Information was given to the antenatal mothers through a structured teaching programme which includes various aspects like General information regarding pregnancy induced hypertension, Antenatal check-ups, Rest and Exercise, Dietary modifications, Medication, identification of warning signs.
- The following conclusions were drawn on the basis of findings of the study:
- The pre-test findings showed that majority of subjects 53(88.3%) were having inadequate level of knowledge regarding self-care management of pregnancy induced hypertension.
- The overall mean post- test knowledge score i.e. (31.13) was apparently higher than mean pre-test knowledge score (15.33). The standard deviation of pre-test was 4.213 higher than post -test (2.960) with ($t_{\text{-value}}$ =44.23, $p<0.001$) respectively. This shows that intervention helped the antenatal mothers to understand more about pregnancy induced hypertension and its self-care management at early stage. The structured teaching programme was proved to be very effective method of transforming information.
- The socio demographic variables educational status, occupation and family income per month of subjects were found to have significant.

NURSING IMPLICATIONS:

Hypertensive disorders are common complication occurring during pregnancy responsible for maternal & foetal mortality & morbidity. It is a common medical disorder associated with pregnancy. Though the condition is on decline, still stands a public health problem. The main goals in self-care management are control of blood pressure, minimisation of complications caused by pregnancy induced hypertension and have positive foetal and maternal outcome. Education regarding the self-care management of pregnancy induced hypertension is essential in the care of the antenatal mothers with pregnancy induced hypertension so as to prevent the further complications. This study helps the antenatal mothers to increase the knowledge and motivate them to practice self-care.

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

Nursing Education:

Education is the key component to update and improve the knowledge of an individual. Pregnancies complicated with hypertensive disorders are associated with increased risk of adverse foetal, neonatal & maternal. Nurse educators can plan the nursing programme to meet the challenging needs of the antenatal mother. Nurse educators have to prepare the Community health nurses**,** nursing students who would play a key role in providing information and re enforcement to antenatal mother. The study implies that health personnel have to be properly trained on how to teach public regarding management of pregnancy induced hypertension in the early stage. The effectiveness of structured teaching programme established could be used as an illustrative informational mode to student nurses, staff nurses, community health nurses, ASHA workers and antenatal mothers. It will improve maternal and foetal outcome as well as prevent complications. Nursing students also should acquire the skill and knowledge to assess the needs of the antenatal mothers and to plan out teaching programmes in the antenatal clinic as well as in the community settings. The nursing curriculum also should provide opportunity to plan and conduct health education programme on the self-care management of pregnancy induced hypertension. Informal health education also should be incorporated in the day to day activities of nursing educators and students. Effective teaching material, audio-visual aids and demonstrations should be used to express the content area clearly.

Nursing practice:

Nursing is an art and a science. As a science, nursing is based upon a body of knowledge that is always changing with new discoveries and innovations. When nurses integrate the science and art of nursing into their practice, the quality of care provided to clients is at a level of excellence that benefits clients in numerous ways. They are the key persons of the health team, who plays a vital role in the promotion and maintenance of health and prevention of complications. Nurses working in antenatal OPD can organize health educational programmes on self-care management of pregnancy induced hypertension. Nurses in community health centres can utilise this information. Nurse practioners can extend their roles like counsellor, advocate, educator and coordinator in implementation of educational programmes.

Nursing Administration:

Nurse administrators are the key persons to plan, organize and conduct in-service education programmes. Nurse administrator's support is necessary to conduct and evaluate health education programmes, so that this knowledge can be imparted to the antenatal mothers. A team may be formed for safe motherhood programme. The orientation programme and continuing nursing education programme on antenatal care should be made as mandatory for all the nurses working

in antenatal ward or OPD and community setting. Standards of prenatal care, to be prepared and implemented by the nurse administrator. Conducting conference among nurses to discuss the evidence based antenatal self-care practices to promote the maternal and perinatal out come and prevention of complications. Nurses to be updated on their knowledge by conducting workshop periodically on the management of various complications of pregnancy induced hypertension during antenatal period.

Nursing Research:

The study throws light on the knowledge of self-care of management of pregnancy induced hypertension. There is a lot of scope for exploration in this area. The study provides a baseline data for conducting other research studies. The study will be a motivation for the budding researchers to conduct similar studies in large scale. The study will be a reference for the research scholars. Further research works can be conducted with every medical condition associated with pregnancy to identify most effective knowledge imparting strategies. There is a need to carry out more researches to detect the knowledge of health providers about pregnancy induced hypertension and its management with special emphasis on self-care.

Community Health Nursing:

Community - based individual structured teaching programme is very effective to improve maternal and perinatal outcome. Community base screening programmes are effective to identify the cases in the risk group. Life style modifications among the antenatal mothers with obesity, essential hypertension, age <20 or >4 years, previous history of PIH. Health teaching is an essential part of health care delivery system. Each member of the health team has the responsibility to educate the general public. Community health nurses have to be oriented toward global prevalence of hypertensive disorders in pregnancy and its impact on maternal and perinatal outcome and the importance of self-care management.

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