EFFECT OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING SELF CARE MANAGEMENT OF PRENATAL MOTHERS WITH PIH

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A pre-experimental research study was conducted to assess the effect of self-instructional module regarding self-care management of prenatal mothers with PIH in selected hospitals of Ernakulam district by using a structured questionnaire. The objectives of the study were to assess the knowledge level of prenatal PIH women before administering the self-instructional module, determine the effect of the self-instructional module on self-care management of PIH in prenatal mothers, and associate the pre-test knowledge scores with their selected demographic variables. The conceptual model used for this study was based on Pender's health promotion model. A quantitative research approach with a pre-experimental one-group pre-test post-test design was used in this study. Settings selected were selected hospitals of Ernakulam district. The population under study was prenatal PIH women admitted to antenatal wards. A total of 40 prenatal mothers with PIH were selected at the sampling stage. The tool for data collection consists of a structured questionnaire to collect demographic variables and to assess the knowledge level before and after the administration of the self-instructional module. The reliability and validity of the tool was established. The pilot study was conducted to assess the feasibility. A structured questionnaire was administered after obtaining an informed consent. Analysis was done by using a paired 't-test. It was concluded that the self-instructional module was effective in improving the knowledge regarding self-care management of PIH. Implications of the study and its findings regarding nursing service, education, administration, and research were made and necessary recommendations were suggested.

Key words: self-instructional module; PIH; self-care management.

I. INTRODUCTION (HEADING 1)

Pregnancy is a most wonderful experience and probably the most unforgettable event in a woman's life. It highlights the woman's amazing creative and nurturing powers while providing bridge to the future. The women with a positive attitude towards pregnancy can experience the joy and wonder and the miracle of birth, rather than experiencing fear of "unknown" in this time. During pregnancy the woman undergoes several physiological changes to accommodate the growing fetus. Even though, these changes are normal, the women may develop some complications during pregnancy, which make the mother and unborn to the risk. Pregnancy induced hypertension is one of the most important complication among that.

According to American college of technology pregnancy induced hypertension is defined as the sustained blood pressure to levels of 140mmHg systolic and 90mmHg diastolic.

In the world the biggest challenge faced in obstetrics is the maternal mortality and morbidity. Hypertension is the most frequently identified medical problem during pregnancy. Hypertensive disorders are a common cause of morbidity and mortality during pregnancy, contributing to poor maternal and neonatal outcomes if not adequately managed. Pregnancy induced hypertension impacts 8 million mother-infant pairs worldwide each year. Pregnancy induced hypertension occurs in about 2–8% of pregnancies. It is the most common medical complication of pregnancy whose incidence has continued to increase worldwide. It is associated with significant maternal morbidity and mortality, accounting for about 50,000 deaths worldwide annually.

According to National High Blood Pressure Education Programme in 2000 pregnancies complicated with hypertensive disorders are associated with increased risk of adverse foetal, neonatal and maternal outcome. WHO estimates the incidence of pre eclampsia to be seven times higher in developing countries out of 2.8% of live births; where as in developed countries it is 0.4%.WHO report in 2005

states that pre-eclampsia is the most frequently encountered medical complication during pregnancy affecting about 3-5% of pregnant women worldwide. Thus reducing maternal mortality by 75% between 1990 and 2015 has been considered as part of the millennium development goals of the World Health Organization (WHO) Nations.

According to south Asian federation of obstetrics and gynaecology, in 2009 the incidence of pregnancy induced hypertension in India ranges from 5-15%. The incidence of PIH in primigravidae is 16% and multigravidae 7 %.

According to National Rural Health mission, the total number of deliveries in Kerala in the year 2010 and 2011 are 375966. And out of 125 reported maternal deaths was due to pregnancy induced hypertension.

II. REVIEW OF LITERATURE

1. **PREGNANCY INDUCED HYPERTENSION**
2. **SELF-CARE MANAGEMENT OF PREGNANCY-INDUCED HYPERTENSION**
3. **EFFECT OF SELF-INSTRUCTIONAL MODULE**

1. Pregnancy induced hypertension

A Case–control Study was conducted in India to identify the determinants of pre-eclampsia among pregnant women admitted for delivery in a district hospital of Karnatka. Sample consists of 200 cases. The experimental group consists of pregnant women with pre eclampsia who developed proteinuria after 20 weeks of gestation and control group without pre eclampsia was the study subjects. In experimental 100 cases and 100 cases in control group. Study variables included mother′ s age, parity, body mass index, history of chronic hypertension, history of diabetes, history of renal disease, family history of hypertension, and history of pre-eclampsia in earlier pregnancy. Significant risk factors identified in univariate analysis included pre pregnancy body mass index (BMI > 25), history of chronic hypertension, history of diabetes, history of renal disease, family history of hypertension, history of pre-eclampsia in earlier pregnancy, and multiple pregnancy. Multiple logistic regression analysis revealed that the prepregnancy BMI of >25, history of chronic hypertension, history of diabetes, history of renal disease, family history of hypertension and multiple pregnancy are the significant risk factors of pre-eclampsia. This study reveals that PIH can be controlled if the risk factors are identified and treated in the early periods of pregnancy.

A data base study was conducted on social factors related to increase risk of pre-eclampsia and pregnancy-induced hypertension in Colorado. The study sample was 362,000 mothers. Birth certificate data on infants born in Colorado from 2000 to 2006 were used to analyse the risk factors. The study confirmed that the known risk factors, included age over 35 years, first pregnancy, multiple gestation, and gaining of weight more than 30 pounds during pregnancy. Result shows that smoking was associated with a lower risk of pre-eclampsia and increased the risk of other pregnancy complications. Women living in rural areas were at increased risk: 56 percent higher than for women in other areas. Related to education, 19 % increase in risk for women who had some college education compared to a high school education. The study concludes that the above mentioned factors have a great impact on the development of pregnancy induced hypertension and pre-eclampsia.

A prospective study was conducted in Diyarbakir from January 1, 2007 to December 31, 2007 to examine whether high parity and age over 45 years are related with adverse maternal and fetal outcomes. Study sample was Sixty-one pregnant women. Mothers were classified in two groups: the study group 23 samples included women with high parity over 45 years of age, and a control group 38 samples included women with high parity between 40-45 years of age (between 40-45 years and 5-9 previous live births). Hypertensive disorders complicating pregnancy, preterm labor, breech presentation, cesarean section ratio, mean APGAR scores, birth weight, fetal sex, fetal macrosomia, and early neonatal death were compared within groups. Six, that is 26% patients in the study group and 12, that is 31.5% patients in the control group had hypertensive disorders of pregnancies ($p > 0.05$). The study shows that women with advanced age have an increased risk for hypertensive disorders during pregnancy.

A case control study was conducted in a tertiary hospital in Nigeria on 1803 women to determine the risk factors for pregnancy-induced hypertension. Multiple logistic regression analysis was used to determine the risk factors for preeclampsia. Results showed that one hundred and thirty-seven that is7.6% of the 1803 women who delivered during the period had pre-eclampsia /eclampsia. Of these 128 samples that is 93.4% were analyzed; ninety-one,that is 71.1% women were primigravida. The study depicts that primigravida are more prone to develop pregnancy-induced hypertension.

A Prospective cohort study was conducted from 1987-2004 with 763795 primiparous mothers who had their first births in Sweden. The study aimed to investigate whether pre-eclampsia is more common in first pregnancies solely because fewer affected women, who presumably have a higher risk of recurrence, go on to have subsequent pregnancies. Study shows that, for multiparous women, the risk was significantly different for women who had pre-eclampsia in one, around 15% or two, around 30% consecutive previous pregnancies than for those with no history, around 1%. Although a longer interval between first and second pregnancies was associated with a higher incidence of pre-eclampsia, the risk for women without pre-eclampsia during their first pregnancy remained substantially lower even after eight years 2.2%, compared with women with pre-eclampsia in their first pregnancy. That study shows that there is a higher incidence of development of PIH related to pregnancy intervals.

2. Self-care management of pregnancy-induced hypertension

A qualitative exploratory study was conducted in North America. The study sample size was 24 women. The convenience sampling technique was used to explain the effectiveness of bed rest for reducing edema in pregnancy-induced hypertension. The result says that a 10% reduction in edema was found over 4 weeks of rest. The study shows that mothers with PIH had a reduction of their edema after taking bed rest either at home or at the hospital.

A randomized controlled trial was conducted on a double bind trial to evaluate the effect of rest in the left lateral position in reducing PIH and pre-eclampsia among 174 normotensive women at 28-29 weeks of gestation. The experimental group, which received treatment protocol was 37 women and the other 37 women received standard antenatal control until delivery. The result of the study was that 29 i.e. 78.32% of women in the control group developed pre-eclampsia as opposed to only 4 i.e.,10.8% cases in the treatment group.

A cohort study was conducted in California to assess job psychological stress and PIH among 717 women in California. The association between on-the-job physical stress and the occurrence of gestational hypertension was increased for women with higher job status. The reason for increased incidence was due to job pressure and psychological stress. The study depicts that stress and tension is an important risk factors related to PIH and it should be avoided during pregnancy.

A prospective cohort study was conducted to investigate the risk of pre-eclampsia in first and subsequent pregnancies. The study suggests that there is a higher risk of recurrence of pre-eclampsia in subsequent pregnancies if pre-eclampsia is present in the first pregnancy.

A retrospective study was conducted on eclampsia, to find out the incidence epidemiology, clinical profile of eclampsia patients, and the effects of current intervention strategy for eclampsia on maternal and perinatal outcomes. Analysis of case recovery of all eclampsia cases for one month was done. The study was concluded inferring that it appears that the current intervention strategy for eclampsia in the maternity hospital is effective in reducing maternal mortality. It also depicts that the perinatal outcome was not satisfactory and it needs modification about treatment.

3. Effect of self-instructional module

An experimental study on the effectiveness of self-instructional modules on pre-eclampsia, developed in the female health workers in PHC in selected districts of Tamil Nadu. It was found that knowledge of pre-eclampsia in the experimental group of 10 female health workers improved after the introduction of the self-instructional module than knowledge of the control group of 10 female health workers58.

An experimental study was conducted to evaluate the self-instructional booklet on pre-eclampsia and its self-care management developed on the basic identified learning needs of mothers with pregnancy-induced hypertension in selected hospitals of Kerala. A purposive sampling technique was used to select the sample. The tool used was a structured interview schedule and an opinionaire. The difference between pre-test and post-test knowledge scores of PIH mothers on pre-eclampsia and its self-care management was significant at 0.05 level and 0.01 level. The study concluded that the pretest knowledge score of primi gravida women with PIH was inadequate. The information booklet enhanced the knowledge of primi gravida women with PIH. The study concludes that self-instructional is an effective strategy to increase knowledge and practice59.

A study was conducted on the effectiveness of planned health education through an information booklet on the health practice of cancer patient s regarding the management of selected side effects of radiation therapy. Regarding the effectiveness of planned health education, the overall pretest knowledge score was only 29.47% to post test knowledge score, which is 78.10%. The pre-test practice score was 32% and post post-test practice score was increased to 77.50% score. The overall finding of the study clearly showed that planned health

education was significantly effective in improving the knowledge and practice of cancer patients receiving radiation therapy. The study showed that the information booklet used for health education helped to update and improve the knowledge of cancer patients regarding side effects of radiation therapy60.

A study was conducted by Ninewells Hospital Dundee UK, to develop an evidence–based information booklet for patients and relatives after preparing for transfer from intensive care units. This collaborative study used an exploratory design with elements of the action research cycle in three phases, which involved identifying patients' and relatives' information needs around the time of transfer, designing and developing an information booklet, and introducing and evaluating the booklet into practice. Semi-structured interviews were used to elicit the views of patients and relatives regarding their information needs. Members of the multidisciplinary teams were involved in identifying and reviewing the booklet content. The evaluation identified positive outcomes relating to patient's and relative's satisfaction with written information and enhanced communication with other wards and health care professionals. This study demonstrated the value of providing patients and relatives with written information rather than oral communication. Study shows the effectiveness of written self-instructional methods rather than oral information in imparting knowledge.

A study was conducted in the UK, to report a scientific approach incorporating patient preferences towards the development of a patient information booklet about ureteric stents. Phase I of the study included 35 adult patients with ureteric stents. For 4 of the samples survey method was used and for 31 of the subjects, the questionnaire was used to assess various issues relating to information given to patients about ureteric stents. A booklet was prepared based on their findings in phase 2 the booklet was tested by 30 patients, a panel of 20 urologists and general practitioners, and five stent manufacturers to assess the booklet for adequacy. 85% preferred all relevant information about the stents to be in a written format with illustrative drawings. A valid information booklet on ureteric stents was developed, incorporating the patient's expectations and views. The result showed that this booklet was found to be an effective tool for patient communication that would help patients cope better with indwelling stents and be useful in counseling patients. This study shows that information booklets are very beneficial for patient satisfaction and co-operation.

RESEARCH METHODOLOGY

Research approach

A quantitative, pre-experimental approach was found to be appropriate for determining the effect of self-instructional module among prenatal PIH women.

Research design

Pre-experimental research with one group pre-test-post-test design was used to evaluate the effectiveness of the self-instructional module for this study.

Variables

Independent variable: Self-instructional module

Dependent variable: Knowledge on self-care management of PIH

Setting of the study

The study was planned to conduct in the four selected private hospitals-Sanjoe hospital perumbavoor, MAGJ hospital Mookkannoor, K G hospital Angamaly, Geethangali hospital Kuruppampady, of Ernakulam district. These hospitals have average bed occupancy of 40-50 inpatients in the OBG departments and two-three gynaecologist consultants.

Population

The population of this study was prenatal PIH women admitted in the selected private hospitals.

Sample and sampling technique

In this study, the sample comprised 40 prenatal women with pregnancy-induced hypertension who attend selected private hospitals and fulfilled the criteria for sample selection.

The samples are selected by the Purposive sampling technique which involves conscious selection by the researcher.

Inclusion criteria:

Prenatal women:

- who developed hypertension during the present pregnancy
- Who gave the history of PIH in previous pregnancies
- Willing to participate in this study

Exclusion criteria:

- Prenatal women who were suffering from chronic hypertension.
- Prenatal women who were exposed to the teaching of PIH

DEVELOPMENT/SELECTION OF TOOL

The steps used for the development of the tool were as follows:

The blueprint of the items about the domain of knowledge of self-care management of PIH was prepared as per objectives. It includes pregnancy-induced hypertension, risk factors, diagnosis, and management. Management consists of dietary management, weight gain, dos and don'ts in pregnancy, fetal movement counting, and medical care.

Description of the tool

The tools used were;

Section A

Tool 1: Questionnaire to collect demographic data

It consists of eleven items related to the demographic variables which include-

a) General history of PIH prenatal women and

b) Obstetrical history of PIH prenatal women.

Tool 2: Structured questionnaire developed by the investigator to assess knowledge on self care management of PIH

It consist total 25 questions regarding pregnancy induced hypertension and its self care management. Each item has four options with one most appropriate answer. The maximum score for the correct response to each items is "one" and for wrong response "zero". The level of knowledge was categorized based on the percentage of scores obtained.

Scoring for level of knowledge as the following:

Total items-25

Table 1: Item wise scoring for level of knowledge

Sl no.	Area	Items	Score
1.	Concept	3	3
2.	Causes	5	5
3.	Signs and symptoms	4	4
4.	Management	6	6
5.	Complications	7	7
	Total	25	25

Total score- 25

Table 2: Percentage of level of knowledge

Level of knowledge	scores	percentage of scores
Poor	<8	<33%
Average	9-16	34-67%
Good	17-25	68-100%

Section B: Self instructional module on self care management of PIH developed by the investigator.

The self instructional module was developed based on the following steps:

- Review the related literature regarding PIH and its self care management
- Organization of contents
- Establishment of the content validity of the module
- Preparation of the final draft

Pilot study

Pretest was done by giving structured questionnaire developed by the investigator. Soon after pretest, self instructional module developed by the investigator was administered. After six days knowledge gained was assessed by post test with the same tool. The result showed that self instructional module was reliable to conduct the main study.

Plan for data analysis

The collected data was planned to be organized, tabulated, and analyzed based on the objectives and hypotheses of the study by using descriptive and inferential statistics after consultation with a statistician.

- Demographic variables- frequency and percentage.
- Knowledge scores of prenatal women regarding self-care management-mean, mean percentage, and standard deviation.
- The effect of self-instructional module on knowledge regarding self-care management of PIH- Paired 't' test.
- Association between knowledge on self-care management and selected demographic variables- chi-square analysis

Analysis and interpretation

Section 1: Description of demographic variables

Section 2: Description of the level of knowledge regarding self-care management of PIH before and after administration of self-instructional module.

Section 3: Comparison of pre and post-interventional knowledge among women

Section 4: Association of knowledge scores of prenatal women before administration of self-instructional module and their selected demographic variables.

Section 1: Description of demographic variables

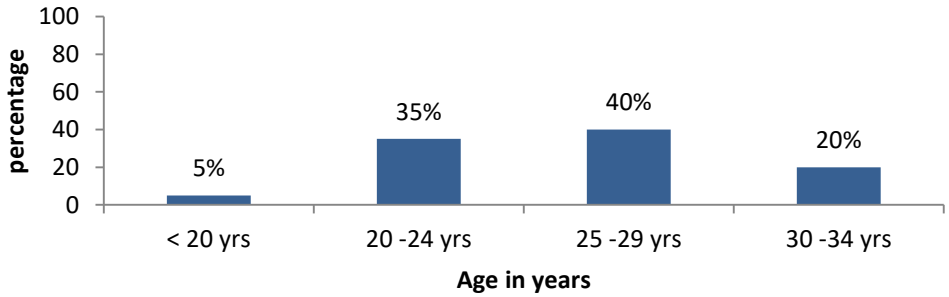

Figure 3: Percentage distribution of samples according to the age

Figure 3 shows that majority i.e.16 (40%) samples belonged to the age group between 25-29 years. Only 2 (5%) of samples were below 20 years.

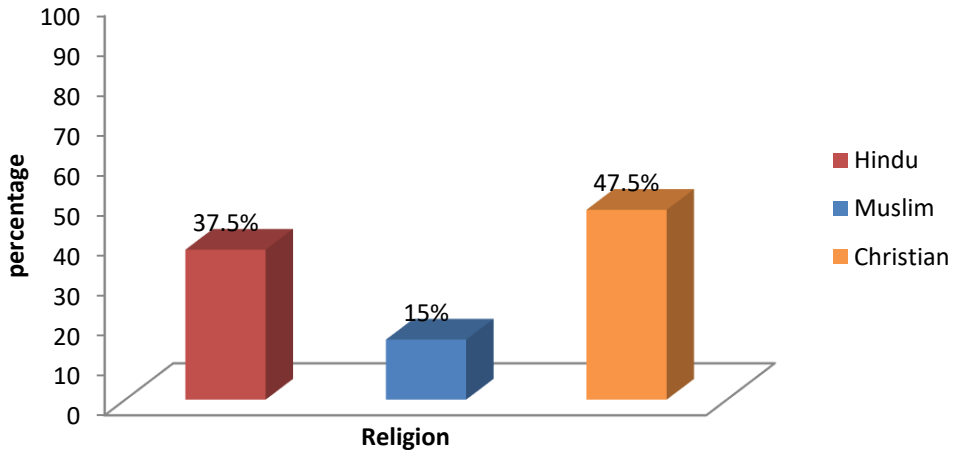

Figure 4: Percentage distribution of samples according to religion

Figure 4 shows that majority i.e.19 (47.5%) prenatal PIH women belonged to Christian religion.

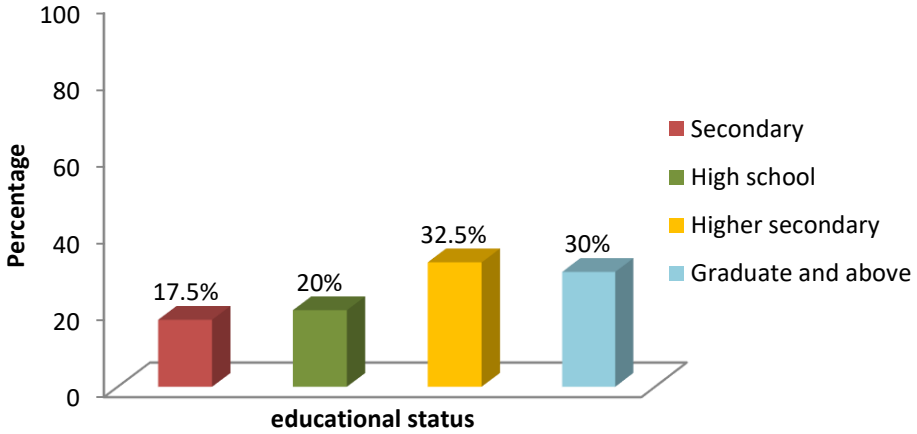

Figure 5: Percentage distribution of samples according to their educational status.

Figure 5 depicts that majority that is 13(32.5%) of the samples had higher secondary education and only 7(17.5%) had secondary education.

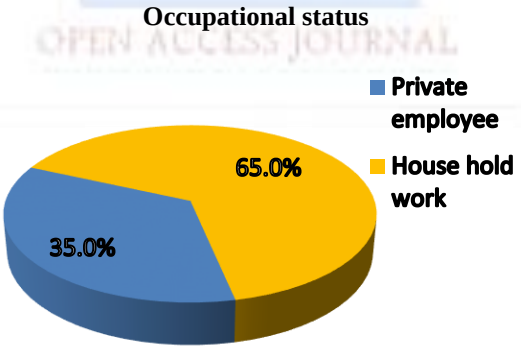

Figure 6: Percentage distribution of samples according to the occupational status.

Figure 6 denotes that majority i.e. 26(65%) of study samples were housewives.

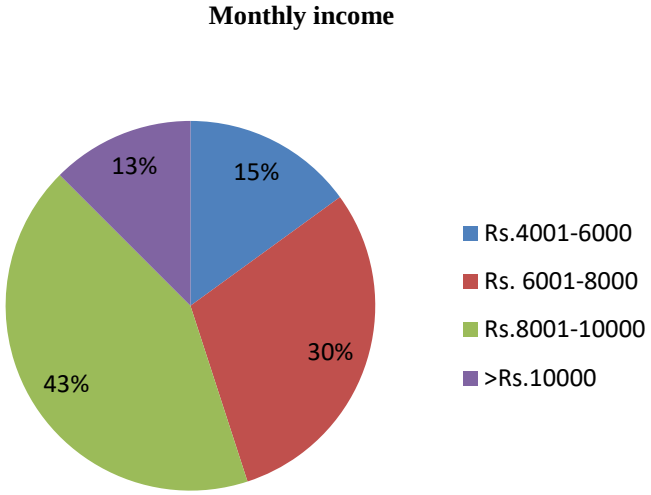

Figure 7: Percentage distribution of samples according to the monthly income

Figure 7 shows that only 13% 0f the samples belonged to low socio economic group and 43% of study samples were from middle income group.

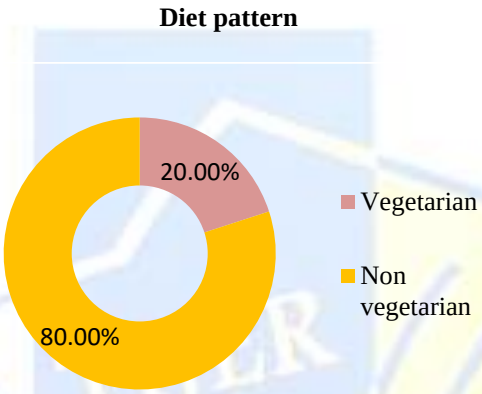

Figure 8: Percentage distribution of samples according to their diet pattern

Figure 8 illustrates that majority 32 i.e,(80%) samples were with non vegetarian diet habit

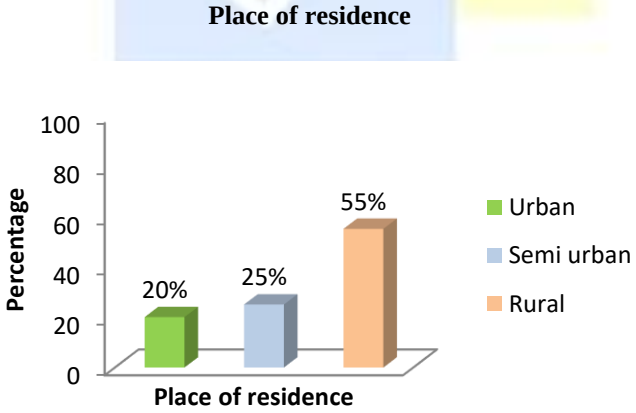

Figure 9: Percentage distribution of samples according to the place of residence

Figure 9 indicates that more than half i.e,22(55%) subjects were from rural population.

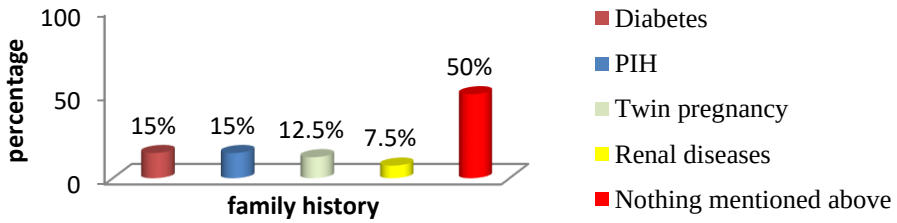

Figure 10: Percentage distribution of samples according to the family history of risk factors for PIH

Figure 10 shows that half i.e, 20(50%) samples had no family history of any specific diseases and only 3(7.5%) had history of renal diseases.

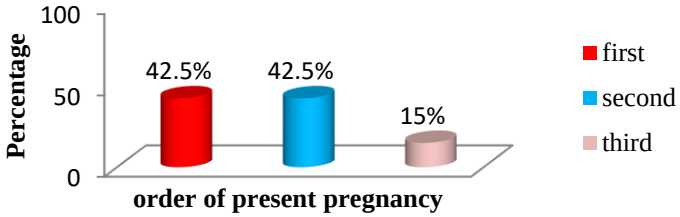

Figure 11: Percentage distribution of samples according to order of the present pregnancy

Figure 11 illustrates that primi and second gravidae 42.5% equally were having the higher incidence of pregnancy induced hypertension.

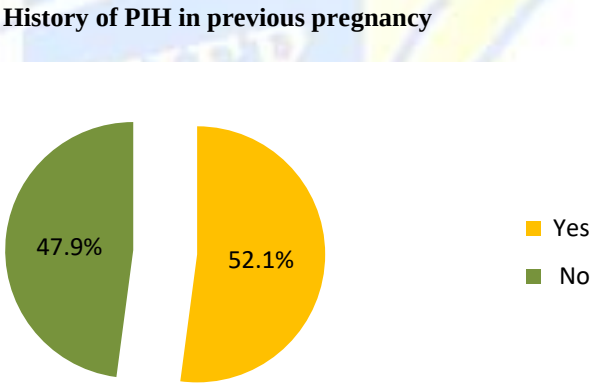

Figure 12: Percentage distribution of samples according to the history of PIH in previous pregnancy

Figure 12 denotes that majority i.e, 12 (52.1%) subjects among 23 multigravida mothers had history of previous PIH.

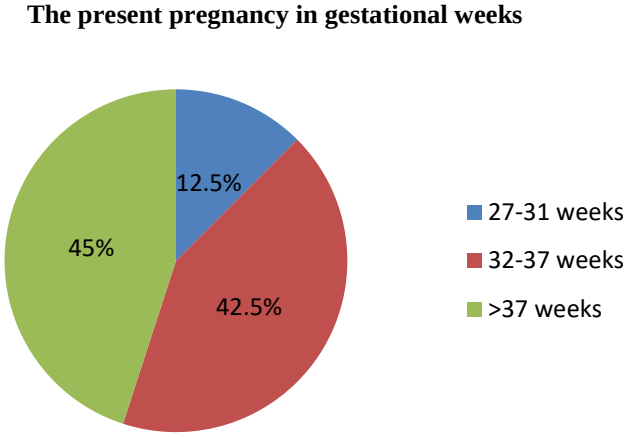

Figure13: Percentage Distribution of samples according to development of PIH in terms of gestational weeks of present pregnancy

Figure 13 indicates that majority i.e. 18(45%) women developed PIH after 37 weeks of gestation.

Section 2: Percentage distribution of the level of knowledge regarding self care management of PIH before and after administration of self instructional module.

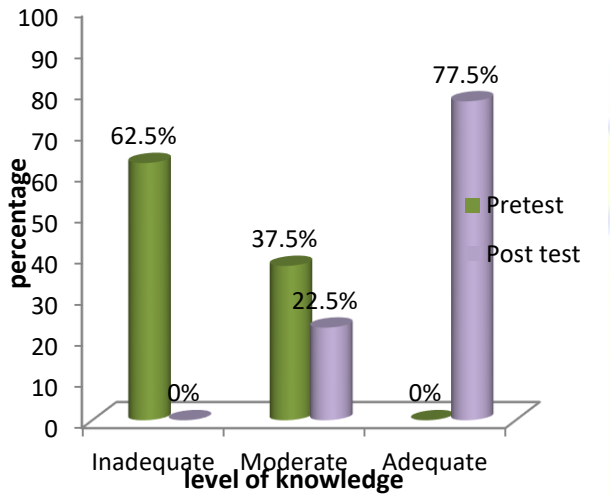

Figure 14: Pre test and post test level of knowledge

Figure 14 illustrates that, in the pretest 25(62.5%) mothers had inadequate knowledge, 15(37.5%) mothers had moderate knowledge and none of them had adequate knowledge and in post test none of the mothers had inadequate knowledge, 9(22.5%) mothers had moderate knowledge and 31(77.5%) mothers had adequate knowledge.

Table 3: Pre test and post test mean, standard deviation and mean difference

	Maximum score	Mean knowledge score	Standard deviation	Mean Difference in knowledge
Pretest	25	8.20	3.11	**11.25**
Post test	**25**	**19.45**	**2.43**	

Table 3 shows that in pretest mean knowledge score was 8.20 and standard deviation was 3.11. In post test, mean knowledge score was 19.45 and standard deviation was 2.43. Mean difference was 11.25. It depicts that there was a mean improvement in the level of knowledge in the post test.

Section 3: Comparison of pre and post interventional knowledge among prenatal women

Table 4: Comparison of pre and post intervention knowledge

(N=40)

Attribute score	frequency	Mean ± SD	Calculated t value	P value	Table value
Pretest	40	8.20±3.11	t=20.95	0.001	1.96
Post test	40	19.45±2.43			

Degree of freedom=39

Table 6 depicts that in pre test mean score was 8.20 and standard deviation was 3.11. In post test, mean score was 19.45 and standard deviation was 2.43. The calculated 't' value is higher than the tabled value of 1.96. H_1: The mean knowledge scores before and after administrations of self instructional module differ significantly. So H_1 was accepted. This statistical significance shows that self instructional module was effective in improving the knowledge of prenatal mothers.

Section 4: Association of knowledge scores of prenatal women before administration of self instructional module with selected demographic variables of the samples.

Table 5: Association of pre test level of knowledge and mothers age in years.

(N=40)

Demographic variables-general history		Pretest level of knowledge		Chi square test				
		Inadequate %	Moderate %	df	Chi square value	Table value	P value	Remarks
Age	< 20 yrs	50.0	50.0	3	0.83	7.99	0.84	NS
	20 -24 yrs	57.1	42.9					
	25 -29 yrs	62.5	37.5					
	30 -34 yrs	75.0	25.0					

NS-Not significant

The table 5 depicts that there is no significant association between the knowledge scores of prenatal women and their age.

Table 6: Association of pre test level of knowledge and mothers religion.

(N=40)

Demographic variables- general history		Pretest level of knowledge		Chi square test				
		Inadequate	Moderate	df	Chi square value	Table value	P value	Remarks
		%	%					
Religion	Hindu	80.0	20.0	2	0.88	5.99	0.84	NS
	Muslim	83.3	16.7					
	Christian	84.2	15.8					

NS-Not significant

The table 6 depicts that there is no significant association between the knowledge scores of prenatal women and their religion.

Table 7: Association of pre test level of knowledge and mothers educational status

(N=40)

Demographic variables- general history		Pretest level of knowledge		Chi square test				
		Inadequate	Moderate	df	Chi square value	Table value	P value	Remarks
		%	%					
Education	Secondary	100.0		3	5.77	7.99	0.13	NS
	High school	62.5	37.5					
	Higher secondary	46.2	53.8					
	Graduate and above	58.3	41.7					

NS-Not significant

The table 7 depicts that there is no significant association between the knowledge scores of prenatal women and their educational status.

Table 8: Association of pre test level of knowledge and mothers occupation

(N=40)

Demographic variables- general history		Pretest level of knowledge		Chi square test				
		Inadequate	Moderate	df	Chi square value	Table value	P value	Remarks
		%	%					
Occupation	Private employee	50.0	50.0	1	1.43	3.84	0.23	NS

	House hold work	69.2	30.8					

NS-Not significant

The table 8 depicts that there is no significant association between the knowledge scores of prenatal women and their occupation.

Table 9: Association of pre test level of knowledge and mothers monthly income

(N=40)

Demographic variables-general history		Pretest level of knowledge		Chi square test				
		Inadequate %	Moderate %	df	Chi square value	Table value	P value	Remarks
Monthly income	Rs.4001-6000	50.0	50.0	3	6.09	7.99	0.11	NS
	Rs. 6001-8000 Rs.8001-10000	41.7	58.3					
	>Rs.10000	70.6	29.4					
		100.0						

NS-Not significant

The table 9 depicts that there is no significant association between the knowledge scores of prenatal women and their monthly income.

Table 10: Association of pre test level of knowledge and mothers diet pattern

(N=40)

Demographic variables-general history		Pretest level of knowledge		Chi square test				
		Inadequate %	Moderate %	df	Chi square value	Table value	P value	Remarks
Diet pattern	Vegetarian	62.5	37.5	1	0.00	3.84	1.00	NS
	Non vegetarian	62.5	37.5					

NS-Not significant

The table 10 depicts that there is no significant association between the knowledge scores of prenatal women and their diet pattern.

Table 11: Association of pre test level of knowledge and mothers residence

(N=40)

Demographic variables- general history		Pretest level of knowledge		Chi square test				
		Inadequate %	Moderate %	df	Chi square value	Table value	P value	Remarks
Residence	Urban	50.0	50.0	2	1.95	5.99	0.38	NS
	Semi urban	80.0	20.0					
	Rural	59.1	40.9					

NS-Not significant

The table 9 depicts that there is no significant association between the knowledge scores of prenatal women and their residence.

The above tables depicts that there was no significant association between the knowledge scores of prenatal women and selected demographic variables. H_2: There is a significant association of pretest knowledge score of prenatal mothers with their selected demographic variables. Hence the research hypothesis H_2 was rejected.

Table 12: Association of pre test level of knowledge and mothers family history

(N=40)

Demographic variables- obstetrical history		Pretest level of knowledge		Chi square test				
		Inadequate %	moderate %	df	Chi square value	Table value	P value	Remarks
Family history	PIH	50.0	50.0	3	3.02	7.99	0.55	NS
	Twin pregnancy	80.0	20.0					
	Renal diseases	33.3	66.7					
	Nothing mentioned above	70.0	30.0					

NS-Not significant

The table 10 depicts that there is no significant association between the knowledge scores of prenatal women and mothers family history.

Table 13: Association of pre test level of knowledge and mothers order of present pregnancy

(N=40)

Demographic variables- obstetrical history		Pretest level of knowledge		Chi square test				
		Inadequate %	moderate %	df	Chi square value	Table value	P value	Remarks
Order of present pregnancy	First	58.8	41.2	2	0.18	5.99	0.91	NS
	Second	64.7	35.3					
	Third	66.7	33.3					

NS-Not significant

The table 13 depicts that there is no significant association between the knowledge scores of prenatal women and mothers order of present pregnancy.

Table 14: Association of pre test level of knowledge and mothers history of PIH in past pregnancy

(N=40)

Demographic variables- obstetrical history		Pretest level of knowledge		Chi square test				
		Inadequate %	moderate %	df	Chi square value	Table value	P value	Remarks
History of PIH in past pregnancy	Yes	58.3	41.7	1	0.13	3.84	0.73	NS
	No	64.3	35.7					

NS-Not significant

The table 12 depicts that there is no significant association between the knowledge scores of prenatal women and mothers history of PIH in past pregnancy.

Table 15: Association of pre test level of knowledge and mothers present pregnancy in gestational weeks

(N=40)

Demographic variables- obstetrical history		Pretest level of knowledge		Chi square test				
		Inadequate %	moderate %	df	Chi square value	Table value	P value	Remarks
Present pregnancy in gestational weeks	27-31 weeks	40.0	60.0	2	1.23	5.99	0.53	NS
	32-37 weeks	64.7	35.3					
	>37 weeks	66.7	33.3					

NS-Not significant

The table 15 depicts that there is no significant association between the knowledge scores of prenatal women and mothers present pregnancy in gestational weeks.

Above tables shows the association between pre test level of knowledge and their demographic variables using chi square test. There is no significant association with pre test knowledge scores and their obstetrical data. . H_2: There is a significant association of pretest knowledge score of prenatal mothers with their selected demographic variables. Hence the research hypothesis H_2 was rejected.

RESULTS

Objectives

1. Assess the knowledge of prenatal mothers on self care management of PIH
2. Determine the effect of Self instructional module on self care management of PIH in prenatal mothers
3. Find out the association between the pre test knowledge scores and selected demographic variables of prenatal women with PIH.

Hypotheses

H1: The mean knowledge scores before and after administrations of self instructional module differ significantly.

H2: There is a significant association of pretest knowledge score of prenatal mothers with their selected demographic variables.

RESULTS

The following result drawn from the study

A total of 40 prenatal PHI women were participated in the study .16(40 %) women belonged to the age group of 25-29 years. With regard to their religion 19(47.5%) subjects were Christian. Regarding their educational status 13(32.5%) had higher secondary education

Most of the women 26(65%)were doing house hold works and 14(35%) were private employees With regard to their socio economical status, 17 (42.5 %)PHI women were from upper middle class with monthly income of Rs .8001 – 10000.

According to their diet pattern 32(80%) women were with mixed diet habit and 8(20%) were vegetarians.

In case of place of residence most of the mothers 22(55%) were from rural area .With regard to their obstetric history half of the women 20(50%) had no significant history of any illnesses.

In case of previous occurrence of PIH in previous pregnancy, majority i.e, 12(52.1%) had previous exposure to pregnancy induced hypertension. Regarding the order of present pregnancy most of them 17(42.5%) were primi gravid mothers and 17(42.5%) were second gravida mothers. With regards to the gestational weeks of present pregnancy 18(45%) developed PIH after 37 weeks of gestation where as 17(42.5%) developed PIH between 27-31 weeks of gestation.

In pretest 62.5% of the mothers were with inadequate knowledge, 37.5% of them were with moderate knowledge and none of them had adequate knowledge. In the post test none of the mothers were with inadequate knowledge, 22.5% of them were with moderate knowledge and 77.5% of them gained adequate knowledge after exposing to self instructional module.

Paired t'test was used to compare the pre and post interventional level of knowledge of prenatal PIH mothers. Calculated't' value was 20.95 which was greater than the table value 1.96 at 0.001 level of significance. It reveals that there was statistically significant difference between pre and post interventional level of knowledge of prenatal women regarding self care management of PIH.

The association between pre test level of knowledge and their demographic variables were done using chi square test which indicates that there is no significant association with pre test knowledge scores and any of the demographic variables. Hence the research hypothesis is rejected.

Study findings revealed that prenatal women lack adequate knowledge regarding PIH and self instructional module influenced in gaining their knowledge level.

DISCUSSION, SUMMARY AND CONCLUSION

Discussion

The study was aimed to assess the effect of self instructional module on knowledge regarding self care management of prenatal mothers with PIH. The investigator analyzed the data based on the objectives.

1. Assess the knowledge of prenat al mothers on self care management of PIH
2. Determine the effect of Self instructional module on self care management of PIH in prenatal mothers
3. Find out the association between the pre test knowledge scores and selected demographic variables of prenatal women with PIH.

Description of sample characteristics

A total of 40 prenatal PHI women were participated in the study .16(40 %) women belonged to the age group of 25-29 years. With regard to their religion 19(47.5%) subjects were Christian. Regarding their educational status 13(32.5%) had higher secondary education. Most of the women 26(65%) were doing house hold works and 14(35%) were private employees

With regard to their socio economical status, 17 (42.5 %) PIH women were from upper middle class with monthly income of Rs .8001 – 10000.

According to their diet pattern 32(80%) women were having mixed diet habit and 8(20%) were vegetarians.

In case of place of residence most of the mothers 22(55%) were from rural area .With regard to their obstetric history half of the women 20(50%) had no significant history of any illnesses.

In case of previous occurrence of PHI in previous pregnancy, majority i.e, 28(70%) had no previous exposure to pregnancy induced hypertension. Regarding the order of present pregnancy most of them 17(42.5%) were primi gravid mothers and 17(42.5%) were second gravida mothers. With regards to the gestational weeks of present pregnancy 18(45%) developed PIH after 37 weeks of gestation where as 17(42.5%) developed PIH between 27-31 weeks of gestation.

Objective 1: Assess the knowledge of prenatal mothers on self care management of PIH

In the present study the level of knowledge on self care management of PIH was 62.5% of the mothers were with inadequate knowledge, 37.5% of them were with moderate knowledge and none of them had adequate knowledge.

Objective 2: Determine the effect of Self instructional module on self care management of PIH in prenatal mothers

In this study, it is stated that self instructional module was effective in improving the knowledge regarding self care management of PIH among prenatal mothers. Paired t'test was used to compare the pre and post interventional level of knowledge of prenatal PIH mothers. Calculated't' value was 20.95 which was greater than the table value 1.96 at 0.001 level of significance. It reveals that there was statistically significant difference between pre and post interventional level of knowledge of prenatal women regarding self care management of PIH. These findings were supported by other studies in Kerala and Tamil nadu showed that self instructional module was effective in imparting the knowledge and practice of self care activities was effective to control PIH.

Objective 3: Find out the association between the pre test knowledge scores and selected demographic variables of prenatal women with PIH.

The present study reveals that incidence of PIH was more among the age group of 20-24 years i.e,(35%) and 25-29 years i.e,(40%). The findings were inconsistent with a study conducted in Diyarbakir states that women with advanced age had increased risk for hypertensive disorders during pregnancy27. A data base study in Colorado concludes maternal age more than 35 years was one of the common risk factor of pregnancy induced hypertension24. Another study concludes that women with the age group of 15-25 years were more vulnerable to develop PIH37. Another study was conducted to identify the risk factors that precede to pregnancy induced hypertension reveals that both women below 20 years of age and more than 31 years were risk factors for development of gestational hypertension.

In this study, PIH is more in primi and second gravidae mothers. These findings were supported by a study conducted in Nigeria states that, in their study about 71.1% of PIH mothers were primigravida26.

In the present study, half of the subjects i.e, (50%) had no positive family history of any illnesses like diabetes, renal diseases, PIH, and twin pregnancy. The findings were inconsistent with a study conducted to investigate an association between a family history of cardiovascular disease and severe preeclampsia concludes that severe pre eclampsia is associated with positive family history of hypertension.

Summary

The present study aimed at finding the effect of self instructional module on self care management of prenatal mothers with PIH in selected hospitals of Ernakulam district. 40 samples were selected from four hospitals. The level of knowledge of prenatal mothers was found by using structured questionnaire and a self instructional module was given to the subjects. After six days post test was given and the level of knowledge was assessed using't' test and scores indicate a true gain in the knowledge. Hence, it was concluded that self instructional module was effective method to improve knowledge among the prenatal mothers with PIH. This study also revealed that there is no significant association between pretest knowledge scores and demographic variables

Conclusion

The following conclusions were drawn on the basis of the findings of the study. Before administration of self instructional module prenatal PIH women had poor knowledge regarding their self care management. After administration of self instructional module the there is significant improvement in knowledge. Thus it can be concluded that self instructional module was an effective method to improve knowledge among the prenatal mothers with PIH.

Nursing Implications

The results of this study have implications on nursing service, education, administration and nursing research.

Nursing service

1. The nursing personnel working in various health care settings should be given in service education to update their abilities in identifying learning needs of perinatal women to develop learning materials and health education.
2. Since the patient education is one of the functions of nursing personnel, they are accountable for the lack of knowledge regarding self care management of PIH observed among the clients. Hence education is an important function of nurse.
3. Deputing the nursing staff of the obstetrical department for continuing nursing education program would create more awareness and equip them with skills required to meet the educative needs of the pre and postnatal women

Nursing education

1. Based on the maternal and infant mortality and rates, it is essential that nurse education continue to emphasize the importance of health promotion, early detection, and prevention of complications regarding pregnancy induced hypertension, in nursing curricula.

2. The students should be trained to acquire the skill and technique of assessing the learning needs of prenatal women and plan teaching programmes based on the same.

Nursing research

1. There is a wide scope of nursing research in the area of pregnancy induced hypertension limited in the results of this study.
2. There is need for extended and intensive nursing research in the areas of mother's awareness and knowledge especially among clients with pregnancy induced hypertension, to develop better method of teaching better practice, in nursing care and develop more effective teaching material.

LIMITATIONS

1. Small sample size limited the generalization
2. Purposive sampling narrowed representation of population
3. Because of the smaller sample size, the investigator could not control the extraneous variables.

RECOMMENDATIONS

1. A comparative study can be conducted for two groups to find the effect of self instructional module on knowledge regarding self care management of PIH
2. A study can be conducted including all the problems related to hypertensive disorders during pregnancy, labour and puerperium.
3. The study can be replicated in the community level at primary health centres and subcentres.

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