



A Study to Assess The Effectiveness of Nursing Interventional Package on Management of Pregnancy Induced Hypertension Among Antenatal Mothers at Government Headquarters In Cuddalore

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ABSTRACT

Pregnancy and childbirth are one of the vital and important life events for the mother. PIH occurs in about 5% - 8% of all pregnancies and more severe cases are frequently associated with poor fetal and maternal outcomes in both developed and developing countries. The present study was carried out with the aim of assess the effectiveness of Nursing Interventional Package on management of Pregnancy Induced Hypertension and its outcome among antenatal mothers. A Pre-experimental design was adopted with one group pre-test and post-test (without control group) was undertaken in a headquarters hospital, Cuddalore. The quantitative approach was adopted. Fifty antenatal mothers were selected by using convenient sampling. Content validity of the tool on Nursing Interventional package was established by five experts from various departments of nursing, medicine and statistics. Chi-square test and independent t-test were used to detect effectiveness of intervention. The result shows that, in the pre-test mean score was 15.32 ± 2.622 and in the post- test mean score was 29.30 ± 3.547 respectively. The calculated paired' test value of $t = -22.0$. It shows that the Nursing Interventional Package was more effective in improving the level of knowledge on PIH and improved health status among PIH mothers. The present study concluded that Nursing Interventional Package was more effectiveness in management of health status among PIH mothers and it was not only cost effective but also easy to administer. The early identification, prevention, and evaluation of high blood pressure as the first measure in control of PIH.

Key words: Antenatal mothers, Education, Health status, Knowledge, Management, Nursing Interventional Package, Pregnancy Induced Hypertension.

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INTRODUCTION

Pregnancy is the state of a developing embryo and carrying fetus within the women's uterus. Pregnancy lasts for about nine months and estimated from the date of the woman's last menstrual period [1]. It is orderly divided into three trimesters and each trimester consists of roughly three months. Hypertension is one of the most common complications during pregnancy and it is one of the most risk factor and major causes of maternal morbidity rate and mortality rate leading to 10-15% of maternal deaths especially in the developing world [2]. The world health organization evaluation that at least one woman dies every seven minutes from complications of pregnancy hypertensive disorders. In globally, PIH could also be a big important public health threat both in developed and developing countries commit to high maternal deaths. PIH complicates 2%-8% of pregnancies within the western world [3]. However, the magnitude of PIH in developing countries reaches up to 16.7%. Additionally, the available literature in Ethiopia had showed a heavy burden of PIH that ranges from 2.23 to 18.25%. In women with gestational hypertension full assessment should be carried out in a secondary care setting by a healthcare professional that is trained in the management of hypertensive disorders. In women with gestational hypertension, take account of the following risk factors that require additional assessment and follow-up care for the Nulliparity, age 40 years or older, pregnancy interval of more than 10 years, family history of pre-

eclampsia, multiple pregnancy, BMI of 35 kg/m² or more, Gestational age at presentation, previous history of pre-eclampsia or gestational hypertension, Preexisting vascular disease, Preexisting kidney disease. An offer woman with gestational hypertension is an integrated package of ANC covering admission to hospital, treatment, measurement of blood pressure, testing for proteinuria [4]. The early identification prevention, detection and evaluation of high blood pressure recommend non-pharmacological treatment as the first measure in control of hypertension. Non pharmacological measures like progressive muscle relaxation, meditation, visualization, yoga, exercise breathing therapy are used to treat mothers with pregnancy included hypertension [5].

MATERIALS AND METHODS

The quantitative approach was adopted for this study, the pre-experimental with one group pre-test – post-test design, (without control group) was selected. In this study Nursing Interventional Package was independent variable and dependent variables were maternal blood pressure, weight, urine sugar and albumin and proteinuria and fetal movement count. The study was conducted in antenatal ward, at Government Headquarters Hospital, Cuddalore. Target population antenatal Mothers who were all diagnosed with Pregnancy Induced Hypertension with thirty to thirty-five weeks of gestation. The sample size consisted of fifty. Convenient sampling was used to select the fifty mothers from the target population. Inclusion criteria antenatal mothers who were able to read and write in Tamil, diagnosed as pregnancy induced hypertension during their previous visit, don't have any fetal anomalies, without pathological conditions like heart disease, diabetes mellitus, previously having hypertension and willing to participate and able to follow the instructions. Exclusion criteria antenatal mothers who were associated with other Medical problems during Pregnancy having symptoms of eclampsia, having fetal anomalies, twin gestation and polyhydramnios. Non adherent to treatment and uncontrolled blood pressure [6].

DATA COLLECTION PROCEDURE

Formal written permission was obtained from the Joint Director, GH hospital Cuddalore to conduct the study. The data was collected for the period of eight weeks from in the month of January 2021. Prior information and written informed consent was obtained before the data collection from the study participants with assurance of confidentiality. Pretest data was collected by the investigator by using structured questionnaire and bio physiological measures also was assessed. Samples were received Nursing Interventional Package was given for one hour per day for seven days. Educated on management of PIH and the pamphlet was issued. Demonstration of antenatal exercise was done. Educated on hypertensive diet. On seventh day the investigator was collected the post test data from the sample by using same structured questionnaire. Daily diary was maintained till delivery. Follow up was done first two days following delivery for management of PIH and its outcome was assessed [7].

RESULTS

This study shows that the demographic information of antenatal mothers. Out of 50 samples 18 (36%) were belongs to age group of 18-22 years, 24(48%) were belongs to age group of 23-26 years, 8(16%) were belongs age group of 27-30 years and none of them were belongs to 30 years above. Regarding mother's occupation 27(54%) was home maker, 7(%) were daily wages, 16(%) were private employee, 16(32%) were degree holder and none of them belongs to government employee. Majority of mothers 28(56%) were belongs to nuclear family, 13(26%) were belongs to joint family and 9(18%) were belongs to extended family. Regarding age at marriage 18(36%) were 18-22 years, 24(48%) were in the age group of 22-26 years, 8(16%) 26-30 years and none of them belongs to 30 years and above. In Immunization status 25(50%) were immunized and 25(50%) were not immunized. Dietary habits 3(6%) were belongs to vegetarian and 47(94%) were belongs to non-vegetarian.

Table 1. Statistical significance of the data (n=50)

| Test | Mean | Standard deviation | 't' value | 'p' value |
|-----------|-------|--------------------|-----------|----------------------------|
| Pre-test | 15.32 | 2.622 | -22.00 | 0.001** S |
| Post-test | 29.30 | 3.547 | | |

*****p* < 0.001, highly significant**

This study shows that, the mean score effectiveness of nursing interventional package on management on health status among antenatal mothers in the pre-test was 15.32 ± 2.622 and in the post-test was 29.30 ± 3.547 respectively. The calculated paired 't' test value of t = -22.0 with p < 0.001 at level shows statistically highly significant difference between comparison of the Pre-test and post- test of the level of health status among antenatal mothers. The study shows that the demographic variable age at

marriage in years had shown statistically significant association post-test level of health status in Pregnancy Induced Hypertension and its outcome among antenatal mothers with chi-square value of ($\chi^2=6.72$, d.f=2) at $p<0.05$ level. The other demographic variables had not shown significant post-test level of health status in Pregnancy Induced Hypertension and its outcome among antenatal mothers respectively [8].

This study shows that out of the 50 mothers who were interviewed, All the mothers 50 (100%) of study population were in the gestational age at delivery in weeks between 37-40 years. Most of the mothers were 27 (54%) had comes under normal spontaneous vaginal delivery in mode of delivery, 18(36%) of mothers had induction of labor, 5(10%) of mothers had cesarean section and none of them had instrumental delivery. Regarding degree of perineal tear 29(58%) of mothers had first degree , 14(28%) of mothers had second degree, 17(14%) of mothers had third degree of perineal tear. Most of the mothers blood pressure after delivery, 34(68%) had comes under 120/80-140/90mmHg, 16(32%) had comes under 140/90-160/100mmHg and none of the mothers had comes under above 160/100mmHg [9]. Regarding APGAR at one minute 11(22%) of newborn had 4-6 score, 39(78%) of newborn had 7-10 score and none of the newborn had score below 4. Regarding APGAR at five minute 50(100%) of newborn had 7-10 score and none of the newborn had 4-6 and below 4 score. Most of 46(92%) of mothers had within half an hour after delivery, 4(8%) of mothers had after 2 hrs and none of the mothers had after 3hrs and after 4 hrs initiation of breast feeding done after delivery. Most of the newborn baby weight 3(6%) of newborn had 1.5-2.0 kg, 17(34%) of newborn had 2.1-2.5 kg, 30(60%) of newborn had 2.5-3.0 kg and none of the newborn had above 3 kg. Majority of 3(6%) of newborn had admission in NICU, 47(94%) of newborn not had admission in NICU. Regarding neonatal outcome 47(94%) of newborn were healthy , 3(6%) of newborn were LBW and none of the newborn were IUGR and IUD/ still born [10].

DISCUSSION

- In pre-test, majority of the antenatal mothers 41 (82%) had better health status and 9 (18%) had poor health status. In post-test, majority of the antenatal mothers 44 (88%) had good health status and 6 (12%) had better health status and none of them had poor health status.
- In the pre-test mean score was 15.32 ± 2.622 and in the post-test was 29.30 ± 3.547 respectively. The calculated paired 't' test value of $t = -22.0$. It shows that nursing interventional package was effective in improved health status among pregnancy induced hypertensive mothers.
- The demographic variable such as Monthly income in rupees and after marriage how many years to get conceived had shown statistically significant association pre-test level of health status in Pregnancy Induced Hypertension and its outcome among Antenatal mothers with chi-square value of ($\chi^2=6.747$, d.f=2) and ($\chi^2=3.82$, d.f=1) at $p<0.05$ level.
- The demographic variable age at marriage in years had shown statistically significant association post-test level of health status in Pregnancy Induced Hypertension and its outcome among Antenatal mothers with chi-square value of ($\chi^2=6.72$, d.f=2) at $p<0.05$ level. The other demographic variables had not shown statistically significant post-test level of health status in Pregnancy Induced Hypertension and its outcome among antenatal mothers respectively.
- The mothers 50 (100%) of were in the gestational age at delivery in weeks between 37-40 years. Most of mothers 27(54%) came under normal spontaneous vaginal delivery. Most of the mothers 29(58%) were first degree of perineal tear. Majority of the mothers 34(68%) were 120/80-140/90mmHg blood pressure after delivery. Most of the newborns 39(78%) were obtained one minute APGAR score was 7-10. All the newborns 50(100%) were at five minute APGAR score was 7-10. Most of the postnatal mothers 46 (92%) were belongs to initiation of breast feeding within half an hour after delivery. Majority of the baby weight 30(60%) were belongs to 2.5 to 3 kg. Most of the newborn 47 (94%) were not had admission in NICU. Majority of the mothers 47 (94%) were had healthy neonatal outcome.

CONCLUSION

The Nursing Interventional Package was effective in management of Pregnancy Induced Hypertension. This Package was not only cost effective but also easy to follow, it was affordable and also it improves quality of life. This study found that pregnant mothers with hypertension had improved level of knowledge and improved level of health status on PIH. So as a nurse midwives should give proper assessment, early identification of complication and implement timely management of maternal and fetal complications during obstetrical care.

CONFLICT OF INTEREST

No conflict of interest.

REFERENCES

1. AbadiKidanimariam Berhe, (2020). Awareness of pregnancy induced hypertension among pregnant women in Tigray Regional State, Pan African Medical Journal. page:1-7.
2. Bharti Mehta, Vijay Kumar, (2015). Hypertension in Pregnancy: A Community-Based Study, Indian Journal of Community Medicine, Vol -40; Issue -page:273-277.
3. Chih-Chieh Yang, MD, Pei-Ling Tang, PhD, et al (2018). Maternal pregnancy-induced hypertension increases subsequent neonatal necrotizing enterocolitis risk in Tiwan, Medicine. 97:31, page.no: 1-5.
4. DebajaniNayak, (2015). Effectiveness of Structured Teaching Programme on Pregnancy Induced Hypertension among Primigravida Mothers, Cloud Publications International Journal of Advanced Nursing Science and Practice Volume 2, Issue 1, pp. 49-53.
5. Gogaram, Prasad H, MishaS,(2018). Prevalence of pregnancy induced hypertension in Churu District. Indian Journal Basic Applied Medical Research, vol-7(3), page.no:271-6.
6. Gomati. B, Anuchithra. S, (2019). Effectiveness of vascular symptom management package on vascular symptoms, quality of life, and perinatal outcome among pregnant women with pregnancy-induced hypertension, International Journal of Medical Science and Public Health Online, Vol -8, Issue -10, page: 818-822.
7. Kolluru V, Ramya Y, Harika, Kaul R. (2016). Maternal and perinatal outcome associated with pregnancy induced hypertension, International Journal Reproduction Contraception Obstetrics and Gynecology; vol-5(10), page.no:3367-71.
8. Komati V. (2015). Effectiveness of guided imagery on level of blood pressure among PIH mothers in selected hospital at Trichy. International Journal of Advance Nursing Manage, vol-3, pag.no:245-52.
9. Kumari Khushboo1, Dr. AvinashKaur Rana (2018). The effectiveness of the “Nursing Interventional Package” on the management of pregnancy- induced hypertension for antenatal mothers, International Journal of Advance Research and Development, (Volume3, Issue7) page:118-123.
10. VasaviKolluru, Ramya Y. Harika, Rajesh Kaul, (2016). Maternal and perinatal outcome associated with pregnancy induced hypertension, International Journal of Reproduction, Contraception, Obstetrics and Gynecology, vol.5(10), page.no:3367-3371.

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