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Evaluate The Effectiveness Of Guided Imagery On Blood Pressure Among Pregnancy Induced Hypertensionmothers At Government Hospital, Chengalpattu District.

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Abstract
Background: Pregnancy-induced hypertension is the prevailing medical disorder of pregnancy that indicates 6–10% of pregnancies all around the world. It is the second direct cause of maternal mortality globally. Present study was aimed to eevaluate the effectiveness of Guided imagery on level of blood pressure among pregnancy induced hypertension (PIH) mothers.
Methods: A Quantitative research approach with Quasi experimental- pre-test post test control group design was adopted. Study was conducted among 60 antenatal mothers who fulfilled the inclusion criteria were selected by using purposive sampling technique at selected government Hospital,chengalpattu district.The data were collected by using structured interview questionnaires.The intervention group started relaxation technique for 15 minutes twice a day for four weeks. The level of blood pressure were monitored at the beginning and four weeks after the intervention. Data were analyzed through SPSS 21, using Chi-square test and paired t-test.
Results: The post-test mild level of blood pressure is 25(83.3%) and moderate level of blood pressure is 5(16.7%) in experimental group. The post-test mild level of blood pressure is 26(86.7%) and moderate level of blood pressure is 4(13.3%) in control group. There was a statistically significant difference between the pre-test and post-test level of blood pressure among experimental group at $p < 0.05$.
Conclusion: This study highlights the critical need to comprehend the benefits of guided imagery approaches for lowering blood pressure in pregnancy induced hypertension(PIH) mothers.

Key words: Blood pressure, Pregnancy induced hypertension mothers, Guided imagery.

Introduction: A woman's most rewarding experience in life is becoming pregnant, but it can also co-occur with conditions like high blood pressure (BP). Pregnancy-induced hypertension (PIH) is the word used to representexcessive blood pressure during pregnancy. In roughly 7-10% of pregnancies, it happens[21]. Pregnancy induced hypertension(PIH) is one of the utmost recurrent sources of morbidity in mothers and newborns. A global assessment indicates that hypertension complicates approximately 10% of pregnancies. Pregnancy-induced hypertension is characterized by blood pressure (BP) of at least 140/90 mmHg measured twice after a rest period, or at least 160/110 mmHg assessed once in a woman who was previously normotensive. Approximately 6.9% of Indian women have pregnancy-induced hypertension (PIH). PIH occurrences vary across India's many regions, ranging from 5 to 15%[4].
High blood pressure, along with or without proteinuria and oedema, is the syndrome known as pregnancy-induced hypertension (PIH). Other clinical manifestations typically appear late in pregnancy and go away once the conceptus is delivered[1]. The 2013 guidelines of the American College of Obstetricians and Gynaecologists (ACOG) state that a pregnant mother whose blood pressure (BP) has previously been normal is eligible for PIH if her systolic blood pressure is 140 mmHg or higher, or if her diastolic blood pressure is 90 mmHg or higher, and these events occur after 20 weeks of gestation [1,21]. Systolic blood pressure (SBP) >140 mmHg and diastolic blood pressure (DBP) >90 mmHg are the position for it. Mild (SBP 140-149 and DBP 90-99 mmHg), moderate (SBP 150-159 and DBP 100-109 mmHg), and severe (SBP ≥ 160 and DBP ≥ 110 mmHg) are the category given by the World Health Organisation[3] . Improved blood vessel resistance is a result of raised blood pressure.
The overall goal of guided imagery is to help the expectant mother visualize herself in a safe, happy, peaceful environment. To this end, several imaging techniques are used. A non-pharmacological method called guided visualization may help pregnant women with hypertension reduce their blood pressure. These methods, by eliciting different cognitive pictures, improve the pregnant woman's emotional state and quality of life by diverting her attention from her distressing experiences and thoughts about day-to-day living. The main purpose of guided imagery is to improve creativity and imagination while increasing problem-solving skills through the visualization of potential outcomes from many choices[6]. Guided imagery is a mental imagery technique where an individual visualizes pleasant images or scenarios. The individual helps the body relax and cultivate a sense of well-being by using all of their senses in their imagination. A lot of women find that using guidedimagery throughout labour and delivery makes them feel more at ease, secure, and capable of handling the process. When it comes to helping pregnant women with hypertension maintain their health, nurses play a critical role. While preparing women for childbirth, the most crucial thing that

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nurses teach them is relaxation techniques[7].It is very important to prepare women about the warning features in order to promoting their health and prevention of disease[21].

Statement of the problem
Evaluate the effectiveness of Guided imagery on Blood Pressure among Pregnancy Induced Hypertension mothers.

Objectives
1. To assess the level of Blood Pressure among Pregnancy Induced Hypertension(PIH) mothers in experimental and control group.
2. To evaluate the effectiveness of Guided imagery on level of Blood Pressure among Pregnancy Induced Hypertension(PIH) mothers between experimental and control group.
3. To associate the level of Blood Pressure among Pregnancy Induced Hypertension(PIH) mothers in experimental group with their selected demographic variables.

Methodology:
This quasi-experimental study was carried out at the Government Hospital in Chengalpattu District from September to December 2023. Using the purposive sample technique, sixty pregnant women with PIH were chosen in accordance with the sampling criteria.Thirty of the sixty pregnant women with PIH were in the experimental group, and thirty were in the control group.The inclusion criteria were pregnancy-induced hypertension (PIH) mothers with gestational age between 20 to 28 weeks, mild PIH (SBP 140–149 mmHg and DBP 90–99 mmHg), moderate PIH (SBP 150–159 mmHg and DBP 100–109 mmHg), and who were equal to communicate in Tamil and English to participate in this study. Pregnancy-induced hypertension (PIH) mothers with severe PIH (SBP ≥160 mmHg and DBP ≥110 mmHg) and mothers with complications such as diabetes mellitus, heart disease, renal diseases, bleeding disorders, and multiple pregnancies other than PIH were excluded. After explaining the study goals, the experimental group was asked to complete a written informed consent form. By maintaining the confidentiality of information, the contact number of pregnancy-induced hypertension (PIH) mothers was obtained.
The data were collected by using structured interview questionnaires. Demographic variables such as age, religion, educational status, type of occupation, monthly income of the family, type of family, diet, and clinical variables such as weeks of gestation, obstetric history, type of delivery, previous history of PIH, and family history of PIH were collected. The level of blood pressure was monitored in both the experimental and control groups. Following the pre-test, intervention was carried out in the experimental group. The investigator educated the samples to do the guided imagery for 15 minutes twice a day for 4 weeks. Periodic reinforcement and telephonic reminders were given to ensure their adherence to the preventive strategies. At the end of the fourth week, a post-test was conducted. The outcome of the study was evaluated by comparing the post-test level of blood pressure in the experimental and control groups.

RESULTS

Table 1. Frequency and Percentage distribution of Pregnancy Induced Hypertension(PIH)mothers according to their Demographic Characteristics N = 60

Demographic Characteristics	Experimental Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Age				
a. 18 - 23 years	**15**	**50**	**13**	**43.3**
b. 24 - 29 years	9	30	10	33.3
c. 30 - 35 years	6	20	7	23.4
Religion				
a. Hindu	**24**	**80**	**24**	**80**
b. Muslim	3	10	3	10
c. Christian	3	10	3	10
d. Others	0	0	0	0
Educational status				
a. No formal education	3	10	1	3.3
b. Primary education	3	10	2	6.7
c. Secondary education	**10**	**33.3**	**12**	**40**
d. Higher education	8	26.7	11	36.7
e. Graduate education and above	6	20	4	13.3
Type of occupation				
a. Home Maker	**23**	**76.7**	**21**	**70**
b. Self Employed	2	6.7	3	10
c. Government Employed	0	0	0	0
d. Private Employed	5	16.6	6	20

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Monthly income of the family				
a. Below Rs. 5000	0	0	1	3.3
b. Rs. 5001-10000	5	16.6	4	13.3
c. Rs. 10001-15000	**19**	**63.4**	**20**	**66.7**
d. Rs. 15001 and above	6	20	5	16.7
Type of family				
a. Nuclear	**20**	**66.7**	**23**	**76.7**
b. Joint	10	33.3	7	23.3
c. Extended	0	0	0	0
Diet				
a. Vegetarian	2	6.7	1	3.3
b. Non- Vegetarian	**28**	**93.3**	**29**	**96.7**

Table.1: summarizes the demographic profile of the study participants. among 60 participants,out of which 30 were in experimental group and 30 were in control group. In experimental group, the frequency and percentage distribution of Pregnancy induced hypertension(PIH)mothers showed that, majority of the samples 15(50%) belonged to the age group between 18- 23 yrs, 24(80%) were Hindu, 10(33.3%) had a secondary education, 23 (76.7%) were home maker ,19(63.4%) were having monthly income of Rs.10000-15001/- , 20(66.7%)were from Nuclear family, 28(93.3%)were non-vegetarian. In control group, among 30 participants,frequency and percentage distribution of Pregnancy induced hypertension (PIH) mothers showed that, majority of the samples 13(43.3%) belonged to the age group between 18- 23 yrs, 24(80%) were Hindu, 12(40%) hadsecondary education, 21 (70%) were home maker ,20(66.7%) were having monthly income of Rs.10000-15001/- , 23(76.7%)were from Nuclear family ,29 (96.7%) were non-vegetarian.

Fig.no.1 Percentage distribution amongPregnancy Induced Hypertension(PIH) mothers based on weeks of gestation

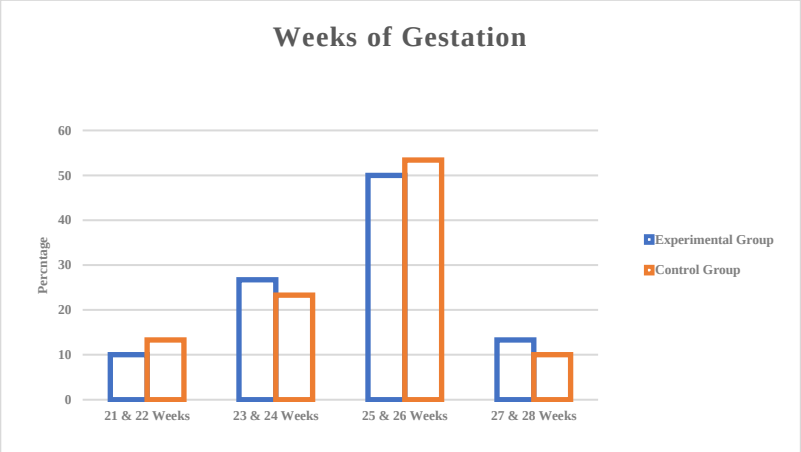

Figure.no 1 presents that, majority of the samples pregnancy induced hypertension(PIH) mothers 15(50%) were between 25&26 weeks of gestation in the experimental group and 16(53.4%) between 25&26 weeks of gestation in the control group.

Table 2 Frequency and Percentage distribution of Pregnancy Induced Hypertension (PIH) mothersbased to their clinical variables N = 60

Demographic Characteristics	Experimental Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Obstetric History				
Gravida				
a. 1	**16**	**53.4**	**21**	**70**
b. 2	11	36.6	8	26.7
c. 3	3	10	1	3.3
d. 4 and above	0	0	0	0
Parity				
a. 0	**19**	**63.3**	**22**	**73.3**
b. 1	8	26.7	7	23.4
c. 2	3	10	1	3.3
d. 3	0	0	0	0
e. 4 and above	0	0	0	0
Abortion				

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a. Yes	3	10	1	3.3
b. No	**27**	**90**	**29**	**97.7**
Previous history of PIH				
a. Yes	6	20	5	16.7
b. No	**24**	**80**	**25**	**83.3**
Family history of PIH				
a. Yes	6	20	5	16.7
b. No	**24**	**80**	**25**	**83.3**

Table. 2: summarizes the clinical variables that, majority of the samples pregnancy induced hypertension(PIH) mothers 16(53.4%) were primi gravida, 19(63.3%) were primipara, 27(90%) were never had an abortion, 24(80%) never had a previous history of PIH, 24(80%) never had a family history of PIH in experimental group and 21(70%) were primi gravida, 22(73.3%) were primipara, 29(97.7.%) were never had an abortion before, 25(83.3%) never had a previous history of PIH, 25(83.3%) never had a family history of PIH in control group.

Fig no. 2: Percentage distribution among pregnancy induced hypertension(PIH) mothersbased on type of delivery

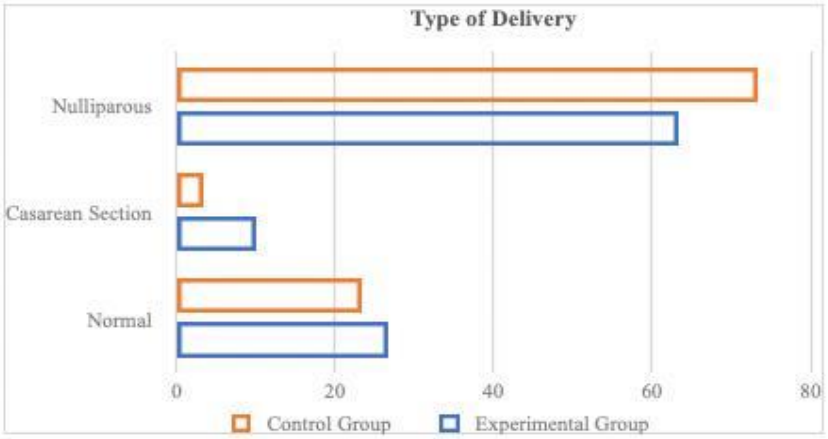

Figure.no 2presents that , pregnancy induced hypertension(PIH) mothers 8(26.6%) had a normal delivery, 3(10%) underwent cesarean section and 19(63.4%) were nulliparousin experimental group and 7(23.4%) had a normal delivery,1(3.3%) underwent a cesarean section and 22(73.3%) were nulliparousin control group.

Table 3. Frequency and Percentage Distribution of Level of Blood Pressure among Pregnancy Induced Hypertension(PIH) mothers in Experimental and Control Group N = 60

Group	Pretest				Post test			
	Mild		Moderate		Mild		Moderate	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Experimental	15	50	15	50	25	83.3	5	16.7
Control	18	60	12	40	26	86.7	4	13.3

Table .3 : In experimental groupthe pre-test distribution level of blood pressure, 15(50%) had mild level of blood pressure, 15(50%) evenly had moderate level of blood pressure and post-test distribution level of blood pressure , 25(83.3%) had mild level of blood pressure, 5(16.7%) had moderate level of blood pressure. In control group the pre-test distribution level of blood pressure, 18(60%) had mild level of blood pressure, 12(40%) had moderate level of blood pressure and post-test distribution level of blood pressure , 26(86.7%) had mild level of blood pressure, 4(13.3%) had moderate level of blood pressure.

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Fig no. 3 line graph showing the mean of Pre-test and Post-test level of systolic and diastolic blood pressure among pregnancy induced hypertension(PIH) mothers in experimental group

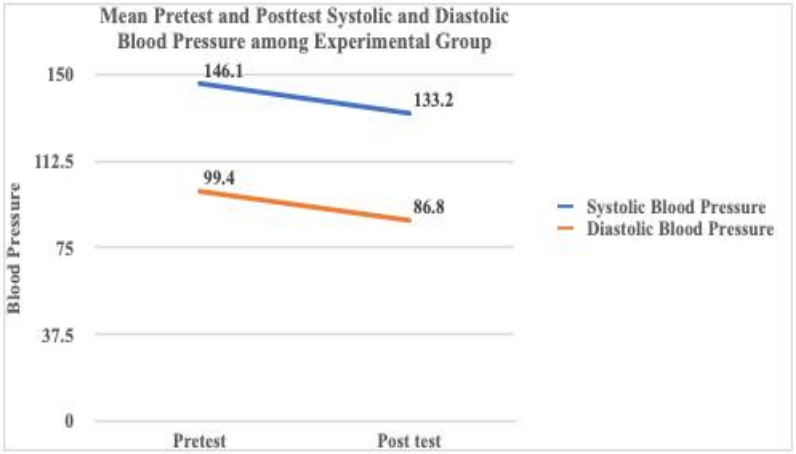

Figure.no 3 presents that, pre-test mean level of systolic blood pressure is 146.1 and diastolic blood pressure is 99.4among pregnancy induced hypertension(PIH) mothers. The post-test mean level of systolic blood pressure is 133.2 and diastolic blood pressure is 86.8among pregnancy induced hypertension(PIH) mothers in experimental group.

Discussion: The result of present study shows there is a significant difference in BP before and after intervention. So, Guided imagery can be used as an effective add on intervention for the management of women with hypertension during pregnancy.The present study was aimed to assess an effect of guided imagery on level of blood pressure among pregnancy induced hypertension(PIH) mothers. Findings of the study showed that a safe method and helps to reduce systolic and diastolic blood pressure. So there is need to focus on use of non-pharmacological methods to manage PIH and it can be implemented throughout the pregnancy.
Summarizes the demographic variables of the study participants,among 60 participants the frequency and percentage distribution of Pregnancy induced hypertension(PIH) mothers showed that majority of the samples 15(50%) belonged to the age group between 18- 23 yrs, 24(80%) were Hindu, 10(33.3%) hada secondary education, 23 (76.7%) were home maker ,19(63.4%) were having monthly income of Rs.10000-15001/- , 20(66.7%)were from Nuclear family ,28(93.3%) Pregnancy induced hypertension(PIH) mothers were non-vegetarian.These findings were consistent with the study conducted bySS. Reshma, Alice Salins*et al.* in.,(2014) reported that, among the subjects, majority were in the age group 18 to 26 years, majority had the income of 4501 to 6000, majority were Hindus, housewives, subjects from rural background, with high school education. 50% of subjects were vegetarians and 50% were mixed groups. Majority did not have previous history of PIH, had not undergone medical treatment for hypertension and PIH in previous pregnancy[8].
The finding revealed that, pregnancy induced hypertension(PIH) mothers pre-test mean level of systolic blood pressure is 146.1 and diastolic blood pressure is 99.4were significantly higher than the post-test mean level of systolic blood pressure is 133.2 and diastolic blood pressure is 86.8in the experimental group.There was a statistically significant difference between the pre-test and post-test level of blood pressure among experimental group at $p < 0.05$.This result was consistent with Shasi Bala and Lekha Viswanath.,(2020) showed thatthere was significant ($P<0.001$) difference in the systolic blood pressure and diastolic blood pressure in pre-test and post- test. The mean pre-test scores of Systolic BP was 146.45 & diastolic BP was 92.06 significantly higher than the mean of post -test scores of Systolic BP was 139.81 & diastolic BP was 87.63[1].

Finding related to associate the level of Blood Pressureamong Pregnancy Induced Hypertension(PIH) mothers in experimental group with their selected demographic variables. The data analysis revealed that there is no significant association between level of Blood Pressure among Pregnancy Induced Hypertension(PIH) mothers with selected demographic variables.

Conclusion
The study's conclusions showed that guided imagery can lower blood pressure among pregnancy induced hypertension(PIH) mothers and it will improve the quality of life by preventing the complications of high blood pressure which includes the stability in physiological, psychological, vocational and lifestyle aspects. Health care providers should strengthen the awareness of pregnant women about pregnancy-induced hypertension in antenatal care clinics and at the community level.Hence, it is concludes that this intervention is simple, effective, and has a mind-body and spirit approach to reduce blood pressure among antenatal women.

Conflict of Interest: The investigator has no conflict of interest.

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