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EFFECT OF MUSIC THERAPY ON BLOOD PRESSURE AMONG ANTENATAL WOMEN WITH PREGNANCY INDUCED HYPERTENSION

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ABSTRACT: Pregnancy is a necessity for human life; it is essential for the regeneration of generation and represents the time of the formation of a new creature.[1] Hypertension caused by pregnancy is defined as developing hypertension as a direct result of the gravid condition.[2] It occurs in about 7-10% of all pregnancies. Listening to music can have a profound effect on our mind and body, especially the slow, slow-moving classical music. This type of music can have a positive effect on our physical activity, lowering heart rate and heart rate, lowering blood pressure, and lowering stress hormones.[3] The aim of the present study was to observe the effect of music therapy on level of blood pressure among the antenatal women with pregnancy induced hypertension in selected hospitals of Punjab. Quasi experimental research approach and non randomized control group design was used to carry out study. 50 antenatal women (25 in experimental and 25 in control group) were selected. The results of the study depicts that on pre interventional level of blood pressure on morning day 1st in experimental group was systolic blood pressure was 154.48±7.113 and diastolic blood pressure was 98.08±4.222. The post interventional level of blood pressure in experimental group on evening day 2nd was systolic blood pressure was 125.92±6.794 and diastolic blood pressure was 87.52±5.455 which shows a significant decrease in level of blood pressure.

Key words: music therapy, blood pressure, antenatal women, pregnancy induced hypertension.

I. INTRODUCTION:

Pregnancy is a necessity for human life; it is essential for the regeneration of generation and represents the time of the formation of a new creature. This begins in pregnancy, lasts about 40 weeks and ends with the birth of a fetus.[1] Like unexpected health problems such as high blood pressure, mental health problems such as depression and anxiety can affect any pregnant woman.[4] Hypertension caused by pregnancy is defined as developing hypertension as a direct result of the gravid condition. It occurs in about 7-10% of all pregnancies. One in 11 women may die from pregnancy-related complications in developing countries, compared with 1 in 5 in developed countries.[2] The incidence of hypertension in primigravida is 16% and 7% in multigravida. According to the National Family Health Survey the prevalence of high blood pressure in Punjab is 15.7%. Every day a mother breathes one last breath after giving birth in Punjab with an average of 370 maternal deaths reported throughout Punjab in 2019-20.[5] Listening to music can have a profound effect on our mind and body, especially the slow, slow-moving classical music. This type of music can have a positive effect on our physical activity, lowering heart rate and heart rate, lowering blood pressure, and lowering stress hormones.[3]

II. MATERIALS AND METHODS:

In view of nature of problem qualitative research approach and non randomized control group design was used to solve the objectives of the study. Selected Civil hospitals of Punjab were used as research setting. 50 antenatal women were selected through purposive sampling technique. 25 were in experimental group and 25 were in control group. Data was collected through blood pressure recording sheet with help of

Sphygmomanometer and stethoscope. Pre and post interventional level of blood pressure was collected from both the groups. Music intervention was provided to experimental group for two consecutive days in 4 sessions. After providing music therapy to experimental group post interventional level of stress was measured for both the groups. Comparison of pre interventional and post interventional level of blood pressure was done for both the groups.

III. RESULTS:

a. Frequency distribution of selected demographic and clinical variables of antenatal women and baseline comparison of experimental and control group N=50

S. No.	Socio demographic Variables	Group		χ^2 value	df	*p*-value
		Exp (n=25)	Ctrl (n=25)			
1.	**Age (years)**					
	18-27	13	12	.088	2	.957^{NS}
	28-37	10	11			
	>37	2	2			
2.	**Educational Status**					
	Illiterate	12	13	.516	3	.947 ^{NS}
	Middle	7	5			
	Senior secondary	3	4			
	Graduation or above	3	3			
3.	**Occupation**					
	Working	11	10	.082	1	.774 ^{NS}
	Non-working	14	15			
4.	**Type of family**					
	Nuclear	10	9	.085	1	.771 ^{NS}
	Joint	15	16			
5.	**Family Income (Rs. /month)**					
	<10000	12	11	.102	2	.950 ^{NS}
	10001-20000	5	5			
	20001-30000	8	9			

S. No.	Clinical Variables	Group		χ^2 value	df	*p*-value
		Exp (n=25)	Ctrl (n=25)			
1.	**Gravida**					
	Primigravida	9	10	.085	1	.771^{NS}
	Multigravida	16	15			
2.	**Gestational Period (weeks)**					
	21-25	3	4	.680	3	.946^{NS}
	26-30	13	14			
	31-35	5	3			
	36 or above	4	4			
3.	**Pre-conceptional education***					
	No	25	25			
4.	**H/o previous abortion**					
	Yes	9	5	1.587	1	.208^{NS}
	No	16	20			
5.	**Previous use of any alternative therapy**					
	Yes	4	5	.136	1	.713^{NS}
	No	21	20			
6.	**Previous h/o PIH**					
	Yes	14	15	.082	1	.774^{NS}
	No	11	10			

Table 1: Frequency and percentage distribution and baseline comparison of both groups

Table 1 depicts the frequency and percentage distribution of socio demographic and clinical variables of antenatal women with pregnancy induced hypertension and shows that the experimental and control group are same and are comparable at baseline.

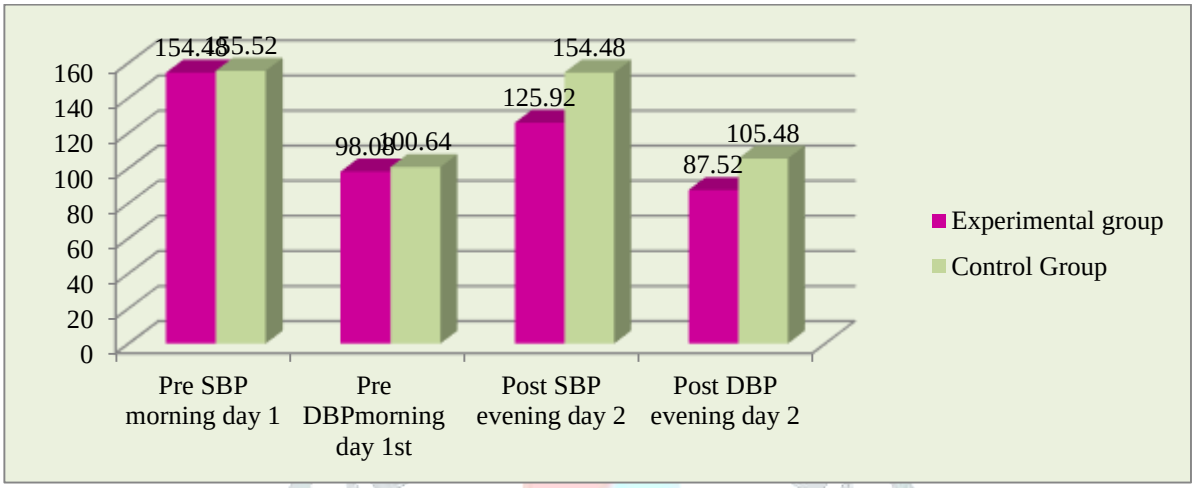
b. Assessment and comparison of pre and post interventional level of blood pressure in experimental and control group. N=50

S. No	Timing/ Day	Blood Pressure	Exp (n =25) Mean SD	Ctrl (n =25) Mean SD	MD	t-value	df	*p*-value
1.	Pre Morning-Day 1st	SBP	154.48±7.113	155.52±10.252	-1.04	.417	48	.679^{NS}
		DBP	98.08±4.222	100.64±3.451	-2.56	2.347	48	.023*
2.	Post Evening-Day 2nd	SBP	125.92±6.794	154.48±7.113	28.560	14.518	48	.001**
		DBP	87.52±5.455	105.48±7.264	17.960	-9.885	48	.001**

NB: *Exp = Experimental, Ctrl = Control, SD = Standard deviation, MD= Mean difference, df = Degree of freedom. NS= Non-Significant, *= significant at 5%, **= significant at 1%*

Table 2: Assessment and comparison of pre and post interventional level of blood pressure in both groups

Table 2: depicts the assessment and comparison of pre interventional of level of blood pressure in experimental and control group.



c. Association of the selected demographic and clinical variables of antenatal women with pregnancy induced hypertension with pre interventional level of blood pressure:

There was significant association of occupation with pre interventional level of blood pressure in control group.

IV. DISCUSSION:

The results of the present study depicts that on day 1st morning pre interventional level of blood pressure was systolic blood pressure was 154.48±7.113 and diastolic blood pressure was 98.08±4.222 in experimental group and on evening day 2nd systolic blood pressure was 125.92±6.794 and diastolic blood pressure was 87.52±5.455 showing a significant decrease in blood pressure among antenatal women.

The results of the present study were supported studies conducted to evaluate whether music therapy improves the effectiveness of treatment for pregnancy-related hypertension. The 60 patients with hypertension caused by pregnancy were randomly divided into 2 groups of 30 subjects each. One group received music therapy in addition to the usual treatment and the other group received only general treatment. Systolic blood pressure, diastolic blood pressure, Hamilton anxiety scale score (HAM-A) and Hamilton Depression scale (HAM-D) and serum angiotensin II levels were assessed before and after treatment. At the end of treatment for a short form of health survey (Sf-36) scores were compared between groups. Systolic blood pressure, diastolic blood pressure, HAM-A and HAM-D scores were all significantly lower following treatment in patients receiving music treatment compared with those in the control group. Adding quality of life outcomes were higher in patients receiving music treatment and their serum angiotensin II levels were significantly lower than those in the control group. These results suggest that music therapy is an effective supplement in the treatment of PIH as it lowers blood pressure, lowers serum angiotensin II, reduces negative emotions and improved quality of life.[6]

V. CONCLUSION:

Pregnancy induced hypertension affects pregnant women and is significant cause of maternal, fetal and neonatal mortality and morbidity. Music therapy uses music to promote positive changes in the well being of an individual mood and behaviour. The research study concluded that music therapy was effective in reducing level of blood pressure and helps in increase treatment efficacy among antenatal women with pregnancy induced hypertension. The study provided benefit to antenatal women from the music therapy. Hence music therapy was effective.

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