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Kripa Angeline., Nirmala S and Renuka K



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Research Article

A STUDY TO ASSESS THE EFFECTIVENESS OF MUSIC THERAPY ON HYPERTENSION AMONG TEACHERS IN SELECTED SCHOOLS AT PUDUCHERRY

Kripa Angeline¹, Nirmala S² and Renuka K³

^{1,2,3}Medical and Surgical Nursing Dept, Kasturba Gandhi Nursing College, Puducherry, India

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ABSTRACT

Introduction: Relaxation of the body and mind is essential for a health life. The high prevalence of hypertension in the general population makes the identification and treatment of affected patients, a top priority for clinicians. Music therapy is the clinical evidence on quality of life and the blood pressure of hypertensive patients. **Objectives:** To assess the pretest level of blood pressure among school teachers with hypertension, to assess the effectiveness of music therapy among school teachers with hypertension, to associate the effectiveness of music therapy on blood pressure with the selected demographic & clinical variables. **Methodology:** Data collection proceeded with prior permission and consent from the concerned. Purposive sampling technique were used for the selection of sample from different schools in puducherry. Then the school teacher were given prerecorded music CD which for 20-30 minutes for experimental group. The music therapy was continued in the consecutive days in the morning session with five session of music therapy again the blood pressure was assessed during the post test. **Findings:** The research findings revealed that the level of Hypertension after music therapy was pre Hypertension 3(7.5%), Hypertension stage 1 is 24(60%), Hypertension stage 2 is 13(32.5%). The comparison of mean, standard deviation, mean difference, t-value, and 'p' were used to assess the value of post level of blood pressure in the experimental group. The pre – test blood pressure and post test blood pressure which clearly reveals the effectiveness of music therapy in reducing the blood pressure. Demographic variables of the school teacher like history of hypertension with relationship is statistically associated with stages of hypertension at p value <0.05. **Conclusion:** The study findings will enable the nurses to plan and implement health education programme regarding the prevention of hypertension and its various treatment modalities in future.

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INTRODUCTION

Relaxation of the body and mind is essential for a healthy life. The prevalence of hypertension has been increasing in developing countries; and community surveys have documented that it is more prevalent among the Indians between the third and sixth decades of their life. Hypertension is a major modifiable risk factor for cardiovascular disease, which accounts for 57 and 24% of all deaths due to stroke and coronary heart disease respectively. Blood pressure is a continuous physiologic trait, which when increases, is called "the silent killer" because people who have it are often symptoms free. Prolonged blood pressure elevation eventually damages blood vessels through the body. The high prevalence of hypertension in the general population makes the identification and treatment of affected patients, a top priority for clinicians.

According to WHO 2002, 600 million people are estimated to be affected with hypertension world-wide and hypertension

causes five million premature deaths each year world- wide. Hypertension causes 13% of global fatalities. Based on the statistics given by National Heart, Lungs and Blood Institute 2010, the incidence of the primary hypertension was 300 new cases annually and in India the estimated undiagnosed prevalence is about 58,735,609 and the diagnosed cases is about 195,785,035 annually. Nearly seventy percent of the diseases have their roots in stress. Nervous breakdowns, high blood pressure, depression, heart disease and ulcers are on the rise. There are many ways to remove the stress (Mumbai Today, 2002). In the advancing world there are lots of relaxation techniques like yoga, meditation, breathing exercise, laugh therapy and music therapy for reducing stress, which is a risk for hypertension.

In this modern world stress is increasing day by day. Stress leads to hypertension. According to World Health Organization (2009) 26.4% of adults in the world and 24.6% in India are suffering from hypertension. Prevalence of hypertension in industrialized countries is 25% & mostly affected is adult

*Corresponding author: *Kripa Angeline*

Medical and Surgical Nursing Dept, Kasturba Gandhi Nursing College, Puducherry, India

population. According to K. PARK (2007), hypertension is one of the major risk factor for cardio vascular mortality, which accounts for 20 to 50% of all deaths in India. In this 21st century the attention is focused on alternative therapies like relaxation, meditation, laugh therapy, aroma therapy, and music therapy along with pharmacological management. But the statistical evidence for music therapy is not widely documented. Hence to create an empirical evidence the investigator brought forth the need of conducting a study on effectiveness of music therapy among hypertensive school teachers.

X.F.Teng (2007) conducted a study on effect of music therapy on hypertensive patient at elderly home. Randomly samples assigned into either a music group (n=15) or a control group (n=15), there was no significant differences between the two groups initial BP values, age, gender, or medication status. Subjects in the music group listened to select music 25 min every day for 1 weeks BP was measured twice a week by a registered nurse with a BP apparatus during the 4 week study period and after the completion of the study. Four subjects change of medical conditions or to personal reasons. After 4 weeks the average decrease seen in the music group. From that the results suggest that listening to a certain type of music serves to reduce high BP and therefore music therapy may be an alternative for hypertension treatment.

Objectives

- To assess the pretest level of blood pressure among school teachers with hypertension.
- To assess the effectiveness of music therapy among school teachers with hypertension in selected schools at Puducherry.
- To associated the effectiveness of music therapy on blood pressure with the selected demographic variables

METHODOLOGY

True experimental research design (one group pre-test –post-test design) used in this study. School teachers with hypertension was the target population. The settings of the study was conducted in the Bahour area Puducherry schools. Sample size 40 was selected by purposive sampling technique. The tool consists of three parts demographic variable, clinical variables and Evaluation of blood pressure to assess blood pressure before and after music therapy.

Research Approach

Quantitative research approach was adopted for the study as it was intended to assess the effectiveness of music therapy on hypertension among teachers in selected schools at puducherry

Research design

True experimental research design (one group pre-test –post-test design) was selected to achieve the objective and to fulfill the need for the study.

Study settings

In Puducherry, the investigators selected four government schools in Bahour area, which is 7 km away from Puducherry.

Population

School teachers with hypertension were the target population for this study.

Sample and sample size

Teachers with hypertension and those who fulfilled the inclusion criteria during the period of study were selected as samples. The sample size 40 school teachers with hypertension.

Inclusion and exclusion criteria

Inclusion criteria

- Both male and female.
- School teachers above 30 years.
- School teachers who can understand Tamil or English.

Exclusion criteria

- School teachers with physical disabilities.
- School teachers not willing to participate in this study.

Sampling technique

Samples who met the criteria during the data collection period was selected by using purposive sampling technique.

Procedure for data collection

Data collection period was 4 weeks. Before starting the data collection, researchers obtained permission from the Education Department from Puducherry. The sample was selected based on inclusion criteria.40 hypertensive school teachers were selected through purposive sampling technique. Demographic profiles were distributed to the selected samples and collections who satisfied the inclusion criteria were selected for 5 days, using purposive sampling technique. Blood pressures of the school teachers were assessed and music therapy was given to the school teachers. The school teachers were asked to hear the music for 20 minutes, the blood pressure monitored on first day before therapy given day and after collected demographic profile from the school teachers.

RESULTS

Distribution of the demographic Variables among school teachers with hypertension.

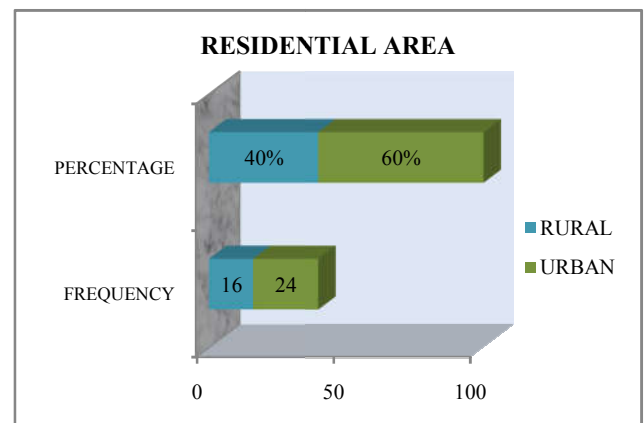


Figure 1 Frequency And Percentage Distribution Of The Residential Area of The School Teachers.

The level of effectiveness of music therapy on hypertension among school teachers with hypertension in selected schools by residential area. It was evident that 60 % (24) were from urban and 40 % (16) were from rural.

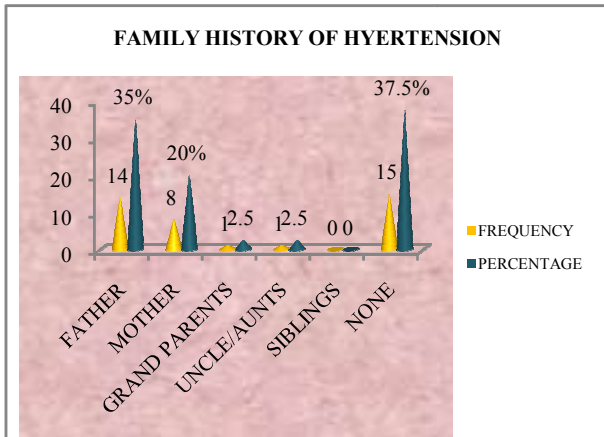


Figure 2 Frequency And Percentage Distribution Of The Family History Of The Hypertension Of The School Teachers.

The frequency and percentage distribution of level of effectiveness of music therapy on hypertension among school teachers with hypertension in selected schools by family history of hypertension. It was evident that 37.5 % (15) had no family history of hypertension and 62.5 % (25) had a family history of hypertension

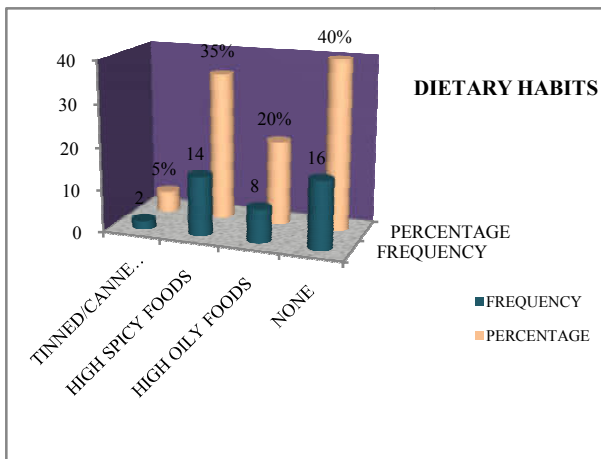


Figure 3 Frequency And Percentage Distribution Of The Dietary Habits Of The School Teachers.

The frequency and percentage distribution of level of effectiveness of music therapy on hypertension among school teachers with hypertension in selected schools by dietary habits. It was evident that 35 % (14) were high spicy foods, 20% (8) were high oily foods, 5% (2) tinned/ canned foods, and 40% (16) were none.

Table 1 levels of hypertension before & after music therapy

Sl.no	Levels of hypertension	Before music therapy		After music therapy	
		Frequency	Percentage %	Frequency	Percentage %
1	Pre- hypertension	1	2.5%	3	7.5%
2	Hypertension stage1	21	52.5%	24	60%
3	Hypertension stage2	18	45%	13	32.5%

Table 1: Depicts the level of hypertension before & after music therapy in school teachers with hypertension. It was evident that 52.5 % (21) had hypertension stage -I and 45 % (18) had hypertension stage- II before music therapy. After music therapy 32.5 % (13) had hypertension stage 2, 60 % (24) had hypertension stage -I and 7.5 % (3) had pre- hypertension. Thus it is evident that blood pressure decreases after music therapy.

Table 2 Effectiveness of music therapy in reduction of blood pressure among hypertensive school teachers in pre-test and post-test. N=40

Level of hypertension	MEAN	
	PRE-TEST	POST-TEST
Systolic blood pressure	156.2250	151.1750
Diastolic blood pressure	97.6750	93.8750
Blood pressure	117.1917	112.9750

Table 2: shows the level of hypertension before and after music therapy. The mean value of pre-test score of Pre-hypertension was 156.2250, hypertension stage-I was 97.6750, and the Hypertension stage-II, was 117.1917 before the implementation of music therapy. The mean value of post-test score of pre-hypertension was 151.1750, hypertension stage-I was 93.8750 and the hypertension stage –II was 112.9750 after the implementation of music therapy which was attributed to the effectiveness of music therapy in decreasing the level of hypertension.

Table 3 Association of blood pressure among school teachers with demographic variables and clinical variables

Si.No	Demographic Variables and clinical variables	Blood Pressure				Chi-square	p-value	
		Pre HTN	HTN I	HTN II	Total			
1.	Residential area	a) Rural	0	7	9	16	1.806	0.405 *S
		b) Urban	1	14	9	24		
2.	Hereditary	a) Father	0	7	7	14	42.444	<0.001 *S
		b) Mother	0	4	4	8		
		c) Grand parents	0	0	1	1		
		e) Siblings	0	1	0	1		
		f) None	0	9	6	15		
3.	Dietary Habits	a) Tinned/canned foods	0	1	1	2	7.415	0.284 * S
		b) High spicy foods	1	10	3	14		
		c) High oily foods	0	2	6	8		
		d) None	0	8	8	16		
4.	Past History	a) YES	0	9	12	21	3.961	0.411 *S
		b) No	1	12	6	19		
		a) Less intake	0	8	12	20		
5.	Salt intake	b) High salt intake	0	2	1	3	4.554	0.336 *S
		c) Normal salt intake	1	11	5	17		

The association between the blood pressure and selected demographic factors of school teachers with hypertension. It is evident that the demographic variables such as residential area, history of hypertension with relationship, dietary habits, duration of illness, co-morbid illness, past history, and salt intake has a significant association with blood pressure in school teachers with hypertension because the “p” values was less than 0.5 whereas the other demographic variables had no significant association.

CONCLUSION

The study concluded that out of 40 samples, each teachers had a mild reduction in their blood pressure values after the

implementation of music therapy when compared to their pretest score. This shows that the regular practice of music therapy helps to reduce hypertension. The study findings will enable the nurses to plan and implement music therapy management & prevention of hypertension to prevent further complications and build a healthy nation.

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