



Prevalence of Pre- Hypertension and Stress Among Rajayoga Practitioners In Kozhikode District, Kerala

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Abstract

Prehypertension is a warning sign that you may get high blood pressure in the future. High blood pressure increases your risk of heart attack, heart failure, stroke, coronary heart diseases, and kidney failure. there is no cure for high blood pressure, but there is treatment with specific diet, life style modification, exercises, and medications. The purpose of the study was to assess the prevalence of pre hypertension and stress among Raja yoga practitioners as they are using a spiritually oriented peaceful life style along with healthy swathik food, adequate physical exercises and Rajayoga meditation. A total of 155 sample between the age of 20 -70 were screened. The tool used were socio personal data sheet, Cohen's perceived stress scale, aneroid type of BP apparatus, measuring tape and weighing machine to assess stress, BP and BMI. The findings showed that 50.2% subject had normal blood pressure, 23.2% had elevated blood pressure, 13.55 had stage I hypertension and only 12.9 had stage II hypertension. None of them identified as hypertensive crisis. Regarding the stress the result showed majority of the sample (68.39%) had no stress or normal stress, 23.8 had moderate stress and only 7.75% had high stress.

Key words: Pre hypertension, prevalence, stress, Rajayoga practitioners, Cohen's perceived stress scale, socio-personal data sheet BP Apparatus, measuring tape, elevated blood pressure, stage-I hypertension.

Introduction

According to the American Heart Association, 59 million people in the U. S have hypertension. People with prehypertension may have a greater risk for other cardiovascular disease (CVD) risk factors. The risk factors-such as high cholesterol, obesity, and diabetes...are seen more in people with PHTN than in those with normal BP. Stage I hypertension is also known as prehypertension, the systolic reading is 120 mmHg-139 mmHg or the diastolic reading is 80-89 mm Hg. Is there any treatment for PHTN? Yes...lose weight if you are overweight, exercise regularly, eat plenty of vegetables, fruits, whole grains, and low-fat dairy. Studies showed that high BP can be lowered and prevented with the DASH diet. DASH diet is low in sodium and high in potassium, magnesium, reduce food that are high in saturated fat, cholesterol, and trans fats. Eat more whole grain foods, fish, poultry and nuts, limit sodium, sweets, sugary drinks, and red meats. Avoid alcohol or use it in a very limited level, because excess alcohol can increase BP. Recent studies showing that any sort of mind relaxation technique like meditation, mind fullness meditation, transental meditation, Rajayoga meditation etc. A study from 2009 explored the effect of yoga, exercise and dietary salt reduction, in 102 adults with slightly elevated or high B. The people engaged in one of the following activities for a period of 8 weeks -brisk walking for 50-60 minutes 4days per week, reducing salt intake by at least 50%, practicing yoga for 30-45 minutes at least 5 days per week. the result shows that these each technique has the power to reduce people with high BP

Need of the study

Around 50% of cardiovascular diseases can be attributed to hypertension. Eighty percent of global occurrence of cardiovascular disease is in developing countries. This transition is faster in Kerala than any other state in India. Pre hypertensive individuals are at higher probability of developing cardiovascular outcomes as well as having other risk factor combination. Prehypertension prevalence in Kerala was as high as 51.8%. A study in urban Trivandrum had reported 41.7% for pre hypertension. Similarly, many study findings showing that the prevalence of hypertension is 35-42% in males and 34-40% in females and pre hypertension range 40-55% in males and 41-53% in females and pre hypertension have positive association with BMI, stress, serum glycerides and HDL cholesterol. Hypertension continues to rise in India irrespective of urban or rural residence of people. Many study findings warrant urgent measures to lower the risk factors in pre hypertension and hypertension. Hypertension is being a silent killer disease responsible for 50% of cardiovascular death in India. Rajayoga practitioners are following a spiritually oriented peaceful life style with strict swasthik vegetarian diet rich in vegetables, fruits, low fatty dairy products and light physical exercise and strict Rajayoga meditation twice or thrice daily for one hour each time. So the investigator is interested to investigate what would be the nature of stress and the blood pressure level of Rajayoga practitioners with a view to adopt this lifestyle to reduce hypertension in ordinary population. Meditation is considered as a weapon to build up positive thoughts and vibrations to reduce stress and boost up self-esteem, self-respect, and unfold the natural powers of eternal qualities to maintain calm and stress-free life which is essential to maintain normal blood pressure.

Research studies

A study conducted by Juan Lil, Hui Zheng I and et al on multiple life style modification for patients with prehypertension and hypertension showed that multiple life style modification programme have positive improvement in the pre hypertension and hypertension condition.

A study was conducted to determine the effect of yoga on the physiological well being, psychomotor parameter and certain cardiovascular risk factors in mild to moderate hypertensive patients. Results showed a decrease in blood pressure and risk factors, i.e. cholesterol, and triglycerides decreased overall improvement in subjective wellbeing and quality of life.

A randomized Quincy cortile interventional study was conducted in SMS medical college, Jaipur, Rajasthan to evaluate the effects of yogasana, pranayama, and meditation among 50 hypertensive patients. The result showed a significant reduction in the systolic blood pressure, diastolic blood pressure and pulse rate after practicing yoga for 4 weeks.

A study about Mindfulness-based stress reduction (MBSR) conducted by Hughesw to review the effectiveness of MBSR in reducing elevated blood pressure. The result showed a mild decrease in elevated blood pressure.

An experimental study conducted to find immediate effect of sukha pranayama on cardiovascular variables in patients with hypertension. The result revealed a high significant reduction in systolic pressure, pulse pressure, mean arterial pressure and significant fall in diastolic blood pressure.

Objectives of the study

1. Assess the stress level among Rajayoga practitioners.
2. Assess the level of pre hypertension among Rajayoga practitioners.

Methodology

Quantitative non-experimental descriptive research design was adopted for the study.

The study was conducted in nine Brahmakumaris centers in Kozhikode district.

The population for the study was 155 Rajayoga practitioners between the age of 20-70 years who practices Rajayoga meditation more than one year both men and women who met the inclusion criteria.

The study subjects were selected using purposive sampling technique.

The inclusion criteria were meditation practitioners between the age of 20-70 years who practices Rajayoga meditation more than one year, who can read and write Malayalam, who are present at the time of assessment. The exclusion criteria were meditation practitioners who are mentally ill and on treatment and who practice Rajayoga meditation below one-year duration.

Research tool

Tool 1- Socio-personal data sheet (semi structured questionnaire)

Tool 2- Cohen's perceived stress scale to assess the stress level. (10 item scale)

Tool 3- Standardized aneroid BP apparatus to assess the blood pressure, a weighing machine and a measuring tape to assess the BMI.

Score interpretation.

The scores were interpreted as follows.

Cohen's perceived stress scale

Below -13 normal stress.

13-19 - moderate stress.

20 and above- high stress.

2. Blood pressure based on American Heart Association's guideline.

Normal BP-< 120/<80 mmHg.

Elevated BP-120-129/< 80 mmHg.

Stage 1 BP-130-139/80-89mmHg.

Stage 11 BP-140 -159/90 mmHg.

Hypertensive crisis-BP 160/100 mmHg.

3.BMI (body mass index). based on Asia pacific guideline.

Under weight-Below 18.5

Normal-18.5-22.9

Over weight-23-24.9

Obese- equal and above 25

After the pilot study the data were collected and analyzed using descriptive statistics.

Analysis and interpretation

Figure 1 shows percentage distribution of participants based on gender

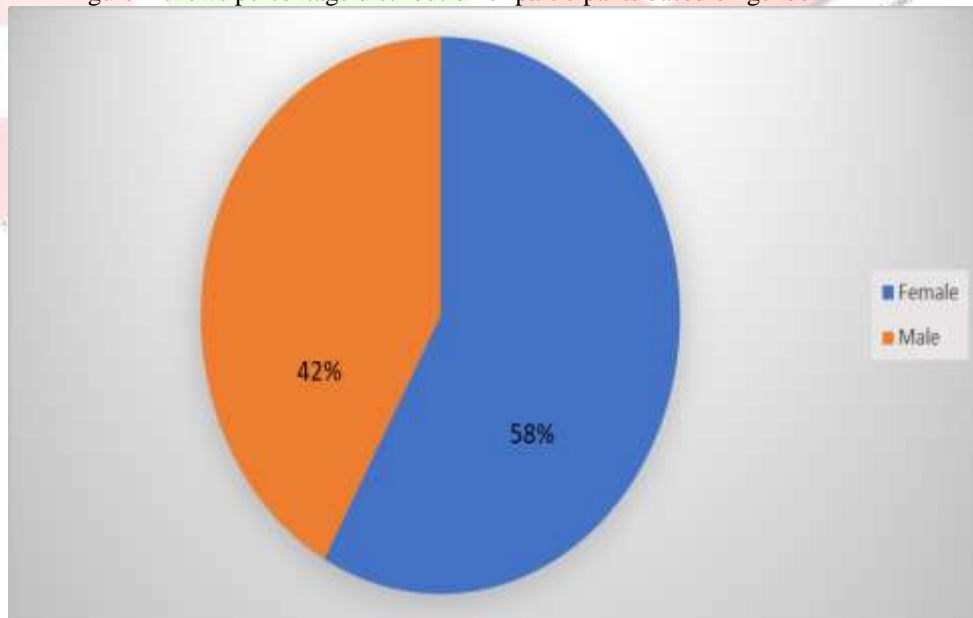


Figure 1 shows percentage distribution of participants based on gender

Figure 1 shows that 58% of parents were females and 42% of participants were male.

Table 2

Frequency and percentage distribution of participants based on age

n=155

Age	Frequency	Percentage
20-30	32	20.58
31-40	46	30.64
41-50	44	28.38
51-60	17	10.96
61-70	16	10.32

Table 2 shows that 30.64% of the participants come under the age group of 31-40, 28.38% come between the age group of 41-50 and 20.58% belongs to the age group of 20-30.

Table 3 Frequency and percentage distribution of participants based on stress

Stress	Frequency(f)	Percentage (%)
Normal	106	68.39%
Moderate	37	23.86%
High/severe	12	7.75%

Table 3 revealed that above average (68.39%) subject had normal or no stress, only 7.75% has high stress.

Table 4 Frequency and percentage distribution of participants based on blood pressure

Blood pressure	Frequency(f)	Percentage (%)
Normal	84	54.19
Elevated	33	21.29
Stage I	21	13.64
Stage II	17	10.82
Hypertensive crisis	0	0

Table 4 revealed that 54.19% had normal BP on 10.82% had stage II hypertension and 34.94% falling in pre-hypertensive group.

Table 5 Frequency and percentage distribution of participants based on BMI

Variable	Frequency	Percentage
Under weight	12	7.74%
Normal	67	43.24%
Over weight	47	30.32%
Obese	29	18.70%

Table 5 shows that, 43.24% has normal BMI and only 18.70% has obese.

Findings of the study:

- More than half of the participants 58% were females
- 30.32% of participants were in the age group 31-40years, 28.38% were in the age group of 41-50, 20.58% fall in 20-30 age group, only 10.96% fall in 61-70 and 10.14 were in 51-60 age group.
- 34.845 were having collegiate education, 22.58% were having higher secondary/PDC education and 19.35% were having post graduate education.
- 27.09 % had history of hyper tension in the family.
- Above average (68.39%) participants had normal or no stress, only 7.75% had high stress, the rest of the participants (23.86) had moderate stress.
- 54.19% had normal BP, 10.82% had stage II hypertension and 34.94% falling in pre-hypertensive group. No one has the problem of hypertension crisis. In pre hypertension group 21.29% fall in elevated BP ie 120-129/below 80 mm Hg. This suggested that among the pre hypertension 21.29% belongs to elevated BP which can be converted in to normal BP with a slight modification of life style or with doing anything it can be corrected.
- 43.24% has normal BMI and only 18.70% had obese.

IMPLICATION

1. It has implication in the field of nursing education, administration, management and nursing research The educators and administrators of nursing profession can utilize the findings of the study to organize various relaxation techniques such as mind fullness meditation, Rajayoga meditation and even educate the people to follow Rajayogi life style to control and prevent hypertension thereby we can reduce the mortality and morbidity of hypertension and its consequence among general public.
2. Nursing administrators/principals can arrange various sessions on relaxation techniques to the nursing students to reduce their stress to improve their study pattern and enhance their academic result.
3. Nursing administrators can arrange relaxation techniques to patients with pre hypertension and hypertension in various departments in the hospital. since it is a non pharmacological intervention has high potentials in treating hypertension, it is a cheapest and highly efficient form of treatment modality to overcome the burden of hypertension and its consequences.
4. This study serves as a scientific basis and references for research scholars especially beginners. The finding of the study highlights the need for the further scientific explanations.

Summary

The present study was undertaken to assess the prevalence of stress and pre hypertension among Rajayoga practitioners of Kozhikode district, Kerala. Quantitative non experimental descriptive research design was adopted for the study. The findings of the study revealed that stress level and pre hypertension level was low in this present study group compared to the recent study findings. So, it is suggested that the Rajayogi life style is a healthy life style which can be adopted or followed to control and prevent pre hypertension and hypertension there by we can reduce the morbidity and mortality of hypertension an ever-growing epidemic in both developed and developing country. Many studies on relaxation techniques are showing that these techniques are very effective and cheap more over it is a non-pharmaceutical approach which is very safe to human kind to control and prevent life style diseases especially hypertension which is always a silent killer disease contributing major cause of death in affected population. Pre hypertension is a condition which is asymptomatic but gradually developed in to stage 2 hypertension and hypertensive crisis within 2-4 year period if not treated properly ,so it is called as silent killer disease, but one can reduce this risk by adopting healthy life style with relaxation techniques there by we can prevent the higher morbidity and the mortality of this disease.

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