



ISSN: 2456-0057

IJPNE 2021; 6(2): 134-142

© 2021 IJPNE

www.journalofsports.com

Received: 11-06-2021

Accepted: 13-07-2021

Arunadevi Chinnadurai

MBBS Student, Rajiv Gandhi
Medical College & CSM Hospital,
Thane, Maharashtra, India

Dhaigude Pranav Raghunath

MBBS Student, Rajiv Gandhi
Medical College & CSM Hospital,
Thane, Maharashtra, India

Dr. Srabani Bhattacharya

Professor & Head of Physiology,
Rajiv Gandhi Medical College &
CSM Hospital, Thane,
Maharashtra, India

Awareness, knowledge & perception on hypertension & self-care practices among general population of both male & female adults

Arunadevi Chinnadurai, Dhaigude Pranav Raghunath and Dr. Srabani Bhattacharya

Abstract

This cross-sectional study was conducted among general population of either gender in the state of Maharashtra, India. The age of the respondent were 18+ yrs. Total number of participants were 186. Among them 69.89% male, 30.11% female. Their occupations student 18.8%, home maker 5.9%, service 39.8%, unemployed 5.4%, retired 1.6%, business 24.2% & other occupations 4.3%. Among them 13.98% suffering from Hypertension, 52.69% not yet diagnosed & 33.33% respondent not yet checked. Among the participant who are diagnosed hypertension 61.54% taking medicine regularly, 11.53% irregular & 26.92% not taking medicine. History of hypertension in either parent was 32.8% & 53.22% does not have history of hypertension in either parent. 40.86% respondents checked Blood Pressure (BP) regularly. Among the respondents 45.7% do less than 30 minutes of physical activity & 7.53% more the 2 hours do physical activity. 1.61% consume alcohol daily & 0.54% use tobacco products more than 5 times per day. Hypertension is emerging as a major public health problem. People should be aware about the risk factors associated with Hypertension.

Keywords: Hypertension, Awareness, Preventive measures.

Introduction

Hypertension is a worldwide risk factor for cardiovascular disease burden & mortality. It is a disease related to risky health behaviours such as smoking, over weight, alcohol consumption, physical activity etc. [1]. As per World Health Organization report [2], about 40% of people Aged more than 25 yrs had hypertension. Hypertension is one of the main risk factors for adverse cardiovascular & cerebrovascular events, is a serious medical, social & economic problem worldwide. Despite progress in the therapy of hypertension & improvement in detectability of the condition, the number of patients with hypertension is still increasing. Education makes the people aware of the disease & what precautions can be undertaken by the health individual [4]. High blood pressure / hypertension, being an established modifiable risk factors for cardiovascular disease, morbidity & mortality [5]. Globally hypertension is the second most important preventable risk factor contributing to 13% of deaths. Anti-hypertensive medication is one of the measure to manage hypertension.

Materials & methods

This cross-sectional study was conducted among the population in Maharashtra, India of both male & female gender who agreed to take part in the study. Total number of respondents were 186. Re-validated questionnaire via Google form was uploaded. The data were entered into the Microsoft Excel & was analyzed.

Corresponding Author:

Dr. Srabani Bhattacharya

Professor & Head of Physiology,
Rajiv Gandhi Medical College &
CSM Hospital, Thane,
Maharashtra, India

Results & discussion

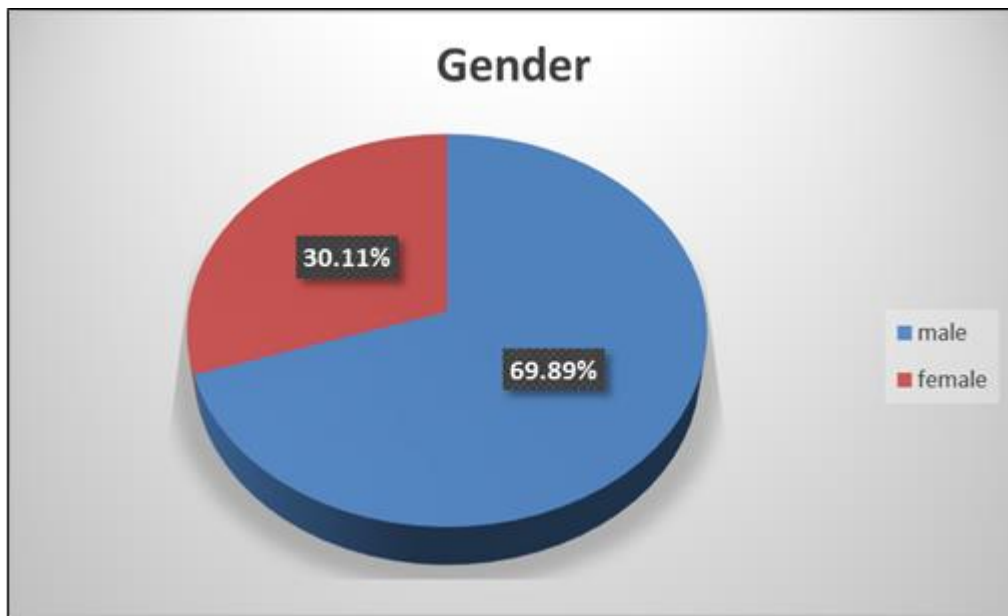


Fig 1: Gender

Gender	No. of participants (out of 186)	Percentage	Average age in years)	Average height in cm	Average weight	Education (Average years)
Male	130	69.89	36.74	166.47	63.68	14.33
Female	56	30.11	37	166.2	63.54	14.22
Combined			37	166.27	63.58	14.23

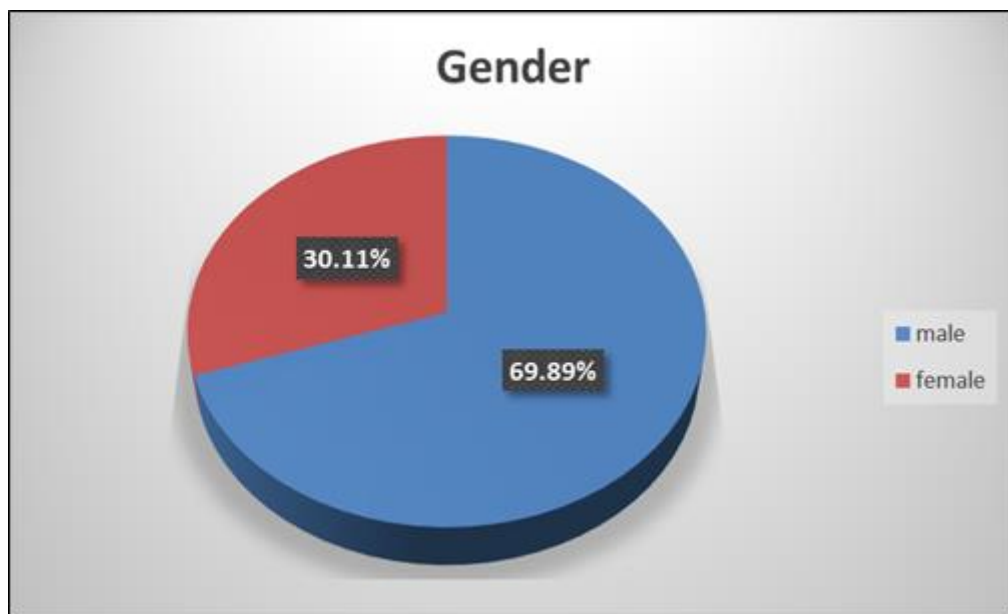


Fig 2: Occupation

Occupation	No. of participants	%	No. of males	No. of females
Student	35	18.8	28	7
Homemaker	11	5.9	0	11
Service	74	39.8	51	23
Unemployed	10	5.4	10	0
Retired	3	1.6	3	0
Business	45	24.2	32	13
Other	8	4.3	6	2

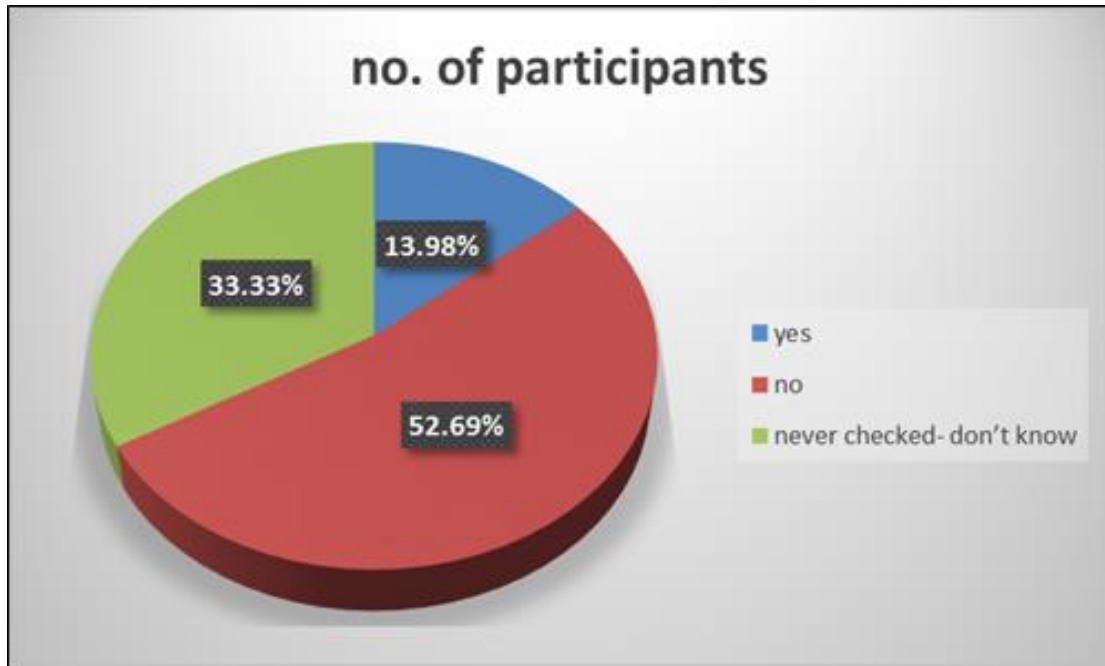


Fig 3: No. of participants

Table 1: Have you been diagnosed to have hypertension?

	No. of participants	%	No. of males	No. of females
Yes	26	13.98	14	12
No	98	52.69	71	27
Never checked- don't know	62	33.33	45	17

Average age of participants diagnosed with hypertension=48.61 yrs

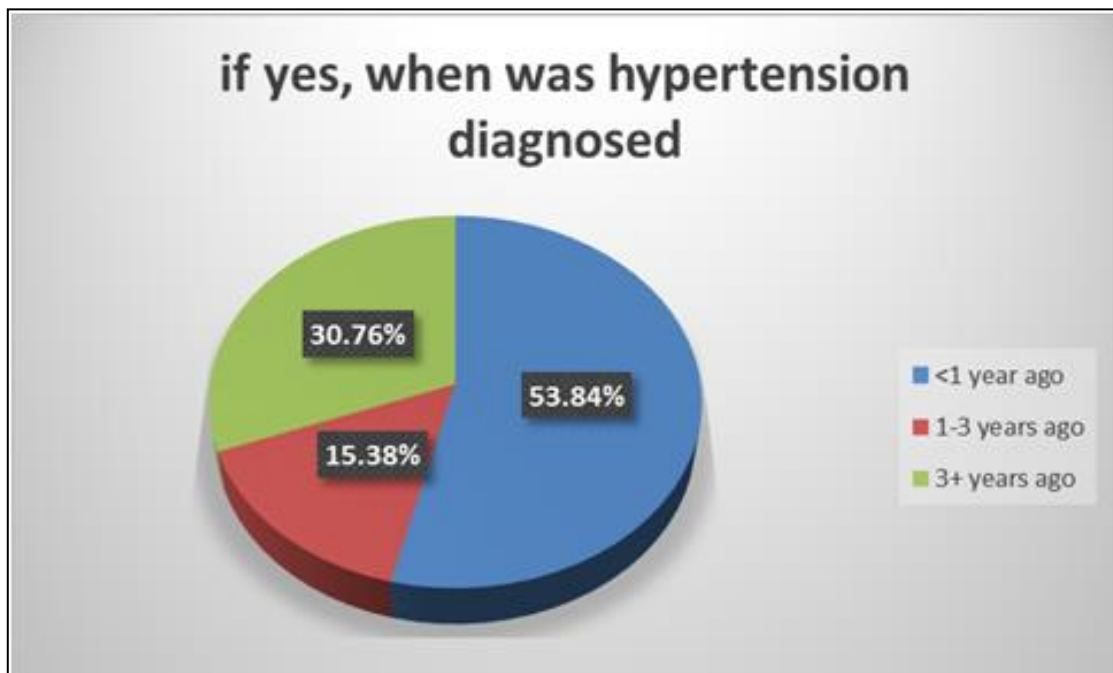


Fig 4: If Yes, When Was Hypertension Diagnosed

Table 2: If yes, when was hypertension diagnosed

	No. of participants	%
<1 year ago	14	53.84
1-3 years ago	4	15.38
3+ years ago	8	30.76

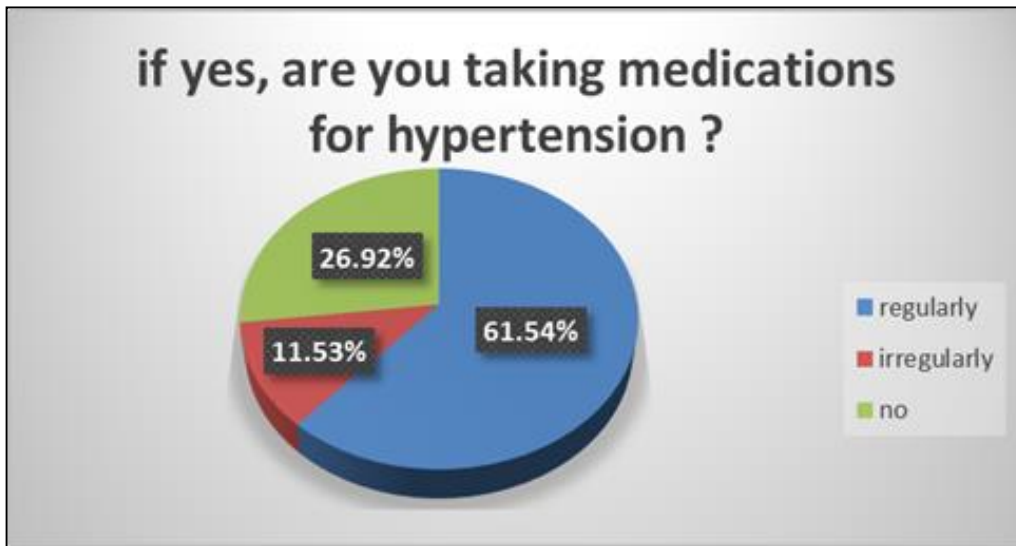


Fig 5: If yes, are you taking medications for hypertension?

Table 4: If Yes, Are You Taking Medications for Hypertension

	No. of participants	%
regularly	16	61.54
irregularly	3	11.53
no	7	26.92



Fig 6: Does anyone else from your immediate family suffer from hypertension?

Table 5: Does anyone else from your immediate family suffer from hypertension?

	No. of participants	%
Yes	77	41.39
No	79	42.47
Don't know	30	16.13

Table 6: History of hypertension in either parent?

	No. of participants	%
Yes	61	32.8
No	99	53.22
Don't know	26	13.98

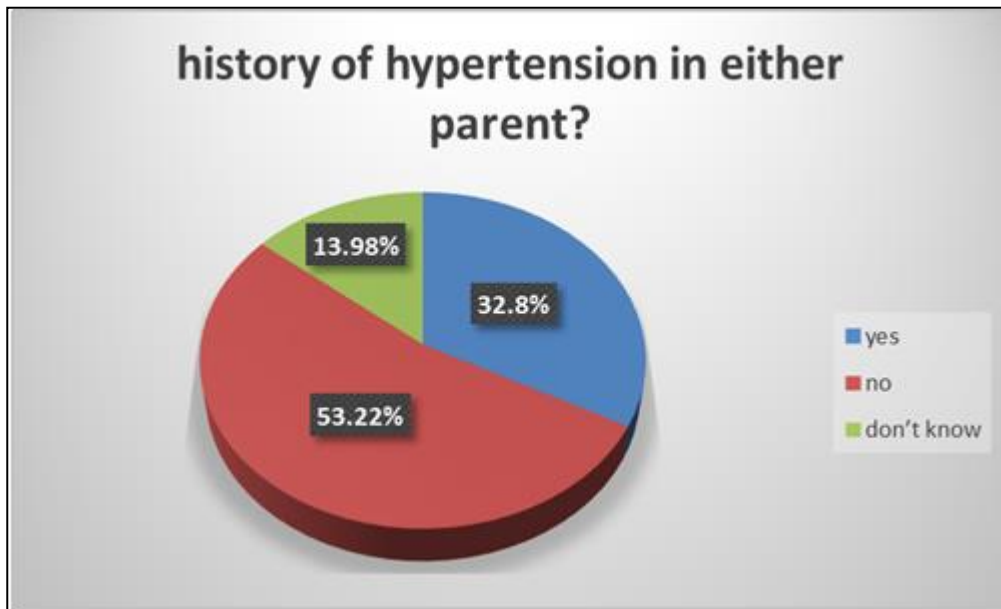


Fig 7: History of hypertension in either parent?

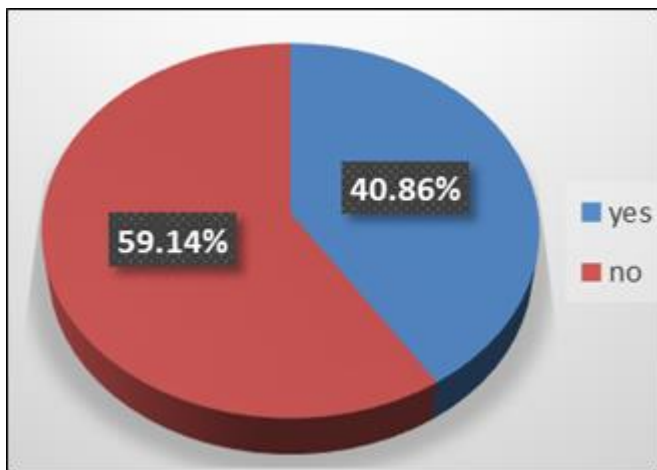


Fig 8: Do you get your blood pressure checked regularly?

Table 7: Do you get your blood pressure checked regularly?

	No. of participants	%
Yes	76	40.86
No	110	59.14

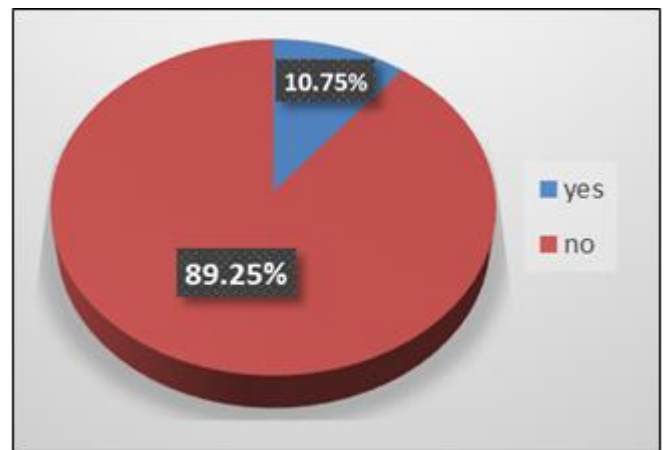


Fig 10: No. of participants (out of 186)

Table 9: Have you been diagnosed with any other disease?

	No. of participants (out of 186)	%
Yes	20	10.75
No	166	89.25

20 participants have been diagnosed with various other disease such as diabetes mellitus, kidney stones, chest pain, asthma, ulcer, malaria , jaundice, anemia, typhoid, PCOS (among females) and heart attack.

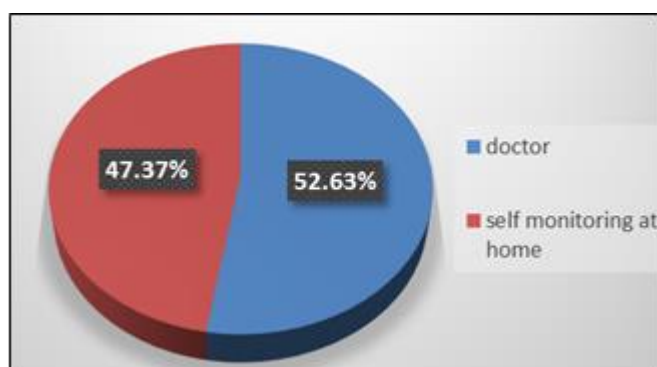


Fig 9: No. of participants (out of 76)

Table 8: If yes, where?

	No. of participants (out of 76)	%
Doctor	40	47.37
Self-monitoring at home	36	52.63

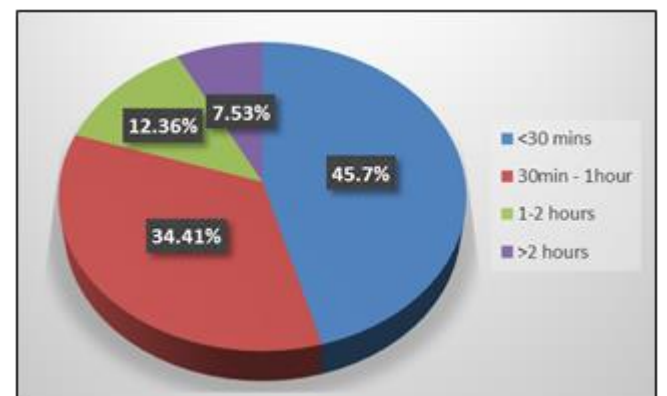


Fig 11; Duration of physical activity per day

Table 10: Duration of physical activity per day

	No. of participants out of 186	%
<30 mins	85	45.7
30min - 1hour	64	34.41
1-2 hours	23	12.36
>2 hours	14	7.53

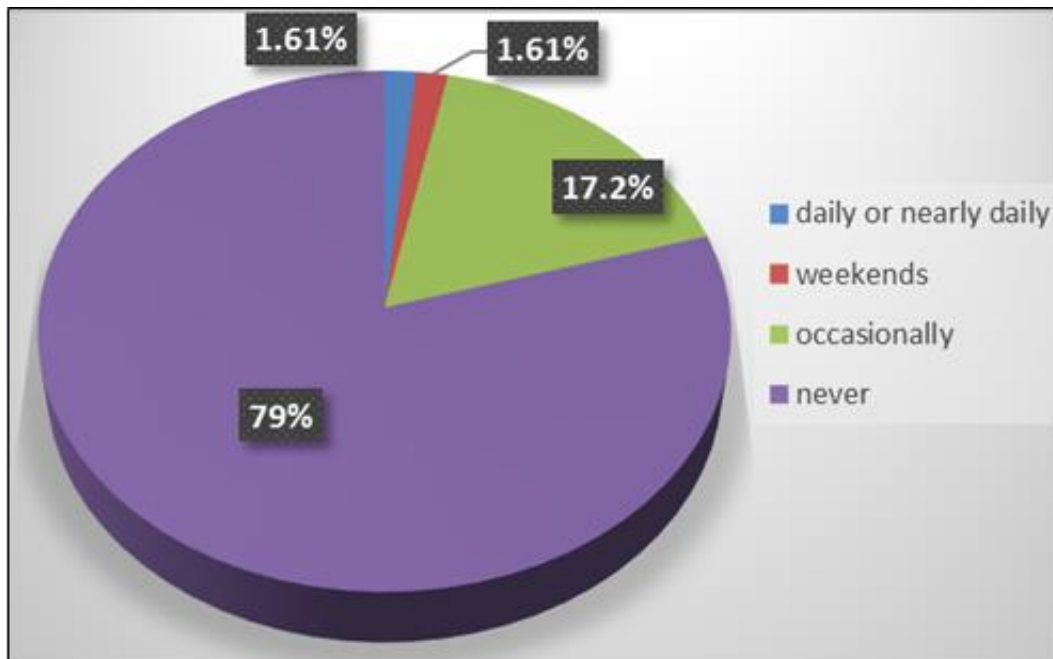


Fig 12: Frequency of consumption of alcohol

Table 11: Frequency of consumption of alcohol

	no. of participants	%
Daily or nearly daily	3	1.61
Weekends	3	1.61
Occasionally	32	17.2
Never	148	79.57

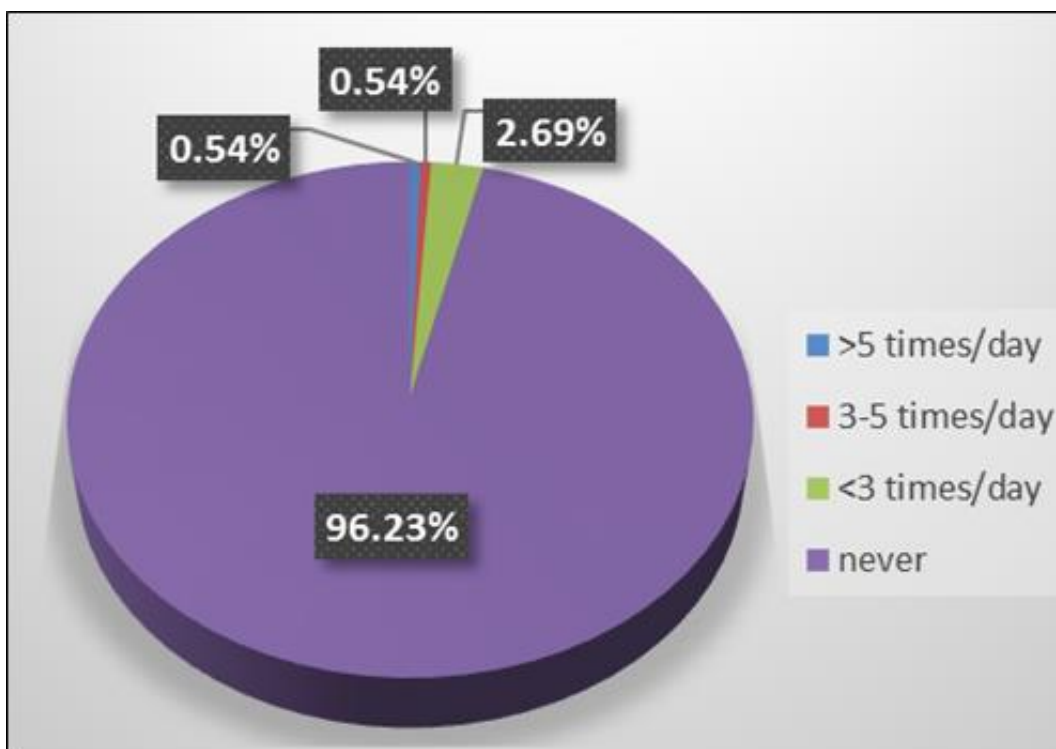


Fig 13: Frequency of use of tobacco products (In any forms)

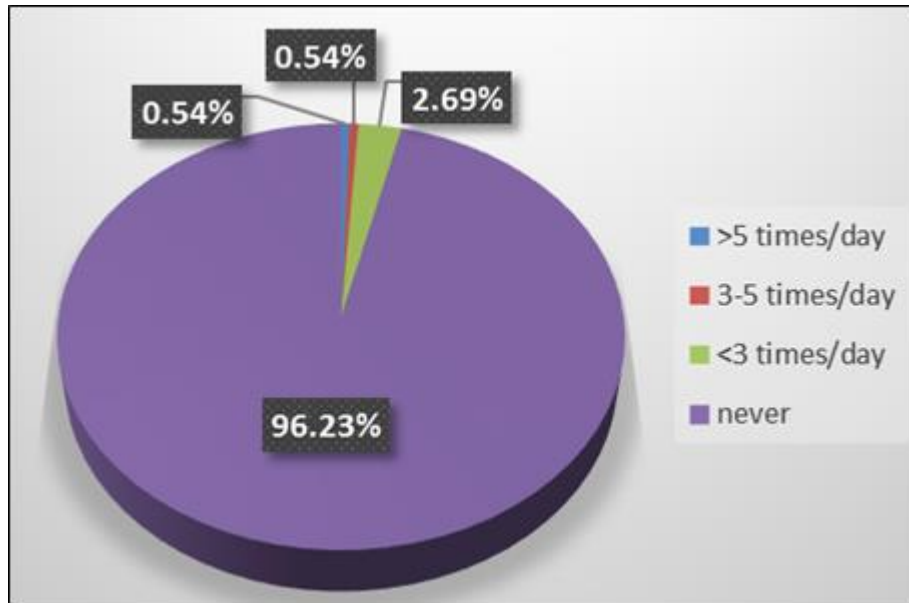


Fig 14: Frequency of use of tobacco products (in any forms)

Table 12: Frequency of use of tobacco products (in any forms)

	No. of participants	%
>5 times/day	1	0.54
3-5 times/day	1	0.54
<3 times/day	5	2.69
never	179	96.23

Table 13: How frequently do you consume the following food items?

Food items	Daily	2-3 times a Week	About once a week	Never
Green leafy vegetables	43(23.12%)	101(54.30%)	41(22.04%)	1(0.54%)
Packaged or ready to eat foods	11 (5.91%)	71(38.17%)	86(46.24%)	18(9.68%)
Fruits	39(20.97%)	77(41.40%)	63(33.87%)	7(3.76%)
Whole milk dairy products	94(50.54%)	56(30.10%)	34(18.28%)	2(1.08%)
Eggs	32(17.20%)	71(38.17%)	45(24.19%)	38(20.43%)
Fish/ sea foods	2(1.08%)	49(26.34%)	65(34.95%)	70(37.63%)
Chicken	9(4.84%)	52(27.96%)	76(40.86%)	49(26.34%)
Red meat	6(3.23%)	26(13.98%)	61(32.79%)	93(50%)
Sweets or confectionery	14(7.53%)	67(36.02%)	92(49.46%)	13(6.99%)
Carbonated soft drinks and/or cola drinks	6(3.23%)	45(24.19%)	80(43.01%)	55(29.57%)
Sprinkle extra salt on foods while having meals/ snacks	13(6.99%)	41(22.04%)	46(24.73%)	86(46.24%)

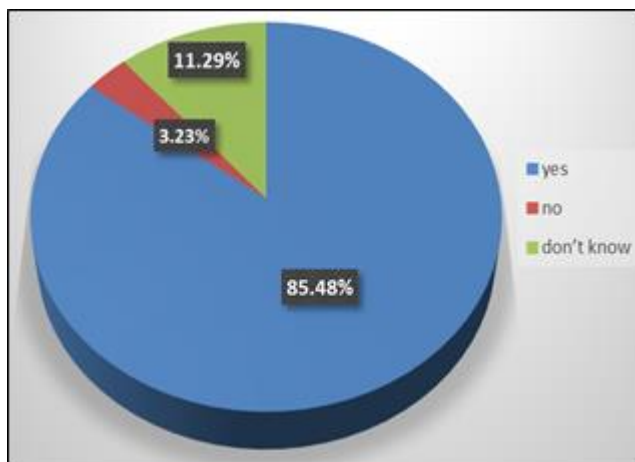


Fig 15: In your opinion is hypertension increasing in India?

Table 14: In your opinion, is hypertension increasing in India?

Opinion	No. of participants	%
Yes	159	85.48%
No	6	3.23%
Don't know	21	11.29%

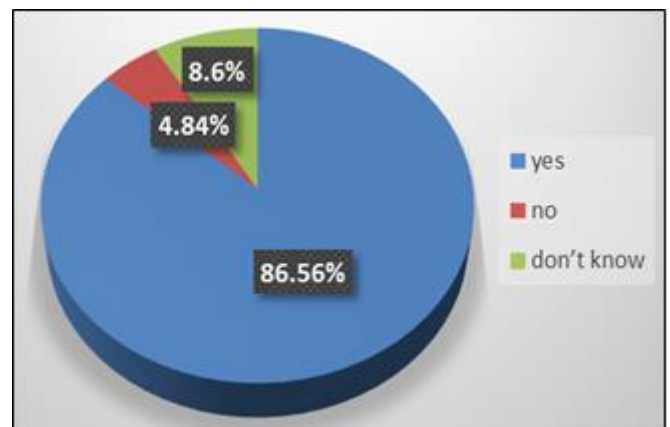


Fig 16: In your opinion, is hypertension a preventable disease?

Fig 15: In your opinion, is hypertension a preventable disease?

	No. of participants	%
Yes	161	86.56
No	9	4.84
Don't know	16	8.6

Table 16: Which of the following are symptoms of hypertension?

	Yes	No	Don't know
Headache	147(79.03%)	14(7.52%)	25(13.44%)
Feeling breathless	124(66.67%)	26(13.98%)	36(19.35%)
Bleeding from nose	78(41.94%)	53(28.49%)	55(29.57%)
Flushing; ESP of face	90(48.39%)	36(19.35%)	60(32.26%)
Dizziness	142(76.34%)	17(9.14%)	27(14.52%)
Chest pain	116(62.37%)	32(17.20%)	38(20.43%)
Palpitations (feels heart beats at rest)	151(81.18%)	16(8.60%)	19(10.22%)
Blood in urine	43(23.12%)	73(39.25%)	70(37.63%)
Blurry vision	108(58.06%)	31(16.67%)	47(25.27%)
Mental stress	151(81.18%)	9(4.84%)	26(13.98%)

Fig 17: Which of the following are risk factors for hypertension?

Risk factors	Yes	No	Don't know
Old age	160(86.02%)	12(6.45%)	14(7.53%)
Overweight	166(84.25%)	6(3.22%)	14(7.53%)
Sedentary lifestyle	151(81.18%)	8(4.30%)	27(14.52%)
Use of tobacco in any form	141(75.80%)	16(8.60%)	29(15.60%)
Alcohol consumption	143(76.88%)	15(8.06%)	28(15.05%)
Mental stress	169(90.86%)	7(3.76%)	10(5.38%)
High cholesterol	160(86.02%)	10(5.38%)	16(8.60%)
Excessive salt intake	158(84.95%)	11(5.91%)	17(9.14%)

Fig 18: Which of the following are complications of uncontrolled hypertension?

Complications	Yes	No	Don't know
Heart attack	165(88.71%)	7(3.76%)	14(7.53%)
Stroke	154(82.80%)	14(7.53%)	18(9.67%)
Enlargement of heart	129(69.35%)	17(9.14%)	40(21.51%)
Kidney disease	125(67.20%)	22(11.83%)	39(20.97%)
Metabolic syndrome	112(60.21%)	27(14.52%)	47(25.27%)
Dementia	88(47.31%)	38(20.43%)	60(32.26%)
Vision problems	124(66.67%)	23(12.36%)	39(20.97%)
Peripheral artery disease	140(75.25%)	13(6.99%)	33(17.74%)
Sexual dysfunction	86(46.24%)	34(18.27%)	66(35.48%)

Fig 18: Which of the following actions can prevent [or] reverse hypertension?

	Yes	No	Don't know
Reducing fat intake	161(86.56%)	7(3.76%)	18(9.68%)
Reducing body weight	157(84.41%)	9(4.84%)	20(10.75%)
Reducing salt intake	161(86.56%)	6(3.23%)	19(10.22%)
Avoiding refined foods	151(81.18%)	13(6.99%)	22(11.83%)
Stopping tobacco use in any form	159(85.48%)	5(2.69%)	22(11.83%)
Stopping alcohol consumption	162(87.10%)	6(3.22%)	18(9.68%)
Managing mental stress	171(91.94%)	3(1.61%)	12(6.45%)
Consuming more fruits & salads	164(88.17%)	8(4.30%)	14(7.53%)

Total number of participants were 186. Female 30.11% & male 69.89%. Among respondents 13.98% had hypertension. Among the respondents who diagnosed hypertension 61.54% were taking medication regularly, 11.53% were irregular & 26.92% were not taking medications. 41.39% of their immediate family members suffering from hypertension in either parent. The prevalence of hypertension is significantly higher in those with a family history of hypertension. 40.86% of respondents checked blood pressure regularly. As per James P S & others [8] revealed that anti-hypertensive medication reduction can be achieved in some patients. Physical activity is important in the prevention of hypertension [9, 10]. The respondents of the present study reported that duration of their physical activity per day was 45.7% <30 mins, 34.41% 30 mins - 1 hour, 12.36% 1-2 hrs & 7.53% >2hrs. The participants reported that 1.61% consume alcohol daily, in weekends 1.61%, occasionally 17.2% & never 79.57%. As per N M T Santan & others [11] the consumption of alcohol blood pressure increases especially among excessive drinkers. Among the respondents use of tobacco products 0.54% >5 times/day, 0.54% 3-5 times/day,

2.69% <3times/day & never 96.23%. As per S Edward & other [12] cessation of smoking, alcohol & tobacco should be adopted. Y L & others [13] reported that healthy BMI & sleep duration 6-8 hrs/day is associated with a lower risk of the occurrence of hypertension are bound to occur in those who are unaware of being hypertensive [14]. Among the respondents the awareness about the symptoms of hypertension was like headache 79.03%, breathlessness 66.6%, bleeding 76.34%, chest pain 62.37%, palpitations 81.18%, blurry vision 58.06%. Hafsa K & other [15] revealed in their study that their participants reported chest pain, vision problems, fatigue, vertigo, palpitation. The respondents of the present study reported that few actions can prevent/ reverse hypertension reducing fat intake 86.56% answered yes, reducing body weight 84.41%, reducing salt intake 86.56%, avoiding fried food 81.18%, stopping tobacco 85.48%, alcohol consumption 87.10%, managing mental stress 91.94% and consuming more fruits & salads 88.17%. C M Brunoel-al [16] reported that lifestyle changes can provide beneficial effects in hypertensive patients.

Conclusion

Health & healthcare providers should develop comprehensive guidelines & strategies to allow the hypertensive patients to have access to the standard healthcare system & be educated on hypertension & its complications. Conducting education campaigns to promote for healthcare recipients & caregivers to promote understanding of adherence & importance of long term treatment. It is urgently necessary to promote knowledge, awareness, health literacy among people to prevent hypertension & associated cardio vascular disease.

Reference

1. Aung MN. Assessing awareness & knowledge of hypertension in an at risk population in the karen ethnic rural community, Thansongyang, Thailand. International of General medicine 2012;2(5):553-561.
2. World Health organization. Global brief on hypertension, 2013. <http://apps.who.int/iris/bitstream/10665/79059/1/WHO-DCO-WHD-2013.2-eng.pdf>
3. Marta Metal. The knowledge & awareness of hypertension among patients with hypertension in central Poland: A Pilot Registry. Angiology 2014;65(6):525-532
4. Jugal Kishore, et al. Prevalence of hypertension & determination of its risk factors in rural Delhi. International J of Hypertension 2016, 1-7.
5. Testome DF. Determinants of blood pressure control amongst hypertensive patients in Northwest Ethiopia. Plos ONE 2018;13(5):1-11.
6. An-le li. The interaction on hypertension between family history & diabetes & other risk factors. Scientific reports 2021;11:4716.
7. Priyanga R, et al. The influence of family history of Hypertension on disease prevalence & associated metabolic risk factor among Sri Lankan Adults. BMC public Health 2015;15:576
8. James PS. Effect of anti-hypertensive medication Reduction Vs usual care on short-term Blood pressure control in patients with hypertension Aged 80yrs & older, JAMA. 2020;323(20):2039-2051.
9. Linda S, et al. Physical activity to prevent & treat-hypertension: A systematic review American college of sports medicine 2019, 1314-1323.

10. Diaz KM. Physical activity & the prevention of hypertension PMC 2014, 1-17.
11. Santana NMT. Consumption of alcohol & blood pressure: Results of the ELSA - Brasil study PLOS ONE 2018;13(1):1-13.
12. Shanthi E, *et al.* A study on associated risk of smoking alcohol & smokeless tobacco on hypertension among advocates. International J of Community medicine & Public Health 2019;6(12):5114-5117.
13. Y Lu. Lifestyle & Risk of hypertension: follow-up of a young pre-hypertensive covert. International J of medical science 2015;12(7):605-612
14. Olack B, *et al.* Risk factors of hypertension among adults aged 35-64 Yrs living in an urban slum Nairobi, Kenya, BMC Public Health 2015;15:1251-1259.
15. Hafsa K. Prevalence of Clinical signs & symptoms of hypertension: A Gender & age based comparison. Palliate med care 2018;5(2):1-8.
16. Brune CM, *et al.* Lifestyle & Hypertension: An evidence-based Review, Journal of Hypertension & Management. 2018;4:1-10.