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Dietary habits of adults suffering from hypertension

[1]Nayera Masoodi, [2]Maria Maqbool, [3]Asran Beigh
Institute of Home Science
University of Kashmir

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ABSTRACT

Background

High blood pressure is a leading risk factor for heart disease, stroke, and other serious health conditions. A balanced diet not only manages blood pressure but also prevents complications, offering people a natural, sustainable way to protect their health. DASH (Dietary Approaches to Stop Hypertension) is a flexible and balanced eating plan that helps create a heart-healthy eating style for life. The study was done dietary habits of adults suffering from hypertension in Srinagar city. In this study it was found that most people with hypertension were between 41 and 50 years old, and a large number of them were women. A majority of them maintained a healthy weight, had normal blood pressure, and experienced systolic hypertension. Headaches were a common symptom. A majority didn't restrict their sodium intake and consumed items like namkeen tea and occasionally indulged in bakery products. They often used lemon to enhance the taste of their food and consumed potassium-rich foods like cucumbers. Regardless of gender, most respondents believed that lifestyle changes could help manage hypertension effectively. Respondents typically had 2-3 meals a day and leaned towards a non-vegetarian diet, often used refined oil for cooking. Surprisingly, most of them did not restrict their sodium intake, which is a crucial consideration for individuals with hypertension. Interestingly, a significant portion of the respondents never consumed salt-based foods like bottled salad dressings or mayonnaise-based products. However, they did sometimes indulge in bakery items, which can contribute to hypertension if consumed excessively due to their high salt and fat content. Moreover, the respondents were conscious of their dietary choices as many included potassium rich foods in their meals, with cucumber being a popular choice. This is a positive step, as potassium can help counteract the effects of sodium on blood pressure.

Methods

The study was done on adults suffering from hypertension. A total of 100 adults were taken for data collection. Respondent’s willingness to participate in the study. Confidentiality was maintained and an informed consent was also taken from the respondents. Purposive sampling technique was used in the study. Data was analysed and presented in the form of tables.

Conclusion

The study highlighted a range of lifestyle and dietary patterns among individuals with hypertension.

It revealed some noteworthy patterns in the respondents' efforts to manage their hypertension. While many of them were committed to visiting doctors and dieticians, it was observed that a substantial portion of the respondents did not adhere to sodium-restricted diets. This highlights the importance of education and awareness about the risks associated with high sodium consumption, as it is a crucial factor in hypertension management. It's also notable that a significant number of respondents opted for non-vegetarian diets and used refined oil for cooking. This preference may indicate the need for dietary guidance tailored to their choices, focusing on healthier cooking methods and protein sources. The study showed that despite occasional indulgence in bakery products, respondents often used lemon as a taste enhancer in their meals. This preference for a natural flavour enhancer could be harnessed in dietary recommendations to promote healthier food choices. In terms of lifestyle, the respondents were fairly active, spending a substantial amount of time on domestic and official work. While this can be beneficial for overall well-being, it's essential for them to manage stress effectively, as a majority of them attributed their hypertension to stress. Stress management strategies and mental health support could be valuable additions to their hypertension management plans. For all adults, lifestyle changes, including maintaining or achieving a healthy weight, following a heart-healthy eating pattern (such as Dietary Approaches to Stop Hypertension), reducing sodium intake, increasing dietary potassium intake, adopting a moderate physical activity program, managing stress, and reducing or eliminating alcohol intake are strongly recommended to prevent or treat elevated blood pressure and hypertension.

Key words: hypertension, life style, potassium rich, exercise, flavour enhancers

INTRODUCTION

Hypertension, often called high blood pressure, has quietly become one of the most pressing public health concerns of our time. WHO defines hypertension as a condition in which systolic pressure exceeds 140 mmHg and diastolic pressure exceeds 90 mm Hg. With diastolic pressures of 100 or more therapy should be initiated with drugs as well as diet. A balanced diet not only manages blood pressure but also prevents complications, offering people a natural, sustainable way to protect their health. It affects millions of people across the globe and is widely recognised as a “silent killer” because it often develops without noticeable symptoms, yet carries serious consequences such as stroke, heart disease, and kidney failure**.** According to the World Health organization (2021), more than 1.28 billion adults worldwide are currently living with hypertension, and strikingly, a majority of them reside in low-and middle-income countries where awareness and treatment are limited.

Dietary influences on blood pressure

Over the last few decades, a growing body of evidence has shown that diet can be as powerful as medicine when it comes to lowering blood pressure. One of the most influential studies in this field is the Dietary Approaches to Stop Hypertension (DASH) trial, which revealed that a diet rich in fruits, vegetables, whole grains, and low-fat dairy could significantly reduce both systolic and diastolic blood

pressure in a matter of weeks. Nutrients such as potassium also play a critical role. The World Health Organization (2021) therefore recommends that adults consume at least 3,510 mg of potassium daily for cardiovascular protection. In addition to nutrient-based approaches, overall dietary patterns such as the Mediterranean diet have also shown remarkable promise. A recent meta-analysis by Liu et al. (2025) confirmed that higher potassium intake is strongly associated with lower blood pressure, particularly among hypertensive patients. Foods naturally rich in potassium such as bananas, legumes, and leafy greens help counteract the harmful effects of sodium, improving vascular health and kidney function.

RESULTS AND DISCUSSION

Table 1: Distribution of respondents as per their age

Age (years)	F	Percentage
20-30	20	20
31-40	29	29
41-50	30	30
51-60	15	15
61 and above	6	6
Total	100	100

Table 1 shows distribution of respondents as per their age. It is found that majority of respondents (30%) belong to age group of 41-50years. About (29%) belong to the age group of 31-40 years. About (20%) belonged to the age group of 20-30. About (15%) belong to the age group of 51-60. Only (6%) belong to the age group of 61 and above. It was also seen that majority of respondents (54%) were females followed by (46%) males. The majority of respondents belonged to medium-income group (72%) and (8%) to the lower income group. An equal distribution of working (54%) and non-working (46%) respondents was also seen in the study. Majority of the respondents (57%) maintained a healthy weight while rest of the respondents (43%) did not maintain a healthy weight.

Table 2: Distribution of respondents based on Body Mass Index (BMI)

BMI	GENDER					
	Male		Female		Overall	
	F	Percentage	F	Percentage	F	Percentage
Under weight (<18.5)	4	8.7	2	3.7	6	6
Normal-weight (18.5- 24.9)	24	52.2	30	55.6	54	54

Over-weight (25 – 25.9)	2	4.3	5	9.3	7	7
Pre-obese (26.0 – 29.9)	16	34.8	17	31.5	33	33
Total	46	100	54	100	100	100

Source: Body Mass Index (kg/m^2) for Asian population (WHO, LANCET, 2004)

The distribution of respondents as per BMI table reveals that majority of the respondents (54%) were having normal weight, followed by the respondents (33%) were pre-obese, (7%) respondents were over-weight and only (6%) were under weight. The majority of respondents (54%) having a normal BMI in Table 2 could be due to a balanced representation of healthy weight individuals, while the percentages of pre-obese (33%).

Table 3: Distribution of respondents as per stages of hypertension

Stages of hypertension		**GENDER**					
		Male		**Female**		**Overall**	
		F	**Percent**	**F**	**Percent**	**F**	**Percent**
Pre-hypertension	**Systolic**	6	66.7	14	77.8	20	74.1
	Diastolic	3	33.3	4	22.2	7	25.9
	Total	9	100	18	100	27	100
Grade I hypertension (mild)	**Systolic**	8	57.1	9	47.4	17	51.5
	Diastolic	6	42.9	10	52.6	16	48.5
	Total	14	100	19	100	33	100
Grade II hypertension (moderate)	**Systolic**	5	45.5	2	20	7	33.3
	Diastolic	6	54.5	8	80	14	66.7
	Total	11	100	10	100	21	100
Grade III hypertension (severe)	**Systolic**	0	0	3	50	3	25
	Diastolic	6	100	3	50	9	75
	Total	6	100	6	100	12	100
Isolated systolic (hypertension)	**Systolic**	2	40	1	100	3	50
	Diastolic	3	60	0	0	3	50
	Total	5	100	1	100	6	100
	Diastolic	1	100	0	0	1	100

Hypertensive crises (consult doctor immediately)	**Total**	1	100	0	0	1	100

***Source: American Heart Association* (2025)**

Table 6 shows the distribution of respondents as per the stages of hypertension. This table reveals that majority of the respondents (75%) were having Grade III (severe) stage of (Diastolic) hypertension, followed by (74%) respondents having (Systolic) pre-hypertension, (66.7%) respondents were (Diastolic) Grade II hypertension and (51.5%) respondents have (Systolic) Grade I hypertension (mild).The high percentage of respondents (75%) with Grade III (severe) diastolic hypertension in Table 4.9 may indicate a severe form of high blood pressure within the surveyed population. The varying percentages in other stages reflect the distribution of hypertension severity, with some individuals falling into the pre-hypertensive or milder categories, while others have more severe conditions.

Table 4: Distribution of respondents as per restrictions of salt-based food items

Restricted Salt based Food items		**GENDER**					
		Male		**Female**		**Overall**	
		F	**Percentage**	**F**	**Percentage**	**F**	**Percentage**
Namkeen tea	**Usually**	35	76.1	32	59.3	67	67
	Sometimes	8	17.4	20	37	28	28
	Never	3	6.5	2	3.7	5	5
	Total	46	100	54	100	100	100
Butter (salted)	**Usually**	14	30.4	17	31.5	31	31
	Sometimes	21	45.7	24	44.4	45	45
	Never	11	23.9	13	24.1	24	24
	Total	46	100	54	100	100	100
Fast food (samosa, pizza, pakora, etc)	**Usually**	13	28.9	13	24.1	26	26.3
	Sometimes	24	53.3	33	61.1	57	57.6
	Never	8	17.8	8	14.8	16	16.2
	Total	45	100	54	100	99	100

Pickles	**Usually**	10	21.7	17	31.5	27	27
	Sometimes	27	58.7	28	51.9	55	55
	Never	9	19.6	9	16.7	18	18
	Total	46	100	54	100	100	100
Flavoured chutneys	**Usually**	16	34.8	8	14.8	24	24
	Sometimes	17	37	34	63	51	51
	Never	13	28.3	12	22.2	25	25
	Total	46	100	54	100	100	100
Dips	**Usually**	9	19.6	10	18.5	19	19
	Sometimes	17	37	24	44.4	41	41
	Never	20	43.5	20	37	40	40
	Total	46	100	54	100	100	100
Snacks (haldirams namkeens, nuts, salted crackers, potato chips, etc)	Usually	8	17.4	16	29.6	24	24
	Sometimes	29	63	22	40.7	51	51
	Never	9	19.6	16	29.6	25	25
	Total	46	100	54	100	100	100
Fried foods items	Usually	10	21.7	14	25.9	24	24
	Sometimes	22	47.8	26	48.1	48	48
	Never	14	30.4	14	25.9	28	28
	Total	46	100	54	100	100	100
Bakery products (cake, pastries, cheesecake, etc)	Usually	7	15.2	15	28.3	22	22.2
	Sometimes	30	65.2	29	54.7	59	59.6
	Never	9	19.6	9	17	18	18.2
	Total	46	100	53	100	99	100
Caffeine based products (tea, coffee, chocolate, energy drinks, etc)	Usually	17	37	21	38.9	38	38
	Sometimes	21	45.7	27	50	48	48
	Never	8	17.4	6	11.1	14	14
	Total	46	100	54	100	100	100
Sodium based	Usually	4	8.7	4	7.4	8	8
	Sometimes	22	47.8	23	42.6	45	45

compounds (sodium carbonate, baking powder, ajinomoto, mono sodium glutamine, etc)	Never	20	43.5	27	50	47	47
	Total	46	100	54	100	100	100
Canned products	Usually	5	10.9	7	13	12	12
	Sometimes	16	34.8	20	37	36	36
	Never	25	54.3	27	50	52	52
	Total	46	100	54	100	100	100
Bottled salad dressings (vinaigrette, emulsified vinaigrette, mayonnaise-based, and mayonnaise)	Usually	7	15.2	8	14.8	15	15
	Sometimes	12	26.1	18	33.3	30	30
	Never	27	58.7	28	51.9	55	55
	Total	46	100	54	100	100	100

Table 4 shows distribution of respondents as per restrictions of salt-based food items. This table revealed that majority of the respondents i.e., (67%) consume Namkeen tea usually, followed by respondents i.e., (45%) Butter (salted) sometimes, respondents i.e., (57.6%) consume Fast-foods (samosa, pakora, pizza, etc.) sometimes. (55%) respondents also consume pickles sometimes, also respondents i.e., (51%) consume flavored chutneys sometimes. Respondents i.e., (59.6%) consume bakery products sometimes. Also, respondents i.e., (47%), (52%) and (55%) never consume sodium-based compounds (sodium carbonate, baking powder, ajinomoto, etc.), canned products, and bottled salad dressings (vinaigrette, emulsified vinaigrette, mayonnaise, and mayonnaise based) respectively. Only 24% respondents were usually consuming snacks (haldirams namkeens, nuts, salted crackers, potato chips, etc.), 51% of respondents consume snacks sometimes, and 25% of respondents never consumed snacks. Only 19% of respondents usually consume dips, 41% of respondents sometimes consume dips. Fried food items were sometimes consumed by 48% of respondents, only 28% of respondents never consumed fried foods. Majority of the respondents i.e., 48% consumed caffeine-based products (tea, coffee, chocolate, energy drinks, etc.), 38% of respondents usually consume caffeine-based products, and only 14% of respondents never consumed tea, coffee, energy drinks, chocolate, etc.). The distribution in Table 4.21 suggests diverse dietary habits among the respondents regarding salt-based food items. For instance, the majority of respondents usually consume Namkeen tea (67%), reflecting a common salted snack, while other items like butter (salted), Fast-foods, pickles, flavoured chutneys, and bakery products are consumed sometimes. Respondents tend to avoid sodium-based compounds, canned products, and bottled salad dressings. Additionally, a significant portion consume snacks and dips sometimes, and there's a varied consumption pattern for caffeine based products. The preferences may be influenced by taste, regional culture, and individual dietary choices.

Table 5: Distribution of respondents as per modifications of recipes through taste enhancers to improve palatability of food

Recipes through taste enhancers to improve palatability of food		GENDER					
		Male		Female		Overall	
		F	Percentage	F	Percentage	F	Percentage
Lemon	Usually	31	67.4	43	79.6	74	74
	Sometimes	11	23.9	7	13	18	18
	Never	4	8.7	4	7.4	8	8
	Total	46	100	54	100	100	100
Vinegar	Usually	19	41.3	16	30.2	35	35.4
	Sometimes	21	45.7	29	54.7	50	50.5
	Never	6	13	8	15.1	14	14.1
	Total	46	100	53	100	99	100
Mint	Usually	23	50	27	50	50	50
	Sometimes	18	39.1	22	40.7	40	40
	Never	5	10.9	5	9.3	10	10
	Total	46	100	54	100	100	100
Coriander	Usually	26	57.8	32	59.3	58	58.6
	Sometimes	14	31.1	20	37	34	34.3
	Never	5	11.1	2	3.7	7	7.1
	Total	45	100	54	100	99	100
Green chillies	Usually	30	65.2	37	68.5	67	67
	Sometimes	12	26.1	13	24.1	25	25
	Never	4	8.7	4	7.4	8	8.0
	Total	46	100	54	100	100	100
Onion	Usually	33	71.7	40	74.1	73	73
	Sometimes	11	23.9	13	24.1	24	24
	Never	2	4.3	1	1.9	3	3.0
	Total	46	100	54	100	100	100

Garlic	**Usually**	29	63	40	74.1	69	69
	Sometimes	13	28.3	10	18.5	23	23
	Never	4	8.7	4	7.4	8	8.0
	Total	46	100	54	100	100	100
Pink salt	**Usually**	11	23.9	12	22.6	23	23.2
	Sometimes	23	50	24	45.3	47	47.5
	Never	12	26.1	17	32.1	29	29.3
	Total	46	100	53	100	99	100
Black pepper	**Usually**	14	30.4	28	51.9	42	42
	Sometimes	22	47.8	13	24.1	35	35
	Never	10	21.7	13	24.1	23	23
	Total	46	100	54	100	100	100
Rock salt	**Usually**	7	15.2	9	16.7	16	16
	Sometimes	24	52.2	21	38.9	45	45
	Never	15	32.6	24	44.4	39	39
	Total	46	100	54	100	100	100
Spices	**Usually**	31	67.4	40	75.5	71	71.7
	Sometimes	10	21.7	10	18.9	20	20.2
	Never	5	10.9	3	5.7	8	8.1
	Total	46	100	53	100	99	100

Table 5 shows the distribution of modified recipes through taste enhancers to improve palatability of food. This table revealed that majority of the respondents i.e., (74%) use Lemon as taste enhancer on daily basis, only (8%) of respondents never consumed lemon followed by respondents (73%) use onion daily, only (3%) of respondents never consumed onion. Garlic is also used by respondents (69%) usually, only (8%) of respondents never consumed garlic. Coriander is also consumed by respondents (58.6%) usually, (34.3%) respondents sometimes consume coriander, and only (7.1%) respondent never consumed coriander. (47.5%) respondents consume pink salt sometimes as taste enhancer, (23.2%) respondents sometimes consume pink salt as a taste enhancer, and (29.3%) respondents never consumed pink salt. Moreover, different types of spices were consumed by majority of respondents.

(71.7%) were usually consuming spices, (20.2%) were sometimes consuming these different types of spices, and only (8.1%) respondents never consumed spices. Rock salt was also added to the list of taste enhancers. Only (16%) of respondents consumed rock salt usually, (45%) of the respondents consumed rock salt sometimes, and (39%) of the respondents never consumed rock salt with their daily diet. Black pepper is the most common and used spice with numerous benefits like detoxifying body, cleanses our intestines and stomach, prevents constipation, it also consists of potassium that helps in regulating heart rate and high blood pressure, and it also helps in weight loss. (42%) respondents were using black pepper usually in their diet, (35%) of respondents sometimes consumed it, and (23%) never consume black pepper. Green chillies are rich in vitamin c, with 109.1mg per 100 grams. Consuming green chillies may help reduce inflammation in the body. Some of essential benefits of green chillies are: helps to cure anaemia, promoting healthy skin, increasing body temperature during winters, reduces stomach ulcers, it is also helpful for diabetes. (67%) of the respondents usually consumed green chillies, (25%) of the respondents sometimes consumed green chillies, and only (8%) respondents never consumed green chillies. Vinegar was usually consumed as taste enhancers by (35%) respondents, (50.5%) respondents sometimes consumed vinegar, and only (14.1%) never consumed vinegar. Mint was also added in the list of taste enhancers and majority of respondents (50%) usually consumed mint, (40%) of the respondents consumed mint sometimes, and only (10%) of respondents never consumed mint.

Table 6: Distribution of respondents as per food sources of potassium consumed by respondents

Food sources of potassium		**GENDER**					
		Male		**Female**		**Overall**	
		F	**Percentage**	**F**	**Percentage**	**F**	**Percentage**
Banana	**Usually**	36	78.3	36	66.7	72	72
	Sometimes	9	19.6	17	31.5	26	26
	Never	1	2.2	1	1.9	2	2
	Total	46	100	54	100	100	100
Watermelon	**Usually**	28	60.9	33	61.1	61	61
	Sometimes	18	39.1	20	37	38	38
	Never	0	0	1	1.9	1	1
	Total	46	100	54	100	100	100
Dried apricot	**Usually**	13	28.3	16	29.6	29	29
	Sometimes	28	60.9	29	53.7	57	57
	Never	5	10.9	9	16.7	14	14

	Total	46	100	54	100	100	100
Pomegranate	**Usually**	18	39.1	17	31.5	35	35
	Sometimes	26	56.5	32	59.3	58	58
	Never	2	4.3	5	9.3	7	7
	Total	46	100	54	100	100	100
Avocado	**Usually**	8	17.4	6	11.3	14	14.1
	Sometimes	13	28.3	15	28.3	28	28.3
	Never	25	54.3	32	60.4	57	57.6
	Total	46	100	53	100	99	100
Coconut water and coconut milk	**Usually**	7	15.2	10	18.5	17	17
	Sometimes	16	34.8	14	25.9	30	30
	Never	23	50	30	55.6	53	53
	Total	46	100	54	100	100	100
Pineapple	**Usually**	18	39.1	16	30.2	34	34.3
	Sometimes	22	47.8	32	60.4	54	54.5
	Never	6	13	5	9.4	11	11.1
	Total	46	100	53	100	99	100
Cucumber	**Usually**	31	67.4	44	81.5	75	75
	Sometimes	13	28.3	7	13	20	20
	Never	2	4.3	3	5.6	5	5
	Total	46	100	54	100	100	100
Tomatoes	**Usually**	31	67.4	41	75.9	72	72
	Sometimes	9	19.6	11	20.4	20	20
	Never	6	13	2	3.7	8	8.0
	Total	46	100	54	100	100	100
Broccoli	**Usually**	3	6.5	6	11.1	9	9
	Sometimes	19	41.3	22	40.7	41	41
	Never	24	52.2	26	48.1	50	50
	Total	46	100	54	100	100	100
Sweet potato	**Usually**	8	17.4	9	16.7	17	17

	Sometimes	11	23.9	17	31.5	28	28
	Never	27	58.7	28	51.9	55	55
	Total	46	100	54	100	100	100

Table 6 shows distribution of potassium rich foods consumed by respondents. This table shows that most of the respondents i.e., (75%) consume cucumber usually, (20%) of the respondents consume sometimes cucumber, only (8%) of respondents never consumed cucumber. Tomatoes were usually consumed by (72%) of respondents, (20%) of the respondents sometimes consumed tomatoes, and only (8%) of the respondents never consumed tomatoes. Respondents i.e., (61%) usually consume watermelon, (38%) of respondents sometimes consumed watermelon, and only (1%) of the respondents never consumed watermelon. Majority of the respondents (54.5%) consume pineapple sometimes, (34.3%) of the respondents usually consumed pineapple, and only (11.1%) respondents never consumed. Respondents i.e., (58%) consume pomegranate sometimes, (35%) of the respondents usually consumed pomegranate, and only (7%) of the respondents never consumed pomegranate. Broccoli was the least usually used food with (9%) of respondents, (41%) of respondents sometimes consumed broccoli, and majority of the respondents i.e., (50%) never consumed broccoli. Sweet potatoes were usually consumed by only (17%) respondents, (28%) respondents were sometimes consuming sweet potatoes, and majority of the respondents i.e., (55%) never consumed sweet potato. Banana was one of the most consumed food source of potassium by the respondents. Majority of the respondents i.e., (72%) usually consumed banana, (26%) of respondents sometimes consumed banana, and only (2%) of the respondents never consumed banana. (29%) of the respondents usually consumed dried apricot, (57%) of the respondents sometimes consumed it, and only (14%) of respondents never consumed dried apricot. Avocado was also added in the list of potassium rich foods. Only (14.1%) respondents usually consumed avocado, (28.3%) of the respondents sometimes consumed avocado, and (57.6%) of respondents never consumed avocado. (17%) respondents usually consumed coconut water and coconut milk, (30%) of the respondents sometimes consumed it, and majority of the respondents (53%) never consumed coconut water and coconut milk.

Table 7: Distribution of respondents as per type of oil used for cooking purpose

Type of Oil	**GENDER**					
	Male		**Female**		**Overall**	
	F	Percent	F	Percent	F	Percent
Refined oil	18	39.1	24	44.4	42	42
Olive oil	10	21.7	7	13	17	17
Sunflower oil	6	13	0	0	6	6

Mustard oil	12	26.1	23	42.6	35	35
Total	46	100	54	100	100	100

Table 7 shows distribution of respondents as per type of oil used for cooking purpose. This table revealed that majority of the respondents i.e., (42%) uses refined oil for cooking purpose, (35%) of respondents uses mustard oil for cooking, (17%) uses olive oil for cooking purpose and only (6%) uses sunflower oil for cooking purpose. The majority of respondents (42%) using refined oil in Table 4.22 may reflect its wide availability and affordability in many regions. The use of mustard oil (35%) might be due to regional preferences, while olive oil (17%) and sunflower oil (6%) usage can be attributed to those seeking specific health benefits or following culinary traditions.

Table 8: Distribution of respondents as per levels of sodium restrictions

Levels of salt restrictions		**GENDER**					
		Male		**Female**		**Overall**	
		F	**Percentage**	**F**	**Percentage**	**F**	**Percentage**
Moderate sodium restriction (2-3mg)	Yes	19	100	19	100	38	100
	Total	19	100	19	100	38	100
Moderate sodium restriction (1000mg)	Yes	5	83.3	4	66.7	9	75
	No	1	16.7	2	33.3	3	25
	Total	6	100	6	100	12	100
Strict sodium restriction (500mg)	Yes	8	100	8	88.9	16	94.1
	No	0	0	1	11.1	1	5.9
	Total	8	100	9	100	17	100
Strict sodium restriction (200mg)	Yes	2	66.7	1	100	3	75
	No	1	33.3	0	0	1	25
	Total	3	100	1	100	4	100
Normal sodium intake (10-12)	Yes	10	100	17	94.4	27	96.4
	No	0	0	1	5.6	1	3.6
	Total	10	100	18	100	28	100

Source: American Heart Association (2025)

Table 8 shows distribution of respondents as per levels of sodium restrictions. This table revealed that majority of the respondents i.e., (100%) consume moderate sodium amount(2-3mg), followed by the (96.4%) respondents who consume normal sodium amount(10-12mg), (94.1%) respondents strictly

restrict sodium in their diet (1000mg). The fact that 100% of respondents consume a moderate sodium amount (2-3mg) in Table 4.23 suggests a common dietary range that includes some salt intake. The percentages for normal sodium consumption (10-12mg) and strict sodium restriction (1000mg) show the variations in respondents' dietary choices, with the majority opting for moderation.

Conclusion

In this study it was found that most people with hypertension were between 41 and 50 years old, and a large number of them were women. A majority of respondents didn't restrict their sodium intake and consumed items like namkeen tea and occasionally indulged in bakery products. They often used lemon to enhance the taste of their food and consumed potassium-rich foods like cucumbers. Regardless of gender, most respondents believed that lifestyle changes could help manage hypertension effectively. This study also revealed that the majority of respondents were visiting a doctor monthly for their hypertension management, showing a proactive approach to their health. They typically had 2-3 meals a day and leaned towards a non-vegetarian diet, often using refined oil for cooking. Surprisingly, most of them did not restrict their sodium intake, which is a crucial consideration for individuals with hypertension. A significant portion of the respondents never consumed salt-based foods like bottled salad dressings or mayonnaise-based products. However, they did sometimes indulge in bakery items, which can contribute to hypertension if consumed excessively due to their high salt and fat content. Moreover, the respondents were conscious of their dietary choices as many included potassium rich foods in their meals, with cucumber being a popular choice. This was a positive step, as potassium can help counteract the effects of sodium on blood pressure. This preference may indicate the need for dietary guidance tailored to their choices, focusing on healthier cooking methods and protein sources. The study showed that despite occasional indulgence in bakery products, respondents often used lemon as a taste enhancer in their meals.

REFERENCES

- World Health Organization,2021.Hypertension fact sheet. WHO Journal of American Heart Association.
- Srilakshmi, B (2019).dietetics (8th ed.). New Delhi :New Age International publishers.
- Leng B, Jin Y, Li G,Chen Li, & Jin N.(2015): Socioeconomic status and hypertension meta-analysis. Journal of Hypertension, 33(2), 221-229
- Appel, L. J., Moore, T. J., Obarzanek, E., Vollmer, W. M., Svetkey, L. P., Sacks, F. M., Bray, G. A., Vogt, T. M., Cutler, J. A., Windhauser, M. M., Lin, P.-H., & Karanja, N. (1997). A clinical trial of the effects of dietary patterns on blood pressure. *New England Journal of Medicine, 336*(16), 1117–112.
- Sacks, F. M., Svetkey, L. P., Vollmer, W. M., Appel, L. J., Bray, G. A., Harsha, D., Obarzanek, E., Conlin, P. R., Miller, E. R., Simons-Morton, D., Karanja, N., & Lin, P.-H. (2001). Effects

on blood pressure of reduced dietary sodium and the Dietary Approaches to Stop Hypertension (DASH) diet. *New England Journal of Medicine, 344*(1), 3–10

- He, F. J., & MacGregor, G. A. (2004). Effect of longer-term modest salt reduction on blood pressure. *The Lancet, 364*(9438), 493–500
- Fung, T. T., Chiuve, S. E., McCullough, M. L., Rexrode, K. M., Logroscino, G., & Hu, F. B. (2008). Adherence to a DASH-style diet and risk of hypertension. *Hypertension, 51*(4), 921–926
- Stamler, J., Elliott, P., & Kesteloot, H. (2013). Relation of dietary potassium to blood pressure. *Journal of Human Hypertension, 27*(11), 725–732
- Mozaffarian, D., Fahimi, S., Singh, G. M., Micha, R., Khatibzadeh, S., Engell, R. E., Lim, S., Danaei, G., Ezzati, M., & Powles, J., on behalf of the Global Burden of Diseases Nutrition and Chronic Diseases Expert Group (NutriCoDE). (2014). Global sodium consumption and death from cardiovascular causes. *New England Journal of Medicine, 371*(7), 624–634.
- Gupta, R., Gokul, K., & Gupta, V. (2017). Dietary patterns and hypertension in urban India. *Nutrition Journal, 16*(1), 1–8.
- Schwingshackl, L., Bogensberger, B., & Hoffmann, G. (2021). Comparative effects of dietary patterns on blood pressure. *BMJ, 372*, n1
- Mir Majid, S. A., Bhat, S. A., Rather, S. A., & Ahmad, S. R. (2021). Mediterranean diet and blood pressure: A systematic review. *Clinical Nutrition, 40*(3), 318–325.
- López-Miranda, J., Pérez-Martínez, P., Delgado-Lista, J., & Jiménez-Lucena, R. (2023). Plant-based diets and hypertension: A review. *Nutrients, 15*(6), 1302.
- Blanco-Rojo, R., Sandoval-Insausti, H., Graciani, A., López-García, E., Moreno-Franco, B., Laclaustra, M., Ordovás, J. M., & Rodríguez-Artalejo, F. (2023). Ultra-processed food consumption and incident hypertension. *European Journal of Nutrition, 62*(4), 1765–1775.
- Liu, Y., Wang, J., Zhang, L., & Chen, X. (2025). Dose–response analysis of dietary potassium and blood pressure. *Journal of Human Hypertension*. Advance online publication.
- Szulińska, M., Kregielska-Narozna, M., Oracz, J., & Bogdański, P. (2025). Probiotics and blood pressure: A meta-analysis of RCTs. *Food Science & Nutrition*. Advance online publication.

Wani, F. A., Mir, M. U., Majid, S., & Bhat, R. A. (2022). Salt consumption and hypertension prevalence in Kashmir. *Indian Heart Journal, 74*(3), 202–208.