Research Article

Prevalence of Hypertension and its Associated Factors among Retired Army in Pokhara

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Article History

Received 23 March 2021 *Revised 10 October 2021* *Accepted 10 November 2021*

ABSTRACT

Hypertension can be caused by a number of factors. Tobacco usage, excessive alcohol use, a poor diet, high salt intake, overweight and obesity, and physical inactivity are among these factors. Demographic factors such as age, ethnicity and family history also play a role in causing hypertension. When inherited factors are paired with an unhealthy lifestyle, the chance of high blood pressure rises. A cross-sectional descriptive research design was used for this study. Non probability purposive sampling was done to select the sample. Three hundred and fifteen retired army were chosen as a sample. Semi- structured interview schedule was used to collect data. Over all prevalence of hypertension was 58.41% with newly diagnosed cases of 33(10.4%) and previous cases of 151(47.9%) and this was significantly associated with Age, years of retirement, smoking, chewing tobacco and salt consumption. The burden of hypertension was high, and it has become a major health concern among retired army. To deal with life-threatening consequences and chronic debilitating morbidity, a community screening program, timely detection, lifestyle adjustment, treatment, and prevention are all critical.

Keywords: Body mass index, hypertension, obesity, prevalence, retired army, smoking, waist hip ratio.

INTRODUCTION

According to World Health Organization [WHO], normal adult blood pressure is defined as a systolic blood pressure of 120 mmHg and a diastolic blood pressure of 80 mmHg. Hypertension or high blood pressure is defined as a systolic blood pressure equal to or above

140 mmHg and/or a diastolic blood pressure equal to or above 90 mmHg (World Health Organization, 2013).

Hypertension is major global public health problem. Every year, nearly 8 million people are killed by high blood pressure. Over 1 billion people worldwide suffer from excessive blood pressure. In 2008, the global prevalence of high blood pressure in adults aged 25 and up was around 40.0 percent (including those under medication). The African Region had the highest prevalence of high blood pressure (46.0 %) among all WHO regions in the same year, while the Americas region had the lowest (35.0 %). High blood pressure affects two out of every five persons in the Eastern Mediterranean region. In practically every country in the region, males have higher blood pressure than females (WHO, 2013).

Among South Asian countries, Nepal reported the highest proportion of hypertensive people (33.8%). In Nepal, hypertension is prevalent in 17.0% of women and 23.0% of men age 15 and above. In age group of 55-59 years, 32.0% of women and 36% of men have hypertension. It is most likely to be hypertensive if you belong to the criteria of women and men in urban areas, those living in the Hill ecological zone, in the Western region (WHO, 2013).

Nepal is currently undergoing an epidemiological change, which is accompanied by an increase in the burden of non-communicable diseases. According to several research, the prevalence of hypertension among Nepalese people ranges from 21.0 percent to 34.0 percent. Two cross-sectional studies conducted in a rural part of the Kathmandu valley indicated that the number of hypertension increased about thrice in those aged 21 and above over a 25-year period from 1981 to 2006.

The link between salt intake and hypertension has been recognized for about 60 years, and it also applies to indigenous. We found a higher burden of hypertension among people who consume more than 10 grams of salt per day, indicating a link between salt intake and hypertension; as salt intake rises, blood pressure rises as well. (Chakma, 2017). It is therefore, necessary to conduct the study among the retired army. The main objective of this study is to assess the prevalence of hypertension and associated factor among the retired army.

DATA AND METHODS

A cross sectional descriptive study was carried out among 315 retired army residing in Rambazar 10 and 15, Pokhara, Kaski to find out the prevalence of hypertension among them. The locality consists of residence of retired armies that made feasible for present study. Research

instrument was validated by incorporating the feedback of subject experts and pretesting was done among of 10% of total sample size. Information on socio demographic variables and behavioral risk factors were collected, that is, tobacco use, alcohol use, and related factors. Some items in Interview schedule was adopted from World Health Organization's validated STEPS instrument version 3.1, an approach to chronic disease risk factors surveillance measures.

Non probability sampling technique was used to select the sample population. Primary data were collected by face to face interview using semi-structured interview schedule and physical measurement such as height, weight, hip and waist ratio and blood pressure measurement was also done by the help of sphygmomanometer during data collection. Respondents were informed about the purposes and objectives of the study. Informed verbal and written consent was taken from each respondents.

Respondents whose blood pressure were found more than normal range were referred to higher center and advised to consult with the physician. The collected data was coded and entered in Microsoft sciences (SPSS) software version 16 for analysis. Descriptive data was analyzed using mean, frequency, percentage and chi-square test was used to find out the association between hypertension and its risk factors.

RESULTS AND DISCUSSION

Background Characteristics of Respondents

Table 1 depicts the background information of the study participants. Just more than half (58.1%) of the participants were below mean age 64 years. Most of the respondents were the followers of Hindu religion i.e. 309 (97.1%) and remaining (2.8%) were Non Hindus. Number of relatively advantaged Janajati were higher i.e. 167 (53.0%), fewer were Dalit i.e. 10 (3.2%).

Table 1

Socio-Demographic Information of Respondents (n=315)

Characteristics	Frequency(n)	Percentage (%)
Age		
Below 64(inclusive)	183	58.1
Above 64	132	41.9
Religion		
Hindu	306	97.2

Non Hindu	9	2.8
Ethnicity		
Dalit	18	5.7
Disadvantaged Janajati	16	5.0
Disadvantaged non Dalit Terai caste group	8	2.5
Upper caste groups	96	30.7
Relatively advantaged Janajati	177	56.1
Years of service		
Below 23 (inclusive)	180	57.1
Above 23	135	42.9
Years of retirement		
Below 23 (inclusive)	177	56.2
Above 23	138	43.2
Duration suffering from HTN (n=151)		
Less than 11(including 11)	133	42.2
More than 11	18	5.7
Under Medication, (n=151)		
Yes	133	42.2
No	18	5.7
Reason for not taking medicine (n=18)		
Medicine need to be taken regularly	5	27.8
Wish to control with life style change	10	55.6
Controlled BP	2	11.1
Swelling	1	5.5
Family History of HTN		
Yes	64	20.3
Presence of associated disease		
No	251	79.7
Yes	104	33
No	211	67
Associated disease beyond HTN (n=69)		
Diabetes	31	44.9
Cardiac disease	19	27.5
Renal Problem	3	4.3
Asthma	5	7.2

Others	11	15.9
Mental stress		
Yes	8	2.5
No	307	97.5

Table 2 presents the information of respondents. Among 151 cases, (5.70%) seems to have chronic hypertension, diagnosed since 11 years. Forty-two percent were under medication and (5.70%) were not taking medicine even after diagnosed with HTN. Whereas the reason explained by respondents for not taking medicines is willing to control hypertension by behavior modification.

Table 2

Prevalence of Hypertension (n=315)

Characteristics	Frequency	Percentage (%)
Prevalence of HTN		
Hypertensive	184	58.3
Non-hypertensive	131	41.7

Table 3 presents the total prevalence of hypertension. Among 315 respondents, majority (58.3%) of the respondents had suffered from hypertension whereas 41.7% were non hypertensive.

Table 3

Behavioral Information of Respondents (n=315)

Risk factors	Frequency	Percentage (%)
Do you smoke		
Yes	117	37.1
No	198	62.9
Frequency of smoking (n=117)		
Daily	97	82.9
2-4 days a week	20	12
chewing tobacco		
Yes	101	20.3
No	214	79.7
Frequency of chewing tobacco (n=101)		
Daily	87	86.1
2-4 days a week	14	13.9
Drink alcohol		
Yes	225	71.4
No	90	28.6

Frequency of drinking alcohol (n=225)		
Daily	156	69.3
2-4 days a week	55	42.4
Once a week	14	6.2
How much salt you add		
1 spoon	87	27.8
Half spoon	136	43.5
One fourth	61	19.5
Pinch of finger	25	7.3
More than 1 spoon	6	1.9
Consumption of processed foods		
Always	5	1.6
Sometimes	106	33.7
Rarely	80	25.4
Never	124	39.4
Fruits		
Daily	154	48.9
2-4 days a week	131	41.6
Once a week	30	9.5
BMI		
Underweight	4	1.3
Healthy	110	34.9
Over weight	149	47.3
Obese	52	16.5
WHR		
No	41	13.0
Moderate	164	52.1
High	110	34.9
Regular health check ups		
Yes	130	41.3
No	185	58.7
Frequency of checkups (n=130)		
Monthly	41	31.5
3 monthly	29	22.3
6 monthly	23	17.7

Yearly	17	13.1
Others	20	15.4
Do you exercise		
Yes	292	92.7
No	23	7.3
Type of exercise		
Moderate	244	83.6
Vigorous	48	16.4
How many days do exercise (292)		
Daily	178	61.0
2-4 days a week	106	45.3
once a week	8	2.7
Exercise, hours per day (292)		
Less than 1 hour	96	32.9
1-4 hours		176
5-8 hours	15	4.8
More than 8 hours	5	1.6

Table 4 depicts that (37.1%) of the sample population were smokers whereas about one third of the participant chew tobacco. Likewise, 82.9% of respondents used smoke daily. Majority (71.4%) of the participants were alcohol users. More than half (58.7%) go for regular checkups and 41(31.5%) of them go for monthly checkups. Most (92.7%) of the respondent perform physical exercises and larger part 244(83.6%) of them perform moderate exercise. Maximum respondents (60.2%) perform exercise for 1-4 hours.

Table 4

Association Between Socio-Demographic Factors and Hypertension (n=315)

Variables	Hypertension		$\chi 2$
	Yes	No	
Age			
below 64(inclusive)	62	121	34.575*
above 64	89	43	
Years of retirement			
Below 23(inclusive)	67	110	16.460*
Above 23	84	54	

*p <0.001

Table 5 presents the statistical significant association between age and years of retirement with hypertension.

Table 5

Association Between Behavioral Factors and Hypertension (n=315)

Variables	Hypertension		$\chi 2$
	Yes	No	
Smoking			
Yes	73	44	15.587*
No	78	120	
Chewing tobacco			
Yes	63	38	12.420*
No	88	126	
Salt consumption			
1 table spoon	119	101	12.492*
Less than 1 table spoon	30	63	
Consumption of Fruits			
Daily	66	88	7 .508**
2-4 days a week	64	67	
Once a week	21	9	
BMI			
Not obese	114	149	12.706*
Obese	36	15	

*p <0.001, **p<0.05

Table 5 depicts that there is significant association between smoking, chewing tobacco, salt consumption, consumption of fruits and BMI with Hypertension. It is evident that there smoking, chewing tobacco, consumption and BMI have significant association with hypertension.

CONCLUSION

The study concluded that more than half of the retired armies were suffered from hypertension. Hypertension is significantly associated with five factors that is age, period retired from army (in years), smoking, chewing tobacco, amount of salt intake. The burden of hypertension is higher among retired army. This result might be the consequences of inactive life style after retirement. Hence, it is essential to emphasize on the public awareness program related to hypertension, risk factors and regular health checkup of the retired army.

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