



PREVALENCE OF HYPERTENSION IN GAZETTED OFFICERS OF DIFFERENT DEPARTMENTS

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ABSTRACT:

OBJECTIVE: To determine the prevalence of hypertension in gazetted officers of different departments in Government sector.

METHOD: This Descriptive cross sectional study was conducted at Mir Pur Azad Jamu Kashmir in 2013-2014. Gazetted officers from different departments, both genders and all age groups were examined for presence of hypertension. They were categorized according to their blood pressure reading as pre-hypertensive, stage-1, stage-2 and hypertensive crisis. Frequencies and percentages were calculated for all categories.

RESULTS: Total number of participants was 593. The prevalence of hypertension was found to be as high as 38.27%(227 patients). Results of Blood pressure distribution showed that pre hypertensive cases were 286(48.22%) more commonly observed as compare to stage 1 (28%), stage 2 (9.6%)and hypertensive crisis (0.5%). Maximum participation was from education department. Out of 535 patients from education department, 243 were pre hypertensive, (157%) were in stage 1 and (52%) were in stage 2 hypertension and 3 subject had suffered a hypertensive crisis. Out of 12 subjects from health department, 9 were pre-hypertensive and 3 patients were in stage 1 hypertension.

CONCLUSION: Maximum number of participants was at pre-hypertension stage and education department had maximum representation with a high prevalence of hypertension.

KEYWORDS: Hypertension, Frequency, Different working classes.

INTRODUCTION:

Hypertension is a silent killer with a day by day increasing prevalence in Pakistani population and also worldwide. The situation becomes more alarming when we come to the fact that more and more cases of resistant hypertension are being noted. Worldwide, 9.4 million deaths are attributed to complications of hypertension, including 45% of all deaths due to coronary artery disease and 51% of all deaths due to stroke¹. Over three quarters of CVD deaths take place in low- and middle-income countries².

In Pakistan, two large epidemiological studies the first based on the 1990–1994 National Health Survey³ and the second based on rural northern areas of the country [4] —reported hypertension prevalence rates of 19.1% and 14%, respectively.

HYPERTENSION CLASSIFICATION:

As the study was planned in 2014 and JNC 7

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guidelines were widely used for hypertension treatment and diagnosis during the study period, so Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of Hypertension was followed for the hypertension classification⁵.

- Normal: Systolic lower than 120 mm Hg, diastolic lower than 80 mm Hg
- Prehypertension: Systolic 120-139 mm Hg, diastolic 80-89 mm Hg
- Stage 1: Systolic 140-159 mm Hg, diastolic 90-99 mm Hg
- Stage 2: Systolic 160 mm Hg or greater, diastolic 100 mm Hg or greater

METHODOLOGY:

This study was designed to assess people from different government departments for hypertension prevalence and awareness about the disease among the gazetted staff. So that concerned Departments could be communicated about the situation and health department could recommend risk mitigation strategy. Primary objective of the study was to assess Hypertension prevalence and to improve the quality of life of the managers of the government departments to ultimately improve departments' efficiency, productivity and

outcome.

All the departments were written a letter on behalf of the District Health Officer Mirpur AJK explaining aims and objectives of the study and requesting their gazzated staff in 2013-14 for participation in the study. A total of 593 patients fulfilling inclusion and exclusion criteria were included from outpatient department after taking informed consent on a consent form. A Performa was used for data collection. Detailed history including associated risk factors was taken and physical examination was performed in each case. Individuals belonging to different working social classes were examined, participated in the study. Patients were categorized according to following

Severe Hypotension	(75/45-40/40)
Hypotension	(90/60-80/50)
Normal	(91/61-119/79)
Pre Hypertension or High Normal	(120/80-139/89)
Stage-I Hypertension	(140/90-159/99)
Stage-II Hypertension (High risk)	(160/100-180/110)
Hypertensive Crisis	(181/111-230/140)

blood pressure readings.

STUDY DESIGN: Descriptive cross sectional study

Sampling technique: Non probability, consecutive sampling.

INCLUSION CRITERIA: Both males and females gazetted scale persons from different government departments were included.

EXCLUSION CRITERIA: Patients with a history of tea consumption or smoking within 30 minutes prior to examination were excluded. Patients on any drug which causes hypertension were also excluded.

DATA ANALYSIS:

Collected data was entered to SPSS version 21.0 and were analyzed. Tables and Graphs were used to represent the results. Qualitative variables like hypertensive and its distribution, and departments were described as frequencies, percentages and proportions. As it was a descriptive study so no p-value was calculated

RESULTS:

A total of 593 subjects were examined maximum participants were from education department - 535(90.2%) followed in that order by health department - 12 (2%), Live stock - 10(1.7%), Agriculture 9 (1.5%) and police - 7(1.2%) departments (Fig-1)(Table-1).

Only one patient had hypotension and it was from education department. Subjects

Figure -1: Showing department wise distribution of study participants

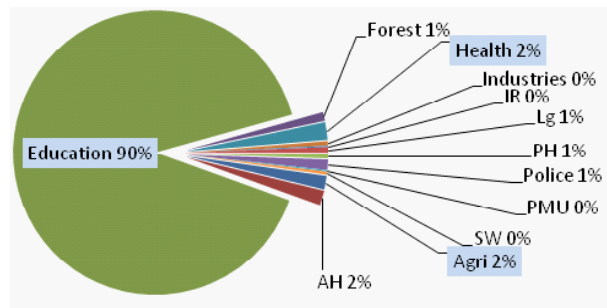


Figure - 2: Percentage of subjects at different stages of BP

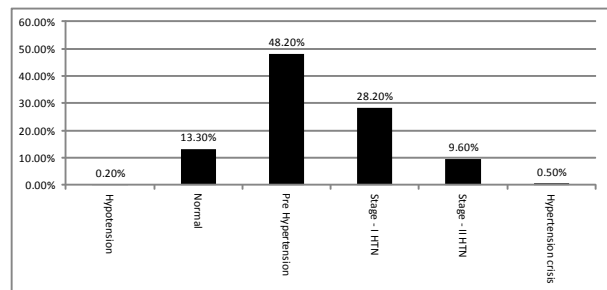
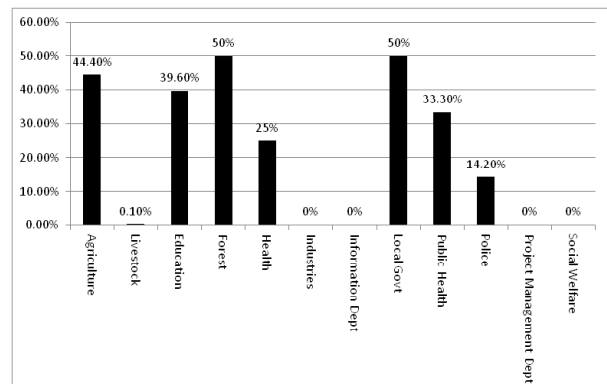


Figure - 3: Prevalence of hypertension in officers of different departments



with normal blood pressure were 79(30.3%) and they were also from education department. Only 3(0.5%) of the subjects suffer hypertensive crisis, all of them belonging to education department. (Table-1) Over all distribution of patients at different stages of hypertension is shown in Fig-2 and it indicate that maximum number of participant were at pre-hypertension stage. Within different working classes prevalence of hypertension (stage-1, 2 and hypertensive crisis) was as shown in Fig-3. Overall percentage of subjects at different stages of blood pressure is shown in figure.



Table-1: Department wise Blood Pressure distribution

		Hypoten-sion	Normal	Pre Hyperten-sion	Stage-I Hyper-tension	Stage-II Hyper-tension	Hypertensie Crisis	Total
Departments	N (%)	1 (0.17%)	79 (13.3%)	286 (48.22%)	167 (28.16%)	57 (9.6%)	3(0.50%)	593(100)
Agriculture (Agri)	9(1.5%)	0	0	5.0	2.0	2.0	0	9.0
Livestock	10(1.68%)	0	0	9.0	0	1.0	0	10
Education	535(90.2%)	1.0	79.0	243.0	157.0	52.0	3	535
Forest	6(1%)	0	0	3.0	2.0	1.0	0	6.0
Health	12(2%)	0	0	9.0	3.0	0	0	12.0
Industries	3(0.5%)	0	0	3.0	0	0	0	3.0
Information Dept. (IR)	1(0.17%)	0	0	1.0	0	0	0	1.0
Local Govern-ment (LG)	4(0.67%)	0	0	2.0	2.0	0	0	4.0
Public Health (PH)	3(0.5%)	0	0	2.0		1.0	0	3.0
Police	7(1.18%)	0	0	6.0	1.0	0	0	7.0
Project Manag-ment Unit (PMU)	1(0.17%)	0	0	1.0	0	0	0	1.0
Social Welfare (SW)	2(0.34%)	0	0	2.0	0	0	0	2.0
Total	593(100%)	1.0	79.0	286.0	167.0	57.0	3.0	593.0

Table-2: Categories wise distribution of B.P in Government sector in Mirpur AJK

	Severe Hy-potension	Hypotension	Normal	Pre Hyperten-sion	Stage-I Hyper-tension	Stage-II Hyper-tension	Hyertensive Crisis
1.Agriculture		0	0	55.6	22.2	22.2	0
2.Livestock			0	90.0	0.0	10.0	0
3.Education		0.2	13.3	45.4	29.3	9.7	0.6
4.Forest		0	00	50.0	33.3	16.7	0
5.Health		0	00	75.0	25.0	0.0	0
6.Industries		0	00	100.0	0.0	0.0	0
7.Information department		0	00	100.0	0.0	0.0	0
8.Local govern-ment		0	00	50.0	50.0	0.0	0
9.Public health		0	00	66.7	0.0	33.3	0
10.Police		0	00	85.7	14.3	0.0	0
11.Project manage-ment unit		0	00	100.0	0.0	0.0	0
12.Social welfare		0	00	100.0	0.0	0.0	0
Total		0.2	13.3	48.2	28.2	9.6	0.5

DISCUSSION:

In this servay to deduct prevalence of hypertension in gazzatted Govt. Officers of different departments, eadequate participation was only from education department. Representation of other departments was too small to make any meaningful conclusion. Maximum number of the subjects were at pre-hypertension stage and about 2/5 th of the officer from education department were hypertensive. One fourth of the health department officer had hypertension.

Hypertension is reported to be common in health professionals. Mitwali et al reported hypertension to be 28% among health professional⁶ which is closer to our finding of 25 %. In education department, hypertension was reported to be 21.6 % by Fikadu et al ⁷, we reported a higher frequency of 39.6%. It appear that our educationist are more stressed due to social constrains. A study conducted at Japan looking for job stress and hypertension, though it lacks correlation, showed that elderly people with lower working class have more hypertension⁸.



Another study conducted on salaried individuals showed no difference in grade and hypertension but in hourly employees higher grade employees had less hypertension⁹. Another study also showed relationship between job status and cardiovascular health with higher status having reduced risks of heart disease¹⁰. A study by Markovitz et al showed that increased risks of hypertension is seen with chronic job strain¹¹.

By evaluating blood pressure in different working classes would help people from all classes to seek medical attention at a very early stage. It will not only make the hypertension management plan easy and more effective but also minimize the loss of working days from dreadful complications of hypertension e.g, stroke or myocardial infarction. This will also help to significantly cut down the health-care burden. In addition, our study will

help to recognize the social groups with a higher prevalence of hypertension. Our results highlight the red flag group, that is the population group from education department. If hypertension goes unrecognized or remains uncontrolled, it may affect their abilities to perform efficiently. Health care professionals should stay more vigilant while examining this particular group of patients, aiming at early screening and more frequent follow ups to keep the situation under control.

CONCLUSION:

We conclude that a significant number of government officers are at pre hypertension stage where therapeutic intervention (non - pharmacologic or pharmacologic) can cut down the risk of frank hypertension. Furthermore, prevalence of hypertension is quite high in education department officers and it may be related to job stress.

Author's Contribution

WA: Collected the data and conducted the study. EUH: Helped in conducting the study. KEA: Helped in data analysis.

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