Original Article

AWARENESS OF RISKS FACTORS ASSOCIATED WITH HYPERTENSION IN PATIENTS PRESENTED TO MEDICAL DEPARTMENT OF DHQ HOSPITAL AT DERA GHAZI KHAN

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ABSTRACT:

OBJECTIVE: The present study was conducted to assess the knowledge of modifiable risk factors of hypertension among the people of D. G. Khan and to relate the findings with prevalence of it.

METHOD: For the purpose semi- structured questionnaire was designed as a research tool and people were asked for their awareness level in different aspects related to hypertension. Overall 300 respondents among them 185 male and 115 female were taken with age range between 36-50 years.

RESULTS: Knowledge regarding association of food (P< 0.020) and smoking (P< 0.052) with hypertension was better in older people. Educated community was well aware about effect of smoking (P< 0.000) and high intake of salt (P< 0.000) as major cause of hypertension. People with good economic values/level had better awareness regarding causes and preventive measures like exercise (P< 0.000) and visiting doctors (P< 0.000).

CONCLUSION: It is concluded that with rise in age, education level and economic status awareness regarding preventive and control of hypertension is better.

KEYWORDS: Hypertension, Risk factors, Awareness, health characteristics

INTRODUCTION:

Hypertension is the leading cause of disability and death round the globe. Various modifiable risk factors like diet, life style, physical inactivity, smoking, obesity and mental stress are associated with hypertension. These can be prevented and controlled through better awareness and health care of community. Hypertension is the principal cause of death and disability with an overall prevalence in heart patients i.e., 20-25% [1]. An INTERHEART study in Western Europe showed 22% heart attacks due to earlier history of hypertension with an almost double risk of further heart attacks [2]. Long standing uncontrolled hypertension accelerates atherosclerosis and hypertensive organ damage [3].

Complications may also include myocardial infarction, congestive cardiac failure, renal failure, peripheral occlusive disease and aortic dissection. The women remaining normotensive during the pregnancy may face lesser risk of coronary heart disease comparing with the nulliparous females [4,5]. Genetics is a major uncontrollable risk factor [6]. If one of the parents is affected with hypertension, there are 25% chances of developing hypertension in the off springs that may become double if both

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the parents are suffering from hypertension. Hypertension before the age of 50 years is more likely to be familial in all the races. Hypertension if exists in both the parents before the age of 55 years may convey more than 6 times higher adjusted risk for the development of high blood pressure throughout the life of an adult and 20 times higher adjusted risk at the age of 35 years [7].

Diets high in sodium, cholesterol, saturated fats, Tran's fatty acids, refined carbohydrates, sugar and possibly caffeine are major risk factors for hypertension [8]. Smoking due to its nicotine content is a devastating risk factor for hypertension. It causes smooth muscle contraction resulting in vasoconstriction. Patients having hypertension due to uncontrollable risk factors should completely stop drinking. Illegal and unnecessary drugs shouldn't be taken [9].

High blood pressure is the biggest single cause of death worldwide through strokes, heart attacks and kidney diseases. Prevention, in this case, is the best and the cheapest option. WHO (2002) ranked hypertension as third factor for disability in adjusted life years. Hypertension is also held responsible as one of the leading causes of death and disability in developing countries. It was estimated that by year 2025, hypertension would be affecting about 1.56 billion people in the world [10].

Hypertension alone is responsible for more than 5.8% deaths worldwide, loss of 11.9% year of life and adjusted life of 1.4% [11]. The assessment, management and control of hypertension carried a great challenge for health care researchers. The swift economic maturity, industrial development and revolutionized lifestyle seen in South Asia have shown the way to an increasing incidence of hypertension in the region [6,12].

Knowledge about hypertension is very poor among the populations in sub-continent. Adequate data about risk factors of hypertension especially in low income area, including tribal areas is not available. Thus the disease is emerging as a major clinical and public health problem in Pakistan. So the present study was designed to assess the knowledge of risk factors of hypertension in the people of Dera Ghazi Khan (D G Khan) and relate the findings with prevalence of hypertension in target population.

MATERIALS AND METHODS

This study was carried out at Medical out Patient Department of District head quarter (DHQ) Hospital Dera Ghazi Khan. The Hospital is 260 bedded and the only large hospital in Punjab providing health facilities on the West bank of river Indus. The city is located almost in the center of Pakistan. The population is approximately 522000 from where a sample of 300 people was selected randomly for the study. Regarding general awareness about high blood pressure the community was divided in to different groups. They were further divided in to subgroups to assess the community awareness about modifiable risk factors like food, sodium salt, exercise and smoking etc through a detailed questionnaire (Appendix I).

The obtained data was subjected to statistically analysis (SPSS 17). Chi-square (x^2) analysis was used in the present study to find out the statistically significant difference in the selected segment of the population at 5% level of significance. The distribution was developed by Prof. Karl Pearson in 1900 for all social studies [13].

RESULTS

Current study was conducted to find out the knowledge about the modifiable risk factors associated with hypertension and preventive measures among the people residing in catchment area of D. G. KHAN.

Socio demographic characteristics of the respondents

The present study comprised of different groups regarding gender, age, education, income, marital status and employment. The obtained data was subjected to statistical analysis and is presented here.

The present study results explored that respondent population (N= 300) consisted of both male and female members (Table 1). Male respondents were 61.7% and female were 38.30%. These were at the age of 35 or below (30.3%), at the age of 50 or below (45%) and at age of 65 or below (24.7%). The mean age of

respondent was 38.34 years. Their marital status indicated that 254 people were married while 46 were unmarried. Regarding their educational status among 300 respondents 25% were illiterate while 75% were literate while among literate people 24.3% had education qualification above matric and 50.7% had the matric level of education. Among all 172 (57.3%) respondents were employed whereas the remaining 128 (42.7%) of selected population were found to be unemployed. Regarding the economic status of the population sample 44% had monthly income less than Rs. 5,000/- and 41.7% had up to Rs. 20,000/- while only 14.3% had above Rs. 20,000/-per month income (Table 1).

Health aspects of the respondents

The respondents were questioned about their health parameters including heart disease patients, awareness about prevention of heart diseases, hypertension prevention, visiting doctor, doing exercise and patient smoking.
Among the respondents visiting medical out door 42 patients (14%) were suffering from heart diseases while 258 (86%) were with other sufferings. The fair number of respondents 95 (31.7%) know how heart diseases can be prevented while 205 (68.3%) respondents did not know. Majority of the respondents 194 (64.7%) had no knowledge that hypertension can be prevented by knowing its cause and 106 (35.3%) knew that by adopting healthy life style hypertension and heart diseases can be prevented. Regarding exercise, 209 respondents (60.7%) did not accomplish exercise and 91 (30.3%) patients were doing exercise but off and on. The participants believing that visiting doctor and doing exercise is helpful for remaining healthy were in large number 217 (72.3%) and only 83 (27.7%) negate the thought (Table 2).

Prevalence of hypertension

Amongst the patients, 156 (52%) were hypertensive and 144 (48%) were not hypertensive. They were questioned at the time of medical checkup and there were some patients who did not know about the prevalence of disease (Table 3). Through this practice they were informed about the disease. In the study most of the visiting people's systolic and diastolic blood pressure was found in medium range. The range of systolic and diastolic blood pressure was 121-150 and 81-100mm/Hg, respectively as mentioned in Appendix-I. Among them 46 patients (15.3%) were those who were diagnosed with in less than one year, 48 (16%) with in less than five years and 62 patients (20.7%) were those who were diagnosed from more than five years (Table 3).

Perception about causes of high blood pressure

High blood pressure/hypertension may occur due to various factors like salt, smoking, food, weight, cholesterol and heredity status. The respondents of present study were asked about these factors. Table 4 exhibits that out of 300 respondents only 84 people (28%) were well aware of the causes of hypertension while 216 (72%) did not know. Considering the salt intake as one of the main reasons the over-all perception showed that 157 people (52.3%) had knowledge that salt is a cause of hypertension and 143 people (47.7%) did not know. Among the respondents 161 (53.7%) knew about the foods that keep them healthy comparing 139 (46.3%) that had no knowledge. The knowledge about blood cholesterol level and dietary cholesterol of the respondents was drastically poor. Out of 300 respondents, 251 people (83.7%) had no knowledge. The situation was better for their knowledge about relationship between weight and hypertension as 205 (68.3%) study members said that weight influences health comparing 95 (31.7%). Concerning smoking, 132 (44%) were smokers while 168 (56%) were found non-smokers. Among smokers 123 (41%) respondents believe that smoking is a major cause of blood pressure but 177 people (59%) did not think that smoking has any effect on hypertension. The respondents considering hypertension and heart diseases as hereditary diseases were 170 (56.7%) and 130 (43.3%) denied this factor rather taking these as life style disorder (Table 4).

Effect of marital status on hypertension after visiting doctor

The comparison of characteristics of respondents with the knowledge of modifiable risk factors associated with hypertension and preventive measures was done. Married people are more regular to visit doctors and taking advice. Further study verified the matter and it was observed that out of 300 respondents, 254 were married while only 46 were unmarried who visited the doctor. They were asked about their views regarding role of exercise on high blood pressure. Among the both communities it was interesting that majority of the respondents 190 from married and 27 from unmarried took it better to visit the doctor, to take advice and to do exercise for keeping healthy life pattern with respect to high blood pressure (Table 5).

Role of education to understand causes of hypertension after visiting doctor

Highly significant differences were also observed concerning the education standard of the respondents concerning the knowledge about high blood pressure (Table 6). Almost 75, 152 and 73 respondents were illiterate, educated up to matric level and above matric level respectively. Nearly 50% of illiterate people had somewhat understanding about the causes of high blood pressure. The ratio was quite higher in matriculate respondents as 74% had better perception compared to the rest of this group. In above matric level group total number of respondents was 73 where 67 (91.80%) were with better knowledge about high blood pressure while only up to 8% were unaware of it as presented in Table 6.

Awareness to visiting doctor in the people having different income status

Another comparison of knowledge of protective measure by doing exercise and visiting doctors can prevent from hypertension was done with monthly income of respondents presented in Table 7. It was noticed that among the respondents of less than Rs. 5000/- (132), 79 (59.85%) had this awareness, monthly income group with Rs. 5000-20000/- (125), 103 (80.40%) had knowledge while among respondents whose monthly income was above Rs. 20000/- (43), 35 (81.79%) were well aware. By using chi squares to determine significance, it becomes clear that males at D. G. Khan received more education, have more money and have better professional circumstances and less unemployment than female. This result coincides with the result of the awareness, prevalence, treatment and control of hypertension with associated factors among adults in slums of Nairobi, Kenya where overall 14% of the people that had hypertension were aware while 35.3% were unaware of hypertension [14].

DISCUSSION

In the present study respondents were classified on the basis of gender, age, marital status, education and income. Significant response was found among the respondents about different parameters. Considering the blood pressure an important cause of cardiac diseases, it was found that most of the respondents had medium systolic and diastolic blood pressure ranged from 121-150 and 81-100mm/Hg. Hypertension was present in all study groups and the results obtained were in line with the findings of other studies [15]. Their study result indicated that hypertension was prevailing in different communities. High blood pressure is a major cause of cardiovascular disorders (CVD) as reported by WHO [1]. Some respondents in the present study had high blood pressure posing the possibility of cardiovascular diseases as pointed out in an earlier study [16]. It is suggested by an earlier research that health care professional in addition to identifying and treating hypertensive patients must also promote a healthy lifestyle and preventive strategies to decrease the prevalence of hypertension in general population [17].

The respondents that were sufferings from heart diseases among those who visited the medical outdoor mostly did not know the

relation of heart problems and high blood pressure but fewer people only. Respondents have little knowledge about hypertension prevention. In the current research project, respondent's knowledge about prevention and causes of hypertension was explored. Majority of the respondent 194 (64.7%) had no knowledge that hypertension can be prevented if they come to know the cause. Smoking and lack of exercise as well as poor food are major causes of high blood pressure. In a recent study similar results were obtained indicating that hypertension can be prevented by healthy life style. The researcher also confounded that awareness among the people through media and rallies also helps in controlling hypertension [18].

The present study confounded that majority of the respondent believed that hypertension and other heart diseases were inherited. These results are in line with the findings of other researchers [19, 20] narrating that hypertension and CVD are inherited health problems. Among the respondents 156 (52%) were hypertensive while 144 (48%) were not hypertensive. They were explored about the time since diagnosed that they were hypertensive and their belief about hypertension. Among them 46 (15.3%) were those who were diagnosed in less than one year, 48 (16%) were those who diagnosed in less than five year and 62 (20.7%) were those who were diagnosed in more than five years. The respondents were asked about their knowledge

Table 1. Socio demographic characteristics of 'N' respondents

Gender	**Frequency**	**Percentage**
Male	185	61.7
Female	115	38.3
Age	**----**	**-----**
21-35	91	30.3
36-50	135	45
51-65	74	24.7
Marital Status	**-----**	**-----**
Unmarried	46	15.3
Married	254	84.7
Education	**Frequency**	**Percentage**
Illiterate	75	25
Matric	152	50.7
Above Matric	73	24.3
Employment	**----**	**-----**
Yes	172	57.3
No	128	42.7
Income	**----**	**-----**
Less than 5000	132	44
5000-20000	125	41.7
Above 20000	43	14.3

N=300

Table 2. Health characteristics of 'N' respondents

Heart Disease patients	**Frequency**	**Percentage**
Yes	42	14
No	258	86
Awareness about prevention of heart diseases	**----**	**-----**
Yes	95	31.7
No	205	68.3
Hypertension prevention	**-----**	**-----**
Yes	106	35.3
No	194	64.7
Visiting doctor	**Frequency**	**Percentage**
Yes	217	72.3
No	83	27.7
Do exercise	**----**	**----**
Yes	91	30.3
No	209	69.7
Patient smoking	Frequency	Percentage
Yes	132	44
No	168	56

N=300

Table 3. Prevalence of hypertension and its know-how in 'N' respondents

Hypertensive patient	**Frequency**	**Percentage**
Yes	156	52
No	144	48
Time since diagnosed	-----	----
0	144	48
Less than one year	46	15.3
Less than 5 years	48	16
More than 5 years	62	20.7

Table 4. Perception about causes of high blood pressure of 'N' respondents

Causes of high blood pressure	**Frequency**	**Percentage**
Salt	**----**	**----**
Yes	157	52.3
No	143	47.7
Smoking	**----**	**----**
Yes	123	41
No	177	59
Food	**Frequency**	**Percentage**
Yes	161	53.7
No	139	46.3
Weight	**----**	**----**
Yes	205	68.3
No	95	31.7
Cholesterol	**----**	**----**
Yes	49	16.3
No	251	83.7
Heredity	-----	-----
Yes	170	56.7
No	130	43.3

Table 5. Effect of marital status on hypertension after visiting doctor

Marital status	**Visiting doctor**		
	Yes (%)	**No (%)**	**Total (%)**
Unmarried	27 (9.0)	19 (6.3)	**46 (15.3)**
Married	190 (63.3)	64 (21.3)	**254 (84.6)**
Total (%)	**217 (72.3)**	**83 (27.6)**	**300**

Chi=5.049
P< 0.025

Table 6. Role of education to understand causes of hypertension after visiting doctor

Education	Visiting doctor		Total (%)
	Yes (%)	No (%)	
Illiterate	38 (12.6)	37 (12.3)	**75 (25.0)**
Matric	112 (37.3)	40 (13.3)	**152 (50.6)**
Above Matric	67 (22.3)	6 (2.0)	**73 (24.3)**
Total (%)	**217 (72.33)**	**83 (27.66)**	**300**

Chi=31.528
P< 0.000

Table 7. Awareness to visiting doctor in the people having different income status

Income	Visiting doctor		Total (%)
	Yes (%)	No (%)	
Less than 5000	79 (26.3)	53 (17.6)	**132 (44.0)**
5000-20000	103 (34.3)	22 (7.3)	**125 (41.6)**
Above 20000	35 (11.6)	8 (2.6)	**43 (14.3)**
Total (%)	**217 (72.3)**	**83 (27.6)**	**300**

Chi=18.375
P< 0.000

regarding cholesterol and hypertension. The results showed that 251 (83.7%) had no knowledge while 49 (16.3%) had incorrect knowledge. The findings of the present research are closely related with the results of another study results [11]. Considering salt as a cause of hypertension perception of the respondents was analyzed. The results indicated that 157 (52.3%) had knowledge about salt and hypertension correlation but 143 (47.7%) did not believe that salt is effective for hypertension. These results were in accord to the findings of other research work conducted [15]. It was elucidated from the present study that most of the people did not know about the association of eating fats and drinking soda with hypertension. These findings are strengthened with the similar outcomes of the earlier researches [11, 16].

Summarizing the over-all results and their discussion it is to elaborate that there are many common practices in life style that lead to health disorders like hypertension. The other major factors that can adversely affect the health problems include illiteracy, low income profile and strict to traditional foods.

CONCLUSION

Hypertension is one of emerging health problems worldwide and is common in Pakistan. Awareness about the disease is necessary in its prevention and control. Current study was conducted to explore the knowledge about modifiable risk factors associated with hypertension in patients who visited the medical O. P. D of D. H. Q. Hospital of D. G. Khan. The study reflects that mostly people had no awareness about hypertension, heart disease and did not know that taking salt, eating fats and drinking sodas are associated with hypertension.

The gaps were explored in knowledge of

hypertension and preventive measures among the respondents due to the factors like age, educational level and economic status. Clear rise in awareness with rise in age, education and economic levels is perceived in our study. Conclusively, in this research it is found that among visited population of D. G. Khan, medical out-patient department, most of the people had low educational and economic level resulting in lower awareness about hypertension.

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O son of Adam, when you see that your Lord, the Glorified, bestows His Favors on you while you disobey Him, you should fear Him (take warning that His Wrath may not turn those very blessings into misfortunes).

Hazrat Ali (Karmulha Wajhay)