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Research Article

KNOWLEDGE REGARDING HYPERTENSION AND ITS RISK FACTORS IN RURAL COMMUNITY OF SULTANKE, RAIWIND LAHORE

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Abstract:

Background: Hypertension is also known as high blood pressure, is a long-term medical condition in which blood pressure in arteries is persistently elevated. The death rate with this is high among people of old age group and people with low status.

Objectives: To assess the knowledge of hypertension and its associated risk factors among members of rural community of Sultanke, Raiwind Lahore.

Material & Methods: Data was collected after taking permission from the ethical committee of Sharif Medical Dental college. 280 persons were interviewed with the help of questionnaire by the researchers and questionnaire was duly filled by their responses. On-Probability convenient sampling technique was used to interview the required number of respondents.

Results: The data was analyzed by putting it into IBM Statistic Software. Approximately 73.9% of respondents had some knowledge about hypertension while 26.1% of respondents had no knowledge about hypertension. About 67.1% thought that hypertension had association with headache, 13.6% had some relation with fatigue, and 15.4% thought hypertension causes vision problems and 3.9% had no idea about symptoms of hypertension. About 26.4% thought that increasing age was risk factor, 12.9% in favor of family history and majority 53.6% thought obesity was risk factor for hypertension. No significant association was observed between gender and knowledge about hypertension.

Conclusion: The overall level of knowledge regarding hypertension was high among both males and females. Majority of respondents had some knowledge about symptoms of hypertension like headache, fatigue and vision problems etc., therefore having vague knowledge about symptoms of hypertension this could guide them, so that earlier possible management should be started

KEYWORDS: Knowledge, Hypertension, Risk factors, Epidemiology

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INTRODUCTION:

Hypertension is also known as high blood pressure, is a long-term medical condition in which blood pressure in arteries is persistently elevated [1]. According to WHO, hypertension was dominant in 26.4% of adult population all over the world in 2000. Total number of hypertensive adults including men and women is 972 million in year 2000 of which 333 million were included in developed countries and 639 million were included in under developed countries. This number of peoples will be expected to increase by 60% in the year 2025 [2]. All over the world 13.5% of total premature deaths were due to high blood pressure. Many heart diseases are related to hypertension. The death rate with this is high among people of old age group and people with low status [3]. A study was done in south west Ethiopia showed hypertension is a serious problem all over the world. About 396 people were under study and only 44.8% people know about their hypertension all other does not, control rate of hypertension was very low [4].

Another study was done by Kayima in Africa, the levels of awareness of hypertension were found in rural communities in Nigeria (8%), and Uganda (10%) and Gabon (9%) is lowest. The highest awareness rates were found in the studies that considered elderly subjects reaching 81% in urban elderly populations of Tunisia. Generally, studies from North African countries showed the highest levels of awareness 71% among hypertensive patients. West and central Africa appeared to have the most minimal degrees of familiarity with hypertension status [5]. The situation regarding hypertension is also very grim in Pakistan contributing to a huge bulk of mortality morbidity. In 1994 national health survey of Pakistan acknowledged that hypertension is very prevalent in people among the age group of 15 and more than 15 and most of them does not even aware of their condition. A very few people in population have knowledge of hypertension and they are controlling it in a very proper way. So, it is concluded that lack of knowledge of blood pressure among population has contributed this unawareness in country [6]

Another research was led in Karachi in which an aggregate of 650 members were drawn closer and agreed 447 were discovered qualified. 284(63.5%) were from Aga Khan College, 101(22.6) from Dow College and 62(13.9) were from Ziauddin University. Mean (SD) period of members was 57.7(12) years, 50.1(224) were men. Controlled hypertension was available in 323(72.3) and uncontrolled hypertension was available in 124(27.4). The absolute mean (SD) Information score was 20.97(4.93) out of a greatest score of 38. On correlation of inquiries identified with information among uncontrolled and controlled

hypertension, there was measurably critical diverse in; which means of hypertension ($p < 0.001$), target SBP($p < 0.001$), target DBP($p < 0.001$), significance of SBP versus DBP, improvement of wellbeing with bringing down of circulatory strain ($p < 0.002$), hypertension being asymptomatic ($p < 0.001$), changing way of life improves blood pressure($p < 0.003$), hypertension being a long lasting illness (< 0.001), deep rooted treatment with antihypertensive(< 0.001) and hypertension being a piece of aging(< 0.001) [7].

Risk factor plays an important role in the pathogenesis of hypertension. They are often regarded as co-morbid factors with the hypertension. Regarding the risk factor a study was conducted by Sara Gul and his collages, this is found that 25.6% of the adults are hypertensive. Approximately 70.6% were males while 29.4% were females; 26.6% were smokers; 2.4% ate regularly meat; 26.8% were obese and overweight; 31.6% check B.P regularly; and 20.6% had positive family history of hypertension with higher chi square test value calculated at $P = 0.05$ [8].

It has been observed that hypertension and its related complications are spreading like wild fire and it is affecting equally to both rural and urban communities. The situation is worst in rural community where people do not have adequate knowledge about hypertension and its related risk factors because of their ignorance and lack of education. Secondary they don't have approach to new ways of mass media for getting information regarding the risk factors so, that they could modify their different life styles and living. Furthermore, lot of local customs and belief exists in the community to deal with hypertension aggravating the situation even worst. The significance of this study is therefore to identify the knowledge young adults have of hypertension and its contributing factors Like obesity, sedentary life styles, diabetes, smoking and excessive salt and excessive alcohol consumption have profound effect on the increasing prevalence of hypertension in middle and later decades of life. Most of people do not know about hypertension. They do not go for their regular blood pressure checkup. Ultimately, they got complications which cause morbidity and mortality. Due to this high prevalence, associated morbidity, mortality and huge economic burden, hypertension has become one of the greatest challenges of the modern era. In the light of above-mentioned factors, it is pertinent to access the knowledge of hypertension patients about their disease and its management.

MATERIAL AND METHODS:

It was a descriptive cross-sectional epidemiological study. The place of study was rural area of

Sultanke. It is located in Lahore district. According to survey in 2014, the total population of Sultanke was 56,522. Study population consisted of local people of Basti Sultanke Tehsil Raiwind District Lahore. The study was conducted in month after the approval of synopsis from April to May in 2017. 280 respondents were included in sample size. Sample size was calculated with confidence interval of 95% at acceptable difference of 0.05 by uni-pipe statistical software. Non-Probability convenient sampling technique was used to interview the required number of respondents. A semi-structured questionnaire was prepared and finalized after pre testing containing both closed and open-ended questions. The researcher visited

the rural area of Basti Sultanke and interviewed the people. Data was entered in computer software SPSS (Statistical Package for Social Science) version 24. The data was cleaned clearly and statistically analyzed by same software. Frequencies and percentages were calculated and data was presented in tables and diagrams. To assess the association between different variables chi square tests were applied. $P \leq 0.05$ was used as a cutoff point to determine the significance level of chi-square test. The permission from ethical community of Sharif Medical & Dental College was obtained before proceeding for the study. Confidentiality of data was maintained.

RESULTS:

Table 1: Frequency Distribution of Respondents According to Their Age, Sultanke. n=280

Age of respondents	Frequency	Percentage
15-25	45	16.1
26-35	108	38.6
36-45	66	23.6
46-55	23	8.2
56-65	21	7.5
66-75	14	5.0
Above 75	3	1.1
Total	280	100.0

This table shows that among 280 population of Sultanke, 45(16.1%) are between 15-25 of age group, 108(38.6%) are between 26-35 years old, 66(23.6%) are between 36-45 years, 23(8.2%) are between 46-55 of age group, 21(7.5%) are between 56-65 years, 14(5.0%) are between 66-75 years old, 3(1.1%) out of them was above 75 years old.

Figure 1: Frequency Distribution of Respondents According to Their Age, Sultanke

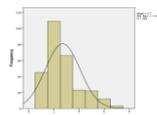


Table-2: Frequency Distribution of Respondents According to Their Gender, Sultanke

Gender of respondents	Frequency	Percentage
Male	197	70.4
Female	83	29.6
Total	280	100.0

Table identifies that among 280 residents of Sultanke 197(70.4%) of population were males and 83(29.6%) were females.

Table-3: Frequency Distribution of Respondents According to Their Educational Status, Sultanke

Educational Status of Respondents	Frequency	Percentage
Illiterate	124	44.3
Primary	74	26.4
Matric	63	22.5
Intermediate	18	6.4
Graduation	1	0.4
Total	280	100.0

This table elucidates that among 280 population of Sultanke 124(44.3%) were illiterate, 74(26.4%) had primary (grade-5) education, 63(22.5%) studied up to matric (grade-10), 18(6.4%) had passes intermediate examination while 1(0.4%) were graduated.

Table-4: Frequency Distribution of Respondents According to Their Occupational Status, Sultanke

Occupational Status of Respondents	Frequency	Percentage
Farmer	47	16.8
Laborer	118	42.1
Business	38	13.6
Teacher	5	1.8
Housewife	64	22.9
Student	6	2.1
Nothing	2	0.7
Total	280	100.0

This table clarifies that among 280 population of Sultanke, 47 (16.8%) were farmers, 118(42.1%) were laborers,38(13.6%) were doing their own business, 5(1.8%) were teachers by profession, 64(22.9%) were housewives, 6(2.1%) were students and 2 (0.7%) do nothing.

Table-5: Frequency Distribution of Respondents According to Their Hearing About Hypertension, Sultanke

Respondent's hearing about hypertension	Frequency	Percentage
YES	151	53.9
NO	129	46.1
Total	280	100.0

This table demonstrates among 280 population of Sultanke, 151(53.9%) thought that they have heard about hypertension while 129 (46.1%) had never heard about hypertension.

Table-6: Frequency Distribution of Respondents According to Their Knowledge About Hypertension, Sultanke

Respondent's Knowledge about hypertension	Frequency	Percentage
YES	207	73.9
NO	73	26.1
Total	280	100.0

This table highlights that among 280 population of Sultanke, 207(73.9%) had some idea about hypertension and 73 (26.1%) had no idea.

Table-7: Frequency Distribution of Respondents According to Their Knowledge About Symptoms of Hypertension, Sultanke

Respondent's knowledge about symptoms	Frequency	Percentage
Headache	188	67.1
Fatigue	38	13.6
Vision problems	43	15.4
No idea	11	3.9
Total	280	100.0

This table depicts that among 280 population of Sultanke, 188(67.1%) thought that hypertension had association with headache, 38 (13.6%) had some relation with fatigue, 43(15.4%) thought that hypertension cause vision problems and 11(3.9%) had no idea about symptoms of hypertension.

Table-8: Frequency Distribution of Respondents According to Their Knowledge About Tests for Diagnosis of Hypertension, Sultanke

Respondent's knowledge about diagnostic test	Frequency	Percentage
BP measurements	183	65.4
Urine test	5	1.8
ECG	84	30.0
No idea	8	2.9
Total	280	100.0

This table reveals that among 280 population of Sultanke, 183(65.4%) said that the blood pressure measurement was diagnostic, 5(1.8%) thought that urine test was diagnostic, 84(30%) thought that ECG had to be done for diagnosis and 8(2.9%) had no idea about diagnosis for hypertension.

Table-9: Frequency Distribution of Respondents According to Their Knowledge of Hypertension Affecting Different Age Groups Mostly, Sultanke

Age groups affected mostly	Frequency	Percentage
20-30	15	5.4
30-40	40	14.3
40-50	65	23.2
50-60	160	57.1
Total	280	100.0

This table describes that among 280 population of Sultanke, the age group affected mostly by hypertension, 15(5.4%) were up to 20-30 years old, 40(14.3%) were up to 30-40 years old, 65(23.2%) were up to 40-50 years old, 160(57.1%) were up to 50-60 years old.

Table-10: Frequency Distribution of Respondents According to Their Knowledge of Hypertension Affecting Gender mostly, Sultanke

Respondent's knowledge about gender affecting	Frequency	Percentage
Male	131	46.8
Female	149	53.2
Total	280	100.0

This table asserts that among 280 population of Sultanke, 131(46.8%) males were affected and 149(53.2%) were females.

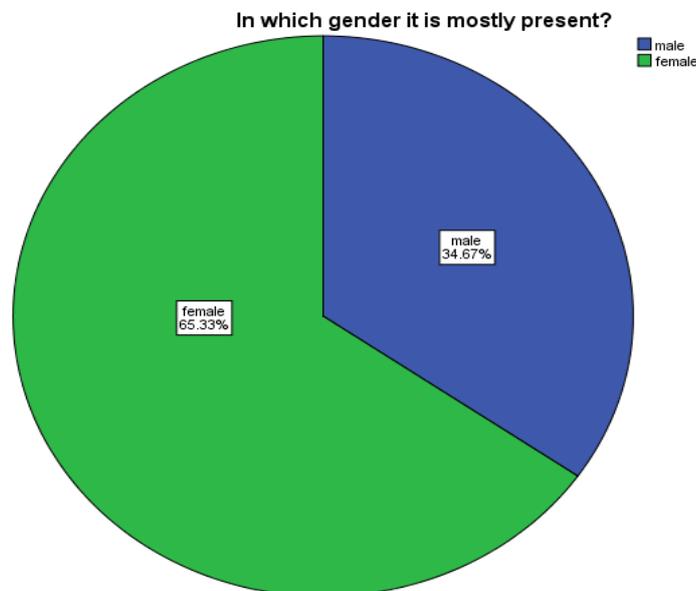
Figure-2

Table-11: Frequency Distribution of Respondents According to Their Knowledge About Risk Factors for Hypertension, Sultanke

Respondent's knowledge about Risk factors	Frequency	Percentage
Age	74	26.4
Race	7	2.5
Family History	36	12.9
Obesity	150	53.6
No idea	13	4.6
Total	280	100.0

This table elucidates that among 280 population of Sultanke, 74(26.4%) thought that increasing age was the risk factor, 7(2.5%) were in favor of race as the risk factor, 36(12.9%) thought that family history was the risk factor, majority 150(53.6%) thought that obesity was the risk factor and 13(4.6%) had no idea about risk factor.

Table-12: Frequency Distribution of Respondents According to Their Knowledge About Complications of Hypertension, Sultanke

Respondent's knowledge about complications	Frequency	Percentage
Renal Failure	23	8.2
Eye Damage	36	12.9
Heart attack	214	76.4
No idea	7	2.5
Total	280	100.0

This table states that among 280 population of Sultanke, complications of hypertension according to 23(8.2%) was renal failure, 36(12.9%) was eye damage, 214(76.4%) was heart attack and 7(2.5%) knew nothing about complications of hypertension.

Table-13: Frequency Distribution According to Knowledge About Treatment of Hypertension, Sultanke

Respondent's knowledge about treatment	Frequency	Percentage
Life style modifications	73	26.1
Consultations of doctors	35	12.5
Dietary changes	38	13.6
Pharmacologic therapy	134	47.9
Total	280	100.0

This table identifies among 280 population of Sultanke, that treatment of hypertension according to 73(26.1%) was life style modification, 35(12.5%) were consultations, 38(13.6%) was dietary changes and 134(47.9%) was pharmacologic therapy.

Table-14: Frequency Distribution of Respondents According to Their Opinion of Referral of Patient with Hypertension to Hospital, Sultanke

Respondent's knowledge about reference to hospital	Frequency	Percentage
Physician recommendation	20	7.1
Don't feel well	79	28.2
Heart pain	141	50.4
Family history	40	14.3
Total	280	100.0

This table exhibits that among 280 population of Sultanke, that condition, patient was referred to hospital according to, 20(7.1%) when physician recommends, 79(28.2%) when don't feel well, 141(50.4%) when heart pain occurred and 40(14.3%) when family history was present.

Table-15: Frequency Distribution of Respondents According to Their Knowledge About Management of Hypertension Risk Factors, Sultanke

Respondent's knowledge about management	Frequency	Percentage
Life style modification	101	36.1
Dietary changes	54	19.3
Decrease weight	74	26.4
Exercise	51	18.2
Total	280	100.0

This table demonstrates among 280 population of Sultanke, the management regarding risk factors according to, 101(36.1%) was life style modification, 54(19.3%) was dietary changes, 74(26.4%) was decrease in weight and 51(18.2%) was adopting exercise.

Table-16: Frequency Distribution of Respondents According to Their Source of Knowledge About Hypertension, Sultanke

Respondent's source of knowledge	Frequency	Percentage
TV	100	35.7
Newspaper	56	20.0
Internet	8	2.9
Not specific	116	41.4
Total	280	100.0

This table clarifies among 280 population of Sultanke, that they got knowledge for hypertension, 100(35.7%) by Television, 56(20%) by newspaper, 8(2.9%) by internet and 116(41.4%) had no specific source.

Table-17: Frequency Distribution of Respondents According to Attending Any Seminar Regarding Hypertension, Sultanke

Respondents attending any seminar	Frequency	Percentage
YES	5	1.8
NO	275	98.2
Total	280	100.0

This table confirms among 280 population of Sultanke, 5(1.8%) had attended seminar regarding hypertension and 275(98.2%) had never attended any seminar.

DISCUSSION:

In our study, 280 respondents were introduced to determine the knowledge about HTN and its related risk factors. The study was conducted in a rather poorly developed slum area of Lahore. As far as the gender participation is concerned approximately 75 % of respondents were male and 25 % are female. This was probably because of their more accessibility and free time from their field work. The females were probably more busy in their household works and also rather reluctant to introduce because of social reasons. A similar study was conducted by Sauda Brankovic, Aida Pilav and their colleague in Canton Sarajevo on frequency of blood pressure measuring according to degree of working population education. They interviewed 443 respondents in their study. Among correspondents, there were 153 male (34.5 %) and 290 female (65.5 %) it is absolutely opposite to our study, due to freedom of opinion and lack of ethical issue in these countries [9].

Regarding the educational status it was very disturbing that majority of respondents were illiterate. Because of this illiteracy and ignorance, they were not able to properly understand and interpret the questions easily. Secondly because of their illiteracy they were unable to understand the importance of this health problem. Therefore, there is dire need to uplift the educational status in the village so that these people could understand their health problem in effective way and proper remedies should be adopted. The educated people in the community with different grades of education may also be used as the first line guide regarding their health problems to communicate to

these of illiterate people. The above study of Aida Pilav and their colleagues showed a high level of literacy rate regarding the structure of respondents, the majority of them 213 (48.1 %) are graduated faculty, 142 (32.1 %) are graduated secondary vocational school and 66 (14.9 %) with a higher degree. These figures show a well literacy rate and awareness about HTN, as far as our study is concerned [9].

As far as occupational status is concerned, approximately 59 % of respondents belong to either farmer or laborers working in the fields on daily wages basis. It is apparent that these respondents are not having any time to listen about these types of health problem or to enhance their knowledge about HTN. They either least adjusted in such type of health activities. So, keeping their daily activities, special type of focus, group discussion could be arranged to impact knowledge about their health problems. It is encouraging that approximate 74 % of people had at least knowledge about HTN and similarly more than 90 % of respondents had some idea about symptoms of HTN like headache, fatigue and vision problems etc. Therefore, having vague knowledge about symptoms of HTN, these respondents at least have some idea about HTN and this could guide them. So that earlier possible management could be started.

Likewise, 65 % of respondents were having knowledge about BP measurement by BP apparatus and similarly 30 % respondents had knowledge about ECG tests playing an important role in diagnosis of HTN. It is very encouraging that they at least had idea about HTN screening and diagnosis by BP apparatus which is a simple test

for HTN diagnosis. Although most of respondents are illiterate, yet they had got idea of increasing problem of HTN with age. Similarly, according to their knowledge, it is approximately equally affecting the both gender but females are more prone to HTN than males showing result of 54:46 in our study. Study was conducted by US National Library of Medicine, National Institute of Health regarding the general differences in HTN awareness among young adult showed that young women are significantly and substantially less likely to be hypertensive than man, with 27 % of men in their late twenties being hypertensive compared to just 12 % of women overall. Our results have similarity to that one.¹⁰ As it is very important that various risk factors play an important role in pathogenesis of HTN. Some factors are modifiable. Some are rather non-modifiable but both are aggravating the HTN. It is very encouraging that respondents included in the study were having ample knowledge about risk factors concerned with HTN. 53.6 % of respondents claimed obesity as risk factor, 26.4 % if respondents were having knowledge of increasing incidence of HTN with age. It is very encouraging to know that although most of people interviewed were illiterate, yet they have very good knowledge of different risk factors of HTN. The study of US National Library of Medicine also revealed that men younger than 65 consistently have higher level of HTN compared to women of same age group and one study found that 18 – 29 years old white adults, just 1.5 % of women but over 5 % of men reported HTN (for black women and man). The proportions were 4 % and 10 % respectively. Behavioral risk factor for HTN included High Body mass Index is also a risk factor for increase in HTN than low BMI [10].

Regarding the knowledge about various complication of HTN, 76 % of people rightly mentioned the heart attack as major complication and similarly about 21 % of people mentioned renal failure and eye problem as major complications. These illiterate people at least have good knowledge about these lethal complications which are manageable if pickup at earliest possible time. Regarding knowledge about treatment of HTN, about 48 % of respondents mentioned medicine as a treat of HTN. About 13.6 % of respondents emphasized on dietary changes to treat HTN. Different International studies reveal that the level of awareness, treatment and control of HTN varies considerably among countries and region. In economically developed countries there is relatively high level of awareness and treatment with approximately one half to two third of hypertensive aware of their diagnosis and one third to one half receiving treatment. The level of awareness, treatment and control of HTN are

especially low in some economically developing countries [11,12,13].

Hospital refer is very important in case of complication to save the life of HTN. It was very encouraging to know that 50 % of the patient were having the knowledge of hospital refer of these patients in case of experiencing heart pain, so that with proper and in time refer of these cases life of patient could be saved. It is apparent from the study that the heart pain is the main symptom for them to be referred. The management of risk factors play a Pivotal role in management of HTN. 36 % respondent had knowledge to modify life style to manage HTN. Similarly, 26 % of respondents emphasize on weight reduction and 19 % of respondents claimed dietary changes as management of HTN. It is good to know they have got knowledge to manage HTN by modifying risk factors which are very important in pathogenesis of HTN and lead to mortality and morbidity [14]. As for as their source of knowledge about HTN is concerned about 36 % of respondents have got knowledge about HTN from TV. 20 % considered newspaper as source of information. As there is low literacy in community only 3 % of respondents consider Internet as source of knowledge of HTN, which seems very strange in this modern era.

CONCLUSION:

The overall level of knowledge regarding hypertension was high among both males and females. Majority of respondents had some knowledge about symptoms of hypertension like headache, fatigue and vision problems etc., therefore having vague knowledge about symptoms of hypertension this could guide them, so that earlier possible management should be started. Likewise, majority of respondents were having knowledge about BP measurements by BP apparatus and ECG test that can play an important role in diagnosis of hypertension. Majority of respondents mentioned heart attack as a major complication of hypertension. These illiterate people at least have good knowledge about lethal complication of hypertension which are manageable, if diagnosed as earliest possible time. Half of respondents claimed of obesity as a risk factor. It is encouraging because most of people interviewed were illiterate, yet they have good knowledge about risk factors of hypertension. Most of respondents having knowledge of hospital refer of these patients in case of experiencing heart pain, so that proper and in time refer of these cases could save the life of these patients. Majority of respondents mentioned medicine as a treatment of hypertension. Education can be a potential risk factor for high BP during life time and thus risk factor for other cardio vascular disease.

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