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Research Article

**A DESCRIPTIVE STUDY ON THE OCCURRENCE OF HYPERTENSION  
IN RELATION TO LIFESTYLE AMONG ADULT RESIDENTS IN  
ALLIED / DHQ HOSPITAL FAISALABAD**

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**Abstract:**

**Objective:** The aim of this study was to determine the incidence of hypertension in relation to lifestyle among adult residents ages 18-80 years old in Allied / DHQ hospital Faisalabad.

**Material and Methods:** The design of this was a descriptive research study. This study was conducted in Allied / DHQ hospital Faisalabad. 50 adult residents between the age from 18-80 years in Allied / DHQ hospital Faisalabad were the participants of this study. Questionnaire was used to collect data regarding the incidence of hypertension in relation to respondents' lifestyle. Primary data was used to achieve the purpose and objectives of this research. The structured questions were given with multiple choices. The respondents were informed about the purpose of the study, their involvement and the confidentiality of the data gathered. Simple frequency and percentage were used to analyze the profile and the lifestyle of the respondents. Chi-square was the statistical equation used to compute for the significant relationship between the incidence of hypertension and the lifestyle of the respondents. Data was tabulated, pie and bar graphs were utilized to better illustrate the patterns and percentages of the population that fall in its respective parameters under concerned.

**Result:** Among 50 households, 36 out of 50 (65.7%) are hypertensive and only 12 (34.3%) are non-hypertensive. The Majority of hypertensive respondents were above 61-year-old 12 (32.6%), consuming 2-3 times meat per week 12 (32.6%) and salty food per week 13 (35%), do not do any exercise 18 (45.6%), don't smoke 30 (71.7%), do not take any alcoholic beverages 10 (50.0%).

**Conclusion:** A p-value of a computed chi square is deemed significant when the results are not more than the alpha of significance which is 0.05. The six parameters used in this study, only two came out with p-values less than 0.05, namely work and exercise. All other parameters had results more than the alpha of significance. Thus, the results of this research clearly reflect that only work and exercise has significant relationship to hypertension. All other parameters have no significance in relation to hypertension.

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**INTRODUCTION:**

Hypertension is defined as having a systolic blood pressure (SBP) > 140 mm Hg, or diastolic blood pressure (DBP) > 90 mm Hg. Prehypertension is defined as having a SBP of 120 – 139 mm Hg or DBP of 80 – 89 mm Hg. ([www.nhlbi.nih.gov/hbp](http://www.nhlbi.nih.gov/hbp)). Hypertension is considered as the biggest single risk factor for deaths worldwide. According to the World Health Organization (WHO), hypertension causes 7 million deaths every year while 1.5 billion people suffer due to its complications. 19% of Filipino adults are hypertensive according to Dr. Dante Morales, President of the Philippine Society of Hypertension (PSH) during the National Hypertension Awareness celebration conducted at the Universidad De Manila on May 19, 2012. Heart attack is the most common cause of death among Filipinos. Dr. Morales also added that this may be attributed to continuous neglect on the danger of hypertension and its complications. The Philippine Society of Hypertension conducted a study and found out that the prevalence of hypertension in the country is increasing. In 2003, data showed that 16 % or approximately 7 million Filipino adults 20 years and above has hypertension. In 2008, the incidence increased to 10 million or 21 % of Filipino adults 20 years and above.

Living a healthy lifestyle plays an important role in treating hypertension. “If you were diagnosed with high blood pressure, avoid smoking, minimize salt intake and alcohol consumption and a regular exercise are among the key strategies which may avoid, delay or reduce the need for medication. Although anyone can develop hypertension, risk factors include obesity, physical inactivity, high salt and sodium intake, low potassium intake, excessive alcohol consumption and diabetes.

**MATERIAL AND METHODS:**

The design of this was a descriptive research study. This study was conducted in Allied / DHQ hospital Faisalabad. 50 adult residents between the age from 18-80 years in Allied / DHQ hospital Faisalabad were the participants of this study from 2016 to 2020. Hypertension is a major health problem worldwide. This research study was conducted in Allied / DHQ hospital Faisalabad.

50 adult residents ages 18-80 in Allied / DHQ hospital Faisalabad were participants of the study. Questionnaire was used to collect data regarding the incidence of hypertension in relation to respondents' lifestyle. The aim of the study is on the relationship of hypertension to lifestyle. Primary data was used to

achieve the purpose and objectives of this research. Before the data was collected, a courtesy call to the barangay captain was executed, Walter L. Llerin, for the approval to conduct the study. The researchers requested for the help of Mrs. Eleodora T. Baoy, one of the barangay health workers, to assist them in data gathering. Firstly, primary data was collected through a structured questionnaire which was administered by the researchers themselves. The structured questions were given with multiple choices. The respondents were asked questions as the researchers checked the appropriate box matching the corresponding answer. The questionnaire was administered personally by the researchers to the respondents, preferably in a conducive environment or in the respondents' residence. It was given in the morning or in the afternoon depending on the availability of the researchers. The blood pressure of each respondent was taken by the researchers during data collection. The respondents are given ample time to finish answering the questions. In order to achieve factual and honest response, the researchers provided instructions that the questions must be answered truthfully and informing that identities will not be revealed in the study. The researchers then kept the answered questionnaires afterwards for processing and analysis of the collected data. The data gathered was processed in order to facilitate the analysis and interpretations of the values to obtained. The data was checked for completeness, legibility of entries and consistency of responses. The data from the profile of the respondents, their lifestyle and the incidence of hypertension was tallied and collated to determine the frequency distribution and simple percentage. Simple Percentage and Frequency distribution ( $\text{Percentage} = \frac{f}{n} \times 100$ , where:  $f$  = frequency and  $n$  = total number of respondents) were utilized to determine the proportion of respondents who are hypertensive and non-hypertensive, profile of the respondents with hypertension according to age and years with hypertension, degree of lifestyle of the respondents in terms of diet, exercise, smoking, drinking and work. The techniques mentioned were used to quantify the values obtained from the data collected. Data was tabulated, pie and bar graphs were utilized to better illustrate the patterns and percentages of the population that fall in its respective parameters under concerned. Chi-square was used to compute for the significant relationship between the incidence of hypertension and the lifestyle of the respondents.

**RESULTS:**

The structured questionnaires used and presented in Appendix-A was completed by 50 respondents

between the ages of 18 to 80 years old from 50 households in Faisalabad.

#### Proportion of Hypertensive and Non-Hypertensive Individuals

Status	f	%
Hypertensive	36	65.7
Non-hypertensive	14	34.3
<b>Total</b>	<b>50</b>	<b>100.0</b>

Table 1. Number of hypertensive and non-hypertensive respondents in Faisalabad as shown in the above table, majority of those interviewed, accounting for 36 out of 50 (65.7%) are hypertensive and only 14 (34.3%) are non-hypertensive.

#### Proportion of Respondents According to Age Groups

Age	f	%
18-25	0	0
25-30	1	2.2
31-35	3	4.3
36-40	3	8.7
41-45	2	2.1
46-50	2	2.1
51-55	5	13.0
56-60	6	19.5
> 61	14	32.6
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 2. Age group of respondents

As shown above, 14 or 32.6% of the respondents with hypertension are above 61 years old. 10 or 19.5% are between the ages of 56-60 years old. 5 or 13.0% are between ages of 51-55 years old. 3 or 8.7% are 36-40 years old. 3 or 4.3% are between the ages of 31-35 years old. 2 or 2.1% are between the ages of 41-45 and 46-50. Only one or 2.2% with the age group of 25-30 years old was found to be hypertensive. The data discussed above shows that a greater percentage of hypertensive respondents were found to be between the ages of 50- > 60 years old and greatly points that increasing age is an important factor for hypertension. As discussed in a case control study done by Sunil Sagare, there was evidence of increasing cases of hypertension with increasing age in both sexes, which can be attributed to the natural aging process and the body's response to cumulative environmental factors.

#### Proportion of Hypertensive Respondents According to Number of Years with Hypertension

Years with Hypertension	f	%
1	7	17.4
2	1	2.2
3	5	13.0
4	4	11.0
5	12	24.1
>6	4	11.0
Undetermined	3	8.7
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 3. Hypertensive respondents according to years with hypertension as shown above, 12 out of 27 respondents (24.1%) have been known hypertensive for 5 years. 5 (13.0%) have been hypertensive for 3 years. 4 (11%) have been hypertensive for 4 years as well as for >6 years. 3 (8.7%) cannot determine how many years they have been hypertensive.

<b>Proportion of Respondents Consuming Meat and Frequency of Consumption:</b>		
<b>Lifestyle</b>	<b>F</b>	<b>%</b>
<b>Lifestyle</b>	<b>F</b>	<b>%</b>
<b>DIET</b>		
<b>Eating Meat</b>		
1x per week	13	30.4
2-3x per week	14	32.6
Daily	5	13.0
No	4	15.2
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 4. Frequency of meat consumption of respondents in Faisalabad

As depicted in the above table, 13 or 30.4% of the hypertensive respondents interviewed consume meat once a week. 14 or 32.6% consume meat in a frequency of twice to thrice a week. 5 or 13.0% eat meat every day. Only 4 or 15.2% from the total hypertensive respondents interviewed do not eat meat. Consumption of food high in saturated fats, such as meat led to increased weight gain, which in turn lead to increase body mass index. An increase body mass index was found to be an important contributory factor to increase blood pressure as shown in a study done by Kotsis *et. al*.

<b>Proportion of Respondents Consuming Salty Foods and Frequency of Consumption</b>		
<b>Salty Foods</b>	<b>F</b>	<b>%</b>
1x per week	5	17.4
2-3x per week	15	35.0
Daily	11	26.1
No	5	13.0
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 5. Frequency of salty food consumption of respondents in Faisalabad 5 or 17.4% eat salty foods once a week. 15 or 35% of the total respondents usually consume salty foods twice to thrice a week. 11 or 26.1% consume salty foods in a daily basis. 5 or 13.0% of the respondents do not consume any salty foods. In a study done by Hajjar *et. al.*, it was found that an increase in sodium intake will also significantly increase systolic blood pressure. In another trial by Joseph Sasseen, hypertensive individuals who reduced salt in their diet also had 5mmhg and 3mmhg reductions in systolic and diastolic blood pressure, respectively. The studies mentioned greatly supports that increase salt intake have direct effect to increasing blood pressure.

<b>Proportion of Respondents Who Exercise and Frequency of Exercise</b>		
<b>EXERCISE</b>	<b>F</b>	<b>%</b>
1x per week	6	15.2
2-3x per week	4	11.0
Daily	6	19.5
No	20	45.6
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 6. Frequency of exercise by respondents in Faisalabad

**Proportion of Respondents Who Smoke and Its Duration**

<b>SMOKING</b>		
<5 years	1	4.3
6-10 years	1	2.2
10-20 years	1	4.3
>20 years	3	8.7
No	30	71.7
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 7. Duration in years for respondents who are smokers

**Proportion of Respondents who Drink and its Frequency**

<b>DRINKING</b>		
Occasionally	9	26.1
1x per week	3	8.7
2-3x per week	1	2.2
Daily	11	6.1
No	12	30.1
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 7. Frequency of alcohol consumption of hypertensive respondents

**Proportion of Respondents According to Category of Work**

<b>WORK</b>		
Light	14	41.3
Moderate	17	39.1
Heavy	5	13.0
<b>Total</b>	<b>36</b>	<b>100.0</b>

Table 8. Category of work of hypertensive respondents in Faisalabad

**Variables with Computed Chi Squares**

<b>Variables</b>	<b>Computed chi square</b>	<b>Degree of freedom</b>	<b>p-value</b>	<b>Decision</b>	<b>Interpretation</b>
Hypertension and eating Meat	2.515	3	.191	Failed to reject	No Significance
Hypertension and eating Salty Foods	3.466	3	.126	Failed to reject	No Significance

Alpha level of significance= 0.05

For this particular study, chi square was the statistical equation used to analyze the data gathered to better demonstrate and highlight any significant relationship between age, diet, exercise, smoking, drinking, work and hypertension. It is the measurement of choice because this study uses multiple independent variables; with raw mutually exclusive data gathered from a large enough sample size. As shown in the table above, only two relationships, that is hypertension related to work and exercise, was found to be significant. All others do not have any significance in relation to hypertension. The data above combines results from both hypertensive and non-hypertensive respondents, both of which have similar lifestyle habits.

**DISCUSSIONS:**

There were 50 respondents. Among them, 36 (43.5%) respondents were hypertensive, while the remaining 14 (32.1%) were non-hypertensive. This study shows that a greater percentage of hypertensive respondents were found to be between the ages of 50- > 60 years old approximately 54.3% showing that increasing age is most important factor for hypertension. 10 out of 50 (24.1%) respondents reported to have hypertension for the past 5 years. Among the hypertensive respondents, 13 (32.6%) of the hypertensive respondents consume meat once a week, 12 (32.6%) consume meat in a frequency of twice to thrice a week, 5 (13.0) eat meat every day. 4 (15.2%) from the total hypertensive respondents interviewed do not eat meat. For eating salty food, 7 (17.4%) eat salty foods once a week. 15 (35%) of the total respondents usually consume salty foods twice to thrice a week. 11 (26.1%) consume salty foods in a daily basis. 5 (13.0%) of the respondents do not consume any salty foods.

Frequency of alcohol consumption of respondents, 11 (26.1%) respondents drink occasionally. The same number of respondents 11 (26.1%) drink on a daily basis. 3 (8.7%) drink once a week and only 1 (2.2%) respondent drink 2 to 3 times per week. Most respondents, a total of 12 (50.0%) do not take any alcoholic beverages. A frequency of exercise, 6 (15.2%) of respondents exercise once per week. 4 (11%) claims to do exercise twice to thrice a week. 8 (19.5%) perform exercise daily and 20 (45.6%) of the total respondents do not exercise. The category of work of respondents, 18 (41.3%) have work classified as light. 17 (39.1%) have work classified to be moderate and a total of 5 (13.0%) have heavy job. With using chi square equation, only two relationships, that is hypertension related to work and exercise, was found to be significant and rest of all do not have any significant.

**CONCLUSION:**

A p-value of a computed chi square is deemed significant when the results are not more than the alpha of significance which is 0.05. Of the six parameters used in this study, only two came out with p-values less than 0.05, namely work and exercise. All other parameters had results more than the alpha of significance. Thus, the results of this research clearly reflect that only work and exercise has significant relationship to hypertension. All other parameters have no significance in relation to hypertension.

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