

THE LIFESTYLE OF HYPERTENSIVE PEOPLE AND ITS HEALTH EFFECTS

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Abstract

Lifestyle changes have brought many problems in people like hypertension, hyperacidity, diabetes, heart disease, liver disease, kidney disease, cancer etc. Therefore, this study has been done to find out the effect of lifestyle on some people with high blood pressure in Kawasoti Nawalpur. This study was conducted using a convenient survey method and using an interview schedule. In this study, a sphygmomanometer and stethoscope were used to find out the blood pressure and a weighing machine and measuring tape were used to find out the body mass index (BMI) of the hypertensive people. A study of 320 people found that 108 people had high blood pressure. After analyzing the data, found that the analyzing main causes of hypertension in hypertensive people are; obesity (38.89%), alcohol consumption (55.56%), smoking (81.48%), more salt and junk food intake (74.07%), and living a sedentary lifestyle (35.19%) etc. The effects of hypertension on hypertensive people are; headache (82.40%), having trouble sleeping (50.92%), Dizziness (49.07%), shortness of breath (13.89%), epistaxis (8.33%), and feel palpitation (33.33%). They have tried to reduce hypertension by losing weight by doing many tasks like fasting once a week (68.51%), yoga or physical exercise (33.33%), reducing alcohol drinking and smoking habits (85.18%) etc. So, after finding out the main causes of hypertension, the researcher wants to suggest to hypertensive people to change their lifestyle including losing weight.

Key words: *BMI, palpitation, sphygmomanometer, cholesterol, obesity.*

Introduction

Hypertension is a major medical problem in the world (Siyad, 2011). High blood pressure is a silent killer and is therefore one of the most significant of the medically related problems that afflict modern man (Stahl, S.M., 1976, p.105). Obesity, heredity and lifestyle also play a role in the development of hypertension. When symptoms do occur, they can differ between individuals depending on such factors as the level of blood pressure, age, underlying cause, medical history, the presence of complications and general health (Siyad, A.R., 2011, pp.1-16). High blood pressure usually develops over time. It can happen because of unhealthy lifestyle choices, such as not getting enough regular physical activity. Certain health conditions, such as diabetes and having

obesity, can also increase the risk of developing high blood pressure (CDC, 2021).

Exercise improves insulin sensitivity (Kang et al., 2002) and blood lipid transport (Tolfrey et al., 2000), and can reverse the metabolic effect on the muscle of obese subjects (Tall, 2002). In this sense, there is evidence that physical activity and physical exercise programs during the years of growth may be protective against future cardiovascular disease (Rowland, 2001).

Obesity is a complex disease involving an excessive amount of body fat (Pruthi, S., 2020). Obesity isn't just a cosmetic concern. It is a medical problem that increases our risk of other diseases and health problems, such as heart disease, diabetes, high blood

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pressure and certain cancers (Pruthi, S., 2020). Childhood obesity is the commonest cause of such cardiovascular risk factors as hypertension, dyslipidemia and insulin resistance (Steinberger J.&D. Stephen, 2003), the principal components of metabolic syndrome in children and adolescents (Weiss et al., 2004, p.2362). It is also an independent risk factor for obesity and increased health risks in adult life (Bibbins et al., 2007, p.2371-2379). WHO specifically recommends that children aged between 5 to 17 years should accumulate at least 60 minutes of daily moderate or vigorous physical aerobic activity (Jose, 2014). Also advisable is a minimum of three times a week doing activities that strengthen the musculoskeletal system (Jose, May 2014, p.661-662).

Usually, hypertension results from a combination of inherited factors, combined with the environment and personal diet, sleeping habits and exercise choices (Pruthi, S., 2020). Although there are genetic, behavioural, metabolic and hormonal influences on body weight, obesity occurs when we take in more calories than we burn through exercise and normal daily activities (Pruthi, S., 2020).

Like other developing countries, Nepal is currently going through an epidemiological transition along with the rising burden of Non-communicable Diseases. However, since 2013, no study investigated the prevalence and determinants of hypertension in Nepal involving a nationally representative sample (NDHS, 2016). The problem of hypertension is emerging as a global epidemic problem. Globally cardiovascular disease accounts for approximately 17 million deaths a year, nearly one-third of the total. Of these, complications of hypertension account for 9.4 million deaths worldwide every year (WHO, 2013). Hypertension is largely asymptomatic, especially in the early stages, leading to its description as a 'silent killer'. Untreated and uncontrolled hypertension leads to structural and functional abnormalities of the cardiovascular system, which and others (NDHS, 2016).

After the review of various articles, this study was conducted to understand the problem of hypertension in Nepal by including a small group of people in Kawasoti, Nawalpur. The present study is related to addressing lifestyle factors to reduce the risk of hypertension in the undiagnosed hypertensive population. The researcher came to find out that there is no massive study about lifestyle and its effects on hypertensive people in Kawasoti. Considering it is the main gap, the researcher has been decided to focus on study in these people and their lifestyle, and the impact it has on their health. The main objectives of this research were to study the lifestyle adopted by hypertensive people and to determine whether an unhealthy lifestyle affects the risk of developing hypertension in people.

Methodology

This study has been done in a qualitative way or inductive method. Or this study can be called an explanatory study as it has to be done in a descriptive way to describe different aspects of the social, cultural and lifestyle of hypertensive patients. The other important processes used to complete the study are as follows:

Procedures

Blood pressure was measured in the non-dominant arm by using a mercury sphygmomanometer with a cuff of the appropriate size and stethoscope following standard recommended procedures. Two readings each for the systolic blood pressure (SBP) and diastolic blood pressure (DBP) were taken in a 5-minute interval after the participants had rested in a chair for at least 5 minutes. The average of the two readings was used for the data analysis. If the two measurements differed by more than 5 mm Hg, then an additional reading was taken, and the average of the three readings was used for data analysis. The diagnostic criteria of hypertension were a systolic or diastolic blood pressure measured more than 140 or 90 mm of Hg. Height and weight were also measured

at that time. Height was measured in centimetres (cm) using a measuring tape, and weight was measured in kg using bathroom scales. Body mass index (BMI) was calculated as body weight (kg) divided by the square of height (m²).

Sociodemographic information, medical history and lifestyle information were obtained from the standard interview schedule. There were different types of lifestyle factors in the schedule but, four different lifestyle factors ascertained at study entry were considered (BMI, physical activity, alcohol use and sleep duration) based on their association with blood pressure change and overall health.

In the course of the study, the researchers suggested that people with obesity and hypertension; voluntarily undergo the necessary laboratory tests, not forcibly. Accordingly, some respondents also did blood tests for sugar, thyroid and total cholesterol.

Sample size and sampling method

The study was conducted to target the hypertensive patients who came in contact with the researcher. Of the 320 people who came in contact with the researcher, the blood pressure was measured and only 108 people had hypertension. Therefore, 108 people were sampled in this study. The sampling method was a judgmental survey. Because the researcher himself is a health worker, runs his private health institution, comes in contact with different types of patients and such survey make it easier to consult patients who come in contact with the researcher automatically, save time and cost of the researcher, only see the desired patient and make the researcher feel simple. Therefore, a convenience survey has been conducted.

Research instruments

In this study, the researcher constructed an interview schedule based on hypertension and lifestyle topics. The schedule includes open and closed questions about what kind of behaviour you are responsible for

when you have high blood pressure. There is a widespread belief that various lifestyle changes can be caused by non-communicable diseases, including hypertension, and a 10-question interview schedule has been constructed to study what those beliefs are in people in Kawasoti. The interview schedule was pre-tested on 10 people and the final schedule was prepared to correct the shortcomings. During the study, a mercury sphygmomanometer and stethoscope were used to measure blood pressure, a bathroom scale weight machine was used to measure weight and inch tape was used to measure height.

The data obtained through face-to-face meetings and tests with patients is highly reliable and valid. Because the researcher himself directly measured the patient's blood pressure, weight and height and filled the interview schedule, the data obtained from it can be proved to be valid and reliable.

Study variables and their measurement

The variables for the causes of hypertension were unhealthy, lazy and sedentary life, by not doing physical exercise, walking or yoga, due to stress, by consuming alcohol and smoking, by eating junk and fast foods etc. The impact of hypertension was a headache, having trouble sleeping, dizziness, palpitation etc. The steps taken to reduce hypertension were meditation, yoga or physical exercise, playing games, walking every day, don't eat junk food, fasting once a week, taking home remedies, medication, don't consume alcohol and smoking etc.

Independent variables used in this study were age, gender and obesity level of the respondents. Age was categorized in eight groups as 25-29 years to 60+ years, gender as male and female and obesity was categorized in overweight (25-29.9 BMI), obesity level I (30-34.9 BMI), level II (35-39.9 BMI) and level III or extreme obesity (40+BMI). The responses to everyone's views on the cause of high blood pressure were recorded as strongly agree, agree, disagree and strongly disagree. Similarly, responses to the effects

of hypertension were recorded as having no problems, some problems, severe problems, and very severe problems, and some of the steps taken to reduce high blood pressure were not adopted, some adopted, normally adopted and strictly adopted were recorded.

Data analysis and interpretation

The researcher analyzed the raw data in different ways. All the data are analyzed one by one on the use of the SPSS (version 23) program. The data analyzed from the SPSS program is presented in the table and its details are also explained in linguistic terms. Frequency and percentage were calculated under descriptive statistics. As the study was qualitative, the researcher also asked several informal questions using the interview schedule. The answers to these questions are presented in an explanatory manner as they cannot be shown in the table and picture, it has been presented in the discussion chapter.

Results

Age and sex of hypertensive respondents

Table 1 shows that the total number of hypertensive respondents was 108. The majority of respondents belong to the age group of 60+ years i.e., 15.75%. About 9.26% of respondents were aged between 25-29 and 45-49 years. Similarly, there was 12.95% of respondents aged 30-34 years. The data revealed 13.89% of respondents who were aged 35-39 years and 40-45 years of respondents were 14.81%, 50-54 years respondent was 12.03% and 55-59 years was also 12.05%. Similarly, table 1 shows that the total male respondents were 50.93% and females were 49.07%.

Table 1

Distribution of respondents by age and sex

Variables		Frequency	
Age (in years)	Male (%)	Female (%)	Total (%)
25-29	8 (7.4)	2 (1.86)	10 (9.26)
30-34	9 (8.32)	5 (4.63)	14 (12.95)
35-39	7 (6.49)	8 (7.40)	15 (13.89)
40-44	5 (4.63)	11 (10.18)	16 (14.81)
45-49	3 (2.78)	7 (6.48)	10 (9.26)
50-54	5 (4.63)	8 (7.40)	13 (12.03)
55-59	11 (10.19)	2 (1.86)	13 (12.05)
60+	7 (6.49)	10 (9.26)	17 (15.75)
Total	55 (50.93)	53 (49.07)	108 (100)

The condition of the respondent's BMI according to gender

The condition of the respondent's BMI is shown in Table 2 below. Among 108 respondents with high blood pressure in the study, around half 38.88% were obese whereas around half 47.60% were male and 52.38% were female.

Table 2
BMI of the respondent by gender

Variables	Frequency		
	Male (%)	Female (%)	Total (%)
25-29.9 (Overweight)	6 (14.28)	4 (9.53)	10 (23.81)
30-34.9 (Obesity I)	3 (7.14)	8 (19.04)	11 (26.20)
35-39.9 (Obesity II)	5 (11.90)	3 (7.14)	8 (19.04)
40 + (Extreme obesity III)	6 (14.28)	7 (16.67)	13 (30.95)
Total	20 (47.60)	22 (52.38)	42 (100)

Table 2 displays that the result indicates that most of the people of this study were extremely obese were 30.95% people followed by obesity II level were 19.04% persons where obesity level I were 26.20% person and overweight were 23.81% persons. This result shows that numerous people are overweighted.

Details related to the cause of hypertension expressed by the respondent

In this study, respondents were asked questions about the causes of hypertension. The answers options (strongly agree, agree, disagree, and strongly disagree) given by the respondents are table 3 below.

Causes	Vari	
	Strongly agree (%)	Agree (%)
Unhealthy, lazy and sedentary life	70 (64.81)	15 (13.89)
By not doing physical exercise, walking or yoga	62 (57.40)	13 (12.03)
Due to stress	55 (50.92)	30 (27.78)
By consuming alcohol	48 (44.44)	40 (37.03)
By eating more non-vegetarian food	32 (29.62)	13 (12.03)
By eating junk food, fast food, sweet, oily and salty food, carbonated drinks etc.	28 (25.92)	33 (30.56)
By consuming smoking	20 (18.51)	11 (10.19)
Having trouble sleeping	18 (16.67)	35 (32.40)

The result of this study shows that the causes of hypertension in the opinion of the respondent are found to be different. When asked what causes hypertension, 29.62% said they strongly agree that eating more non-vegetarian food. Similarly, 12.03% of respondents said to agree with the question, 23.15% said disagree and 35.19% said strongly disagree. Asked about another cause of hypertension, 25.92% of respondents were strongly agreed to eat junk food, fast food, sweet, oily, salty, spicy food, and carbonated drinks. In the same question, 30.56% were said to agree, 12.97% were said to disagree and 39.81% were said strongly disagree. Similarly, 18.51% of respondents were strongly agreed with the cause of hypertension by a habit of smoking, 10.19% agreed, 11.11% disagreed and 60.19% have strongly disagreed.

A total of 81.47% out of 108 were alcohol consumers. Out of them, 44.44% of respondents strongly agreed the cause of hypertension is taking alcohol, 37.03% were agreed on this cause. 18.52% were not alcohol

drinkers. Similarly, 57.40% of respondents were strongly agreed they did not do physical exercise, walking or yoga. 12.03% were agreed on this cause, 10.19% have disagreed and 20.38% have strongly disagreed. Most of the respondents had sedentary life, the study shows that 64.81% of respondents were strongly agreed with this cause, 13.89% were agreed, 20.38% have disagreed and only 0.92% have strongly disagreed. In another cause of hypertension, 78.70% of respondents said the cause of hypertension is stress, 50.92% were strongly agreed with this cause, 27.78% agreed, 13.89% have disagreed and 7.40% have strongly disagreed.

Impact of hypertension on daily life and health

In this study, respondents answered spontaneously about the disadvantages of hypertension in their daily lives and the negative effects it has on their health. What they have to say about the various problems caused by hypertension is presented in table 4 below:

Table 4.
Variables
Impact of hypertension on daily life and health in respondents

Variables	Impact on health		
	No problem (%)	Some problem (%)	Severe problem (%)
Fainting	107 (99.07)	1 (0.92)	0
Diabetes	102 (94.44)	5 (4.62)	0
Epistaxis	99 (91.67)	7 (6.49)	2 (1.84)
Chest pain	96 (88.89)	10 (9.26)	1 (0.92)
Respiratory problems	93 (86.11)	14 (12.97)	1 (0.92)
Anxiety, stress and mental problem	75 (69.44)	20 (18.52)	11 (10.19)
Palpitation	72 (66.67)	14 (12.97)	12 (11.11)
Dizziness	55 (50.92)	25 (23.14)	18 (16.67)
Having trouble sleeping	53 (49.07)	22 (20.38)	21 (19.44)
Headache	19 (17.59)	45 (41.67)	32 (29.74)

A result of this study shows that, on the question of how hypertension affects own's health, 9.26% said the very severe problem of dizziness, 16.67% said severe problem, 23.14% said some problem, and 50.92% said no problem. Similarly, with headaches due to hypertension, there was 11.11% have a very severe problem, 29.63% have a severe problem, 41.67% have some problem and 17.59% have no problem. There was a problem of palpitation among respondents; 66.67% have no problem; 12.97% have some problem, 11.11% have a severe problem and 9.26% have a very severe problem.

49.07% have not to trouble sleeping but 20.38% have some problem, 19.44% have a severe problem and 11.11% have a very severe problem in sleeping due to hypertension. Shortness of breath or respiratory problems was seen in 0.92% as severely; another

12.97% were suffered from some problem and 86.11% have no problem.

In this study, the researcher found that diabetes was seen in six cases. 94.44% have no problem, 4.62% cases have some problem of diabetes and only 0.92% have very severe problem of diabetes. Most of the patients feel irritation due to hypertension. 32.40% have no problem but 24.07% have some problem, 12.97% have severe and 30.56% have very severe problems of irritability.

Steps were taken to reduce hypertension

This study also shows that respondents have taken a variety of steps to reduce their hypertension, as explained in table 5.

Table 5
Steps were taken to reduce hypertension

Variables

(%)

Table 5 shows that 9.26% of people normally adopted more fruits, 32.40% persons sometimes adopted, and a large number 58.33% of respondents not adopted this behaviour. Similarly, 30.56% of respondents were not eaten fatty, oily, spicy or salty items, 26.85% were normally strict with these items, 16.67% were sometimes taken these items, and 25.92% were eating these items.

Among the respondent, those who never walked 45.37%, 22.22% sometimes walking, 10.19% were normal walking, and daily walking was 22.22% people. Similarly, those who always or strictly do yoga or exercise to lose weight and manage hypertension were 9.26%-person, normal adopted persons were 10.19%, sometimes adopted were 13.89%, and never do yoga or exercise were 66.67%. In addition, those who want to reduce stress through meditation and do occasionally meditation were 12.03%, and those who never adopted meditation were found 87.97%. Similarly, 12.03% of those respondents regularly played sports to reduce hypertension, 11.11% of those who played irregularly, 16.67% played occasionally and 60.19% of those who never played.

14.81% did not take hypertensive medication, 11.11% sometimes taking medication, 16.67% normally taking medication and 57.40% of respondents were strictly taking medication to reduce hypertension. Respondents who consume alcohol and smoking; 38.89% of respondents not adopted these habits to reduce hypertension, 21.30% did not normally consume these items, 25.0% sometimes consumed alcohol and smoking both, and 14.81% were neglected respondents, they were not sincere own health, they have regular adopted alcohol and smoking both habits.

Likewise, only 22.22% of respondents did not adopt junk food, readymade food, sweet, fast food and carbonated drinks to reduce hypertension. 25.92% have sometimes adopted these foods, 13.89% were continuing their food habit, and 37.97% were still not changed and not serious in their problem. They have adopted these food items as it was. At last, 31.49% of respondents did not adopt fasting once a week to

reduce their problem, 50.0% practised sometimes fasting to reduce hypertension and obesity, 9.26% were normally adopted fasting and 9.26% respondents strictly adopted fasting once a week.

Discussion

In this study which was conducted in Kawasoti on the problems of hypertension and the impact of lifestyle, it has been found that there were many problems of hypertension due to lifestyle changes. It is assumed that the incidence will be not low but high due to increasing urbanization, change of food habits, lack of physical activity, and a sedentary lifestyle. In a study of 320 people, their blood pressure was checked, BMI and interview were also taken, 108 of them had problems. In the course of the study, the researcher suggested that people with obesity and hypertension; voluntarily undergo the necessary laboratory tests, not forcibly. A total number of 36 respondents (33.33%) out of 108, had their blood tested by accepting the researcher's request and counseling. Six (16.66% out of 36) of them were diagnosed with a thyroid problem (hypothyroidism). Similarly, two out of 36 respondents (5.55%) who took the blood test had a sugar problem and two out of 36 respondents (5.55%) had high total cholesterol levels.

Among the hypertensive patients in this study, only 57.40% of people were taking medications strictly. Hypertensive patients are afraid to take medicine because they believe that it affects them and that they should take it for life. They want to cure this disease by controlling their diet and taking herbal medicine.

Analyzing socio-demographic characteristics; women were more obese than men, the female population was more affected by hypertension, and more hypertensive people in the community drank alcohol and smoked. Similarly, patients with hypertension had a sedentary lifestyle, stress, eating junk food and sleep problems were the major risk factors. Hypertension was found to have a significant effect on physical health problems. People who are hypertensive or at risk of

hypertension are unaware of that lifestyle and that it has had a direct effect on their health. Many hypertensive patients have no symptoms at all. But few of the respondents had symptoms like headache, insomnia, palpitation and dizziness due to hypertension.

The study found that some people with high blood pressure did not have any symptoms. There were more patients with headaches, dizziness, sleep problems, palpitation, etc. However, the study did not find paralysis or fainting. What this means is that if the problem of high blood pressure can be detected at an early stage, then proper treatment can be started without increasing the harmful effects. This study shows that if a person allows himself to evaluate why he has a problem of high blood pressure, he can review the behaviour he is adopting. People say that the cause of this problem is the sedentary lifestyle, not being able to do physical work, stress, consuming alcohol and smoking, eating more non-veg. items, junk food eating habits, etc., can be understood from the fact that people have realized that this is due to their behaviour.

Conclusion

From the information presented in the text and tables, the following specific conclusions and general recommendations have been formulated:

It can be concluded from the study; hypertension is an important public health problem in Kawasoti Nawalpur also. In a study of 320 people, it was not uncommon to find 108 people (33.75%) with high blood pressure. That is why it can be said the results of the present review illustrate that hypertension is a public health issue that is rapidly increasing and thus needs to be addressed seriously. A specific diet combined with physical activity can achieve the desired loss of body fat and are the most effective and long-lasting ways to manage hypertension. This study indicates that weight loss is the main goal of the treatment of hypertension. This is because the

study found that 42 (38.89%) out of 108 high blood pressure patients were obese.

Among the main limitations of this study, the researcher has not been able to cover many aspects of lifestyle in this study. The study included only people aged 25 to 60 or older but the people who were selected should not suffer from serious vascular and other diseases.

Although it is possible to assume that many people with high blood pressure are in the community, no large samples have been selected in this study. A comparative study of other communities has not been done. In the same way, this study is not limited to any one specific subject but also studies many general subjects, so this study cannot represent all places.

The researcher would like to suggest that to solve the problems related to the existing lifestyle in the community; to solve many problems such as obesity, high blood pressure, diabetes, thyroid etc. To solve these problems, a few lifestyles technique should be adopted like; to get mental satisfaction, to eliminate anxiety, insomnia, etc. it is necessary to practice yoga regularly, to control junk food, reject consume alcohol and smoking and unnecessary oily, salty and spicier foods, to practice meditation etc. These are the main pieces of advice to give hypertensive patients to solve these various problems. The researcher also suggests to health institutions or concern level to prevent such non-communicable diseases; planning and implementing the health awareness program and health checkup camps regularly to the community. Similarly, if the state can implement an integrated non-communicable disease prevention program through a primary health care approach can also be a cheap and sustainable way to combat non-communicable diseases like high blood pressure. It is necessary to study other lifestyle-related diseases such as diabetes, cancer, GERD (gastroesophageal reflux disease), depression etc.

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