Study to assess the Prevalence of Hypertension in Baznagar, Lucknow

Dr. Anjalatchi Muthukumaran
Vice principal, Era College of nursing, sarfrazganj, lucknow 226003

ABSTRACT:

Introduction:- Hypertension is a major public health problem and important area of research due to its high prevalence and being major risk factor for cardiovascular disease and other complications. Hypertension to have many deleterious effects on the body that puts people at a higher risk of developing other illnesses and diseases, such as obesity and diabetes. High blood pressure is the single largest risk factor for disease burden worldwide.

Objectives:- To assess the prevalence of hypertension and its associated factors.

Materials and Methods:- A cross-sectional study was undertaken in a rural area of Baznagar, Lucknow. Data was collected by face to face interview technique after verbal informed consent. Convenient sampling technique was used to select the study participants. A total 100 study subjects aged 20-45 years was used. Socio-demographic sheet and B.P. Record sheet were used to collect data.

Results:- Out of 100 participants 36% were found to be hypertensive and 64% were non hypertensive. Majority (52.8%) males were hypertensive and (47.2%) females were hypertensive. There is significant relationship between hypertension and gender among subject (P=0.005). Majority of subject were found hypertensive in the age group of 20-28 years but there is no significance relationship between hypertension and age (P=0.143)

Conclusion:- Around one –third of the subjects were hypertensive (36%) and half of the study subjects were non-hypertensive (64%) in this area.

KEY WORDS: Assess, Blood pressure, Hypertension, Prevalence.

INTRODUCTION

According to World Health Organization (WHO), health is defined as a dynamic state of complete physical, mental and social well-being not be merely an absence of disease or infirmity.

In order to service and function properly body tissue and organs need the oxygenated blood which is carried by circulatory system throughout the body, when the heart beats, it creates pressure that pushes blood through a network of tube-shaped blood vessels, which include the arteries, veins and capillaries. This pressure is known as a blood pressure. The first systolic pressure occurs as blood pumps out of the heart. The second diastolic pressure is created as the heart rests between heart beats.2

The world where we live is constantly changing our health. Most people in a country with economic growth are healthy and the people in developing countries was accompanied by emergence of non-communicable disease such as High Blood Pressure, Cardio Vascular Disease (CVD), Chronic Obstructive Pulmonary Disease, Stroke, Chronic Kidney Disease, High Blood Sugar and High Cholesterol Level due to Demographic Ageing, Increased Urbanization, Fast Food, Sedentary Lifestyle Obesity, Access Salt in Diet, Alcohol Consumption, Tobacco Chewing etc. Individual in developing country like India have twice fastest of increased chronic disease such as 'Hypertension' which is a matter of great concern for our country.3

Need Of The Study

Hypertension is now recognized as a very major contributor to disease burden globally. The world health report 2002 identified hypertension or high blood pressure, as the 3rd ranked factor for disability adjusted disease and stroke, the leading cause of death worldwide. Recent a people living with hypertension worldwide, and it is estimated that this number will escalate to more than 1.56 billion by the year 2025. Nearly 2/3 of hypertensive lives in low and middle income countries, resulting in a huge economic burden.11

A study of knowledge and learning needs of client with hypertension in Hyderabad. The sample consist of 50 participants purposively selected adults between 20-60 years of age. Data was obtained using a Questionnaire. The finding showed that the client
had low knowledge (mean score 17.1 out of maximum score 55) about their disease condition and the measures to control was given the 5th priority.

The Global burden of hypertension shown unpleasant result. So, we need to conduct study regarding prevalence and risk factors of hypertension among rural community. The study will help in identifying the prevalence and the risk factors of hypertension among rural community.

PROBLEM STATEMENT
Prevalence of hypertension in Baznagar, Lucknow.

AIM OF THE STUDY
1. To assess the prevalence of hypertension among the selected rural community.

OBJECTIVES
1. To identify the prevalence of hypertension in a selected rural community.
2. To determine the association of hypertension with the selected variables.

OPERATIONAL DEFINITION
1. Asses:-Asses is defined as to evaluate or analyze. In this study, it refers to identify prevalence of hypertension among the rural community.
2. Prevalence:-Prevalence is a statistical concept referring to the number of cases of a disease that are present in a particular population at a given time. In our study prevalence is the number of existing case of hypertension in selected rural community.
3. Blood pressure:-Blood pressure is created by the force of blood pushing against wall of blood vessels (arteries) as it is pumped by the heart. According to NHM normal blood pressure is 120-129 and/or 80-84 mmHg.
4. Hypertension:- Hypertension, also known as high or raised blood pressure, a condition in which the blood vessels have persistently raised pressure. According to NHM include hypertension 130-139 and/or 85-89 mmHg.

Assumption
People will give their full participation during the structured interview schedule and blood pressure monitoring.

Delimitation
The study is limited to people of age group (20-45) living in Baznagar, Lucknow.

REVIEW OF LITERATURE
Vinita thapliyal, karuna Singh, Anil joshi (2017), conducted a community based cross section study to assess the prevalence and associated factors of hypertension among adult in rural Uttarakhand. The sample size was 300 age group of 18-45 year. Data was collected by WHO STEPS Questionnaire waist circumference blood pressure body mass index of the participants was also calculated. Result showed that were identified as hypertensive males were having high percentage of hypertension as compared to females that was (18.2%) and (9.7%) respectively.

Jugal Kishore, Neerugupta, Charukohli and Neeta kumar (2016) conducted a study to assess the prevalence of hypertension and determination of its risk factor in rural Delhi. Sample size was 194. Systematic random sampling technique was used. WHO STEPS approach was used to collect data. Blood pressure, body mass index and blood sugar were measured. Result was shown hypertension was significantly higher in individuals more than 35 years than those less than 35 years.

Methodology
This chapter deals with the methodology adopted for “Prevalence of hypertension in Baznagar, Lucknow.”

Research approach
A Quantitative research approach was used in the present study.
Research design
A descriptive design was employed in this study to assess prevalence of Hypertension among the community people of Baznagar.

Research setting
Setting is the physical location and conditions in which data collection takes place.
This research study was conducted in Baznagar, Lucknow.

Target population
The Target population of this study was people living in Baznagar among age group of 20-45 years.

Accessible population
People living in Baznagar, Lucknow among the age group of 20-45 years.

(A) Inclusion Criteria: -
Participants present at the time of data collection.
Age group between 20-45 year.
Willing to participate in the study.

(B) Exclusion Criteria: -
Exclude pregnant ladies with hypertension.

Sample:-
Sample is a representative unit of target population in which researcher work their study.

Sample size: -
In preset study sample is 100 people living in Baznagar.

Sampling technique: -
Basvanthappa BT (2007)* stated that sampling is the process of selecting representative segment of the population under study and sample is representative unit of a target population.
The sample technique was convenient sample technique.

Selection and Development of Tool :-
As the study is to the prevalence of hypertension in Baznagar, Lucknow.

PART A
Socio-demographic profile sheet
Socio-demographic profile of the subject consisting of the baseline data demographic data of the subject such as code no. age, gender, marital status, education, occupation, dietary pattern, life style, addiction, mobility and exercise, pattern of exercise, monthly income, are you any medication.

PART B: B.P. record sheet
BP. Record sheet consisting code no., age and gender and first reading of BP. Measurement of all the participants (n=100) and whose BP. was increased then we are taking three further consecutive readings.

Validity of tool
Polit and Hungler (2010) stated that validity of an instrument refers to the degree to which an instrument measures what it is suppose to be measuring. The content validity of tool was done by the panel by 6 expert qualified and experienced in various speciality area of nursing.

Data collection procedure
After obtaining the permission from concerned authorities, the investigators will introduce ourselves to the study subjects
and explains the purpose of the study. The data will be collected using socio demographic profile sheet and BP. Record sheet in two phrases.

PHASE –I:- During this phase permission has been taken from authorities for conducting research.

PHASE-II: - Total 100 subjects were enrolled by convenient sampling who were fulfilling the inclusion criteria in the study.

PHASE-III: - Subjects were informed about the purpose of the study, benefits and confidentiality of information before administering tools.

PHASE-IV: - Written consent was obtained from participants.

PHASE-V: - Socio demographic profile sheet, B.P. record sheet was administered.

PHASE-VII: - Finally, the data were collected from each subjects.

Plan for data analysis
The present study was carried out “Prevalence of hypertension in Baznagar, Lucknow. A total 100 subjects who met the inclusion criteria were enrolled for the study.

The data was collected by using tools.

- Data were entered in the MS Excel (2007) and analyzed by using Statistical Package for Social sciences (SPSS version 16.0 INC., Chicago, IL).
- Data collected during the course of the study was analyzed by using descriptive and inferential statistics.
- In descriptive percentage, mean and standard deviation were used to analyze the data.
- In inferential statistics: Chi square test including Fisher’s exact test were employed to determine the association of hypertension with selected demographic variables.
- Significant findings of the study were presented in tables and graphs.
- A p value<0.05 was used as threshold to test the significance.
- Interpretations of the findings were done.

Pilot study

- To assess the availability of the study subject.
- To assess the feasibility and practicability of using the research tool.
- To estimate the time required for interviewing each study subject.
- To assess and refine the deficiency or make any addition to the research methodology.
- To assess the appropriateness clarity and adequacy of the language used in the tools.
- To study the requirement of the data analysis and interpretation of the data.

Finding of the pilot study

- The study was found feasible to be conducted
- Tools were feasible.
- The methodology was found appropriate for the study
- The maximum time required for each subject was 15 minute.
- Analysis and interpretation of the data were planned.

Result of the Pilot study:
The sample was feasible. Sample willing to participate in our data collection procedure and fulfill our inclusion criteria. There was no change in socio-demographic sheet and BP record sheet that was discussed with the Guide and Co-guide.

ANALYSIS AND INTERPRETATION

Analysis:-
The data was obtained from 100 samples and completed in master sheet then it was analyzed by using Statistical Package for Social Sciences (SPSS version 16.0 Inc, Chicago, IL). Data collected during the course of study was analyzed by using descriptive and inferential statistics. In descriptive statistics percentage, range, mean and standard deviation were used to analyze
the data. In inferential statistics, Chi. Square test was employed to determine the association of hypertension with selected demographical variables. Significant findings of the study were presented in tables, pie chart and bar graph.

Table 1. Socio-demographic profile of study subject  

| Variables                      | N  | (%) |
|--------------------------------|----|-----|
| **Age(years)**                 |    |     |
| 20-28 years                    | 47 | 47% |
| 29-37 years                    | 32 | 32% |
| 38-45 years                    | 21 | 21% |
| **Gender**                     |    |     |
| Male                           | 35 | 35% |
| Female                         | 65 | 65% |
| **Marital status**             |    |     |
| Married                        | 78 | 78% |
| Unmarried                      | 19 | 19% |
| Divorced                       | 1  | 1%  |
| Widow/widower                  | 2  | 2%  |
| **Education**                  |    |     |
| Illiterate                     | 51 | 51% |
| Primary                        | 18 | 18% |
| Secondary/higher secondary     | 28 | 28% |
| Under graduate                 | 3  | 3%  |
| **Occupation**                 |    |     |
| Employed                       | 32 | 32% |
| Unemployed                     | 40 | 40% |
| Others                         | 28 | 28% |
| **Dietary pattern**            |    |     |
| Vegetarian                     | 26 | 26% |
| Non-vegetarian                 | 74 | 74% |
| **Life-style**                 |    |     |
| Sedentary worker               | 3  | 3%  |
| Moderate worker                | 77 | 77% |
| Heavy worker                   | 20 | 20% |
| **Addiction**                  |    |     |
| Yes                            | 36 | 36% |
| No                             | 63 | 63% |
| **Mobility and exercise**      |    |     |
| Yes                            | 19 | 19% |
| No                             | 81 | 81% |
| **Pattern of exercise**        |    |     |
| Regular                        | 10 | 10% |
| Irregular                      | 90 | 90% |
Table -1: shows the percentage distribution of subject based on their socio demographic profile. About (47%) subjects were age group 20-28 years. More than half of the subjects (65%) were female.

- In relation to marital status about (78%) subjects were married
- Majority of subjects (51%) were illiterate, (18%) subjects were primary, (28%) subjects were secondary or higher secondary and rest of (3%) were undergraduate.
- In relation to occupation, the maximum numbers of subject (40%) were unemployed, (32%) were employed and (28%) were others.
- In relation to dietary pattern, majority (74%) of subjects were non-vegetarian, only 26% subjects were vegetarian.
- The data with regard to lifestyle shows that 77% of subject were moderate worker, 20% subject were heavy worker and 3% subject were sedentary worker
- In relation to addiction data reveals that 36% of subjects were having addiction and majority of subjects (63%) were not having any type of addiction.
- In relation to mobility and exercise more than half of the subjects 81% did not have mobility and exercise.
- The data with regards to pattern of exercise most of study subjects (90%) were not follow regular pattern of exercise.
- The monthly income of subject reveals that maximum of the subject 47% have monthly income between Rs. 5000-10000, (35%) have monthly income ≤5000 and (16%) have monthly income 10000-20000, (2%) have monthly income more than 20000.
- Majority of the subjects (90%) were not on medication and (10%) subject on medication(Anti-hypertensive, Antipyretics, anxiolytic)

| Monthly income (In rupees)** | 35 | 47 | 16 | 2 |
|-----------------------------|----|----|----|---|
| ≤5000                       | 35 | 47 | 16 | 2 |
| 5000-10000                  |    |    |    |   |
| 10000-20000                 |    |    |    |   |
| >20000                      |    |    |    |   |

*Mean±SD=(1.74±0.787), Range =(20-45)

**Mean±SD =(1.85±0.757), Range =(3000-30000)

Figure.1 Prevalence of Hypertension
Figure 1: Shows distribution of hypertensive patients in which majority of subjects 64% were non hypertensive and 36% were hypertensive.

Table 2.0: Association of Hypertension with Gender

| Hypertension | Gender | Male | Female |
|--------------|--------|------|--------|
| Yes          |        | 19(52.8%) | 17(47.2%) |
| No           |        | 16(25%)   | 48(75%)  |

Table 2.0 shows gender wise distribution of the subjects examined hypertension and non-hypertension in which most of the subject’s male (52.8%) were hypertensive in comparison to female (47.2%). There is significant association of hypertension with gender (p=0.005).

DISCUSSION

Objective 1: To identify the prevalence of Hypertension in Baznagar, Lucknow.

The finding of present study revealed that out of 100 participants 36 % were found to be hypertensive and 64% were non hypertensive. Abebe SM, etal 2015, conducted a study to the prevalence and associated factors of hypertension: a cross sectional community based study in northwest Ethiopia. The result shown a total of 2200 participants were included in this study. The prevalence of hypertension was found to be 27.9%.

Objective 2: To determine the association of hypertension with the selected demographic variables

The findings of the present study on the basis of age distribution. 36.1% participants were hypertensive age group 20-28 years. The above findings supported by a study conducted Jugal Kishore et al (2010), were hypertension was significantly higher.
in participants whose age more than 35 years than those less than 35 years. The another study result shown majority of subject were found hypertensive in the age group of 20-28 years but there is no significant relationship between hypertensive and age (P=0.143). The finding of the study were supported by Vinita Thapliyal, Kareena Singh, Anil Joshi (2017) who conducted a study to assess the prevalence and associated factor of hypertension among adult in rural Uttarakhand. The findings shown out of 300 participants 44 (14.7%) were identified as hypertensive.

The present study findings shown there was statistically significant pattern of exercise with Hypertension. The result of the study revealed out of 36 hypertensive subjects. (19.4%) participants were having regular pattern of exercise while majority of participants (80.6%) were having irregular pattern of exercise. The supported study “Comparative Study of physical activity of hypertensive and normotensive conducted by” Nasser A. Al-Hamdán, Abdulmohsen, H et al 2019, revealed that out of 4758 participants about 1213 were Hypertensive (25.5%). Physically active in ‘Recreational’ (12.1%), ‘work’(20.2%) and ‘transport related activities’ (46.1%) respectively. The global physical activity questionnaire is used to know the frequency and time spend doing moderate to vigorous intense physical activity in three domains (a) work related physical activity (paid and unpaid) , (b) walking and cycling (c) recreational physical activity.

SUMMARY

The research was conducted in selected rural community Baznagar, Lucknow. Descriptive study design was employed. The age of study population was 18-45years which in above mentioned Baznagar, Lucknow. Non-probability convenient sampling technique was used on the basis of inclusion criteria.100 participants were involved in this study. Socio-demographic profile sheet, B.P. record sheet was used as tools to collect the data from participants in Baznagar, Lucknow. A pilot study was rehearsed before the final study project over sample size of a 10 participants.

The data of final study was analyzed using descriptive statistics, calculation of frequency, percentage, mean, standard deviation, z test was done. The data has been represented in the form of tables, pie diagrams and bar graph.

Mean age of the subjects was 1.74±0.787. About (36%) subjects were belongto age group of (20-28years). More than half of subjects (52.8%) were males. Majority of the subjects were married(78%). Approximately half of participants were illiterate (51%), (18%) had primary education, (28%) had secondary/higher secondary and rest of them (3%) were only undergraduate.

CONCLUSION

The study conducted that out of 100 participants, majority of participants was in age group 20-28 years were hypertensive. The analysis of present study revealed that majority(52.8%) of participants male were hypertensive. Hypertension is a major cause of morbidity and mortality, and need to be treated. It is extremely common condition, however it is still under diagnosed and easy to treat. Lifestyle modification should always be encouraged in all hypertensive patients. However, there was statistically significant relationship of hypertension with gender, pattern of exercise and monthly income were found in present study.

LIMITATION

1. The study was conducted in rural community.
2. Those who are willing to participates.

NURSING IMPLICATIONS

The study findings have certain important implication for the nursing profession i.e. in clinical practice, nursing education, nursing administration, and nursing research. In these entire area nurse act as an educator, organizer, leader, counselor, motivator and can help in awareness about the hypertension as well as its prevalence.

NURSING EDUCATION

- The study has an important implication in the nursing education and other field. In the revised curriculum of basic nursing education and in post graduation much emphasis is laid on knowledge regarding prevalence of hypertension.
- Teaching learning activities showed include health education on hypertension.
Nurse should provide guidance and counseling services to which lead to promotion of healthy lifestyle.

In service education needs to be planned and implement for community health nurse to in which their information on recent researches regarding prevalence of hypertension.

NURSING PRACTICE
- In mainly working in community, hospitals & in health centres play a very important role in promoting health and well being of individual.
- Nurses working in community area may come across the situation that many individual suffering from hypertension and related complication, if nurses have adequate knowledge regarding hypertension, it sign and symptoms and its management they can provide also.
- The evidence based practices is the need of today's practice. Based on evidence, nursing practice can be modified and improved.

NURSING ADMINISTRATION
- There is an increasing need for quality and holistic care in today's health care system. The finding of this study can be utilized by nursing personal while providing care for the individual.
- Nursing administration should organized periodic in service educational and training program (regarding latest innovation) for nursing staff to improve their knowledge regarding sign and symptom of hypertension and its management.
- The knowledge about hypertension will help the nurse to provide health education and effective care to hypertensive patient.

NURSING RESEARCH
- The finding of the study will act as a catalist to carry out more extensive research. A very limited research study conducted "the prevelance of hypertension in Baznagar, Lucknow". The nurse should provide knowledge and encourage individual about awareness regarding the hypertension and its management to prevent further complications.

RECOMMENDATION
- The similar study can be conducted in large population.
- A similar study can be conducted in urban area.
- A comparative study can be conducted among urban and rural population.
- A study can be conducted to assess the prevalence of hypertension and its associated factors.

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