## CHAPTER - I

## INTRODUCTION

### 1.1Background of the Study

Health is most precious element of human life. It is multidimensional or multifactor of people. It has several dimensions such as physical, mental, social, mental, spiritual, vocational etc. which influence human lifestyle .So Hypertension is a major public health burden due to its causal association with cardiovascular disease morbidity, mortality, disability and economic costs. In 1948, the National Institute of Health [NIH] Launched the Framingham heart Study, the first study of its kind to assess hypertension as a risk factor for developing cardiovascular disease.

Hypertension is defined as medical condition in which the blood pressure in the Arteries is elevated exceeding 140 mmHg over 90 mmHg . This elevation makes the heart work harder than usual to circulate blood through blood vessels. Hypertension is becoming an increasingly common health problem worldwide due to greater longevity in many countries. Since people live longer, they are exposed to chronic disease of old age such a hypertension and cardiovascular disease. According to the World Health Organization [WHO], in 2008, an estimated 36 billion of the 57 million worldwide deaths were due to Non-Communicable Disease[NCD], These disease included hypertension $26.4 \%$ in the worldwide population in 2008 the total number of hypertensive adults 972 million; 333 million were in more economically developed countries, and 639 million were in less economically developed countries, further hypertension is one of the leading causes of premature death worldwide, According to Nepal ministry of health $81 \%$ disease from Non communicable patients which is a major problem also Hypertension, So according to WHO in 2000 Nepal condition $70 \%$ communicable disease and $30 \%$ Non-communicable disease which increases over $60 \%$ such as hypertension major disease of Nepal, and WHO new data of Nepal ranking 2014 Nepal situated 51 Ranking where 3,584 per one Lakh population from Total population of Nepal death problem from Hypertension. Hypertension has been identified as a leading risk factor for mortality and ranked third a cause of disability adjusted life years worldwide. More than a quarter of the world's adult population totaling one billion has hypertension in 2000 and this population will increase to $29 \%$ or 1.56 billion by 2025 . The prevalence of hypertension is increasing with age consistently in all regions of the world. Although hypertension is more common in
economically developed countries ( $37.3 \%$ ) than developing countries ( $22.9 \%$ ), there are considerable larger absolute numbers of individuals affected in developing countries due to larger population size. Such as socio- demographic, genetic and family related life style, co-morbidity and use of different drugs.

The problems of hypertension and others non-communicable disease is growing rapidly to epidemic levels in the developing countries. The management and control of hypertension is possible with a combination of medication and strict life style changes. The main reasons for this inadequate control of blood pressure include demographic characteristics, other reasons include lack of hypertension awareness and lack of knowledge about high blood pressure, while it is difficult or impossible to change demographic and personal characteristics, cultural norms and socio- economic status, increasing knowledge through educational interventions on treatment can positively influence patient's beliefs about medicine. Because hypertension may occur for many people at some point in their lives, safe and potentially effective preventive measure should be more widely established. Hypertension (HT) is also known as one of the most significant risk factors of cardiovascular disease. HT prevalence in the world wide 2015 may 3 (BMC public Health) adult populations is estimated at $26 \%$ and HT is also one of the most urgent health problems among children and adolescents. It has been assessed that HT is common in $3.5 \%$ of the population at developmental age. The highest HT Frequency is observed among adolescent is more and more often recognized without any clinical symptoms. Similarly to adults, primary hypertension among children composed to obesity and family history of this disease, obesity, hyper cholestertemia hypertension and habits contributing to the risk of cardiovascular disease which have their roots in childhood, tend to continue into adulthood. Here any preventive actions against this disease in adulthood will be for too late. According to (Girma Fikadu ) and (Seblewengel Lemma) International journal of Hypertension of volume,(2016); Recently in addition to the high prevalence of infection disease, the incidence of Non communicable disease is alarmingly increasing in the developing countries. Although there are some more recent studies indicating the decline of CVD in Africa, NCDs are generally showing rapid in their countries, hypertension is one the Non communicable disease that is advantage at fact face in Africa countries. Besides being a major cause of deaths, hypertension is a major risk factor for many chronic diseases like coronary heart disease, stroke, heart
failure, kidney disease, and others. It is responsible for about $6 \%$ ( 9 million) of deaths worldwide and affects about one billion people globally. According to Indians Journal of forensic and community medicine, January - March 2017; 4(1): 53-57, globally it is estimated that about $62 \%$ of CVD and $49 \%$ of ischemic heart disease attributable to High blood pressure. Hypertension is an important public health challenge in both economically developing and developed countries. Hypertension is a silent killer, because people who have it are often symptom free or unaware of the disease. Hypertension is positive family history, increase in age, race, genetic factors, and lifestyle changes, dietary changes reduced physical activity and increased stress has led to more cases of hypertension. The teaching profession is highly stressful occupation due to enhanced psychosocial stress at the work place. Teachers work overload has been the subject of intense research.

### 1.2 Statement of problems

Hypertension is the most common cardiovascular disorder effecting $20 \%$ of adult population worldwide. It is also regarded as an important public health problem of global dimensions, both in the developed and developing countries. Therefore it appears that there is a lack of knowledge about hypertension by this age group 18 to 40 years of age that leads to further serious complications worldwide. Raised blood pressure is estimated to cause 7.5 million deaths, about $12.8 \%$ of the total annual death. In this account 57 million DALYs or 3.7\% of total DALYs.

Globally, the overall prevalence of raised blood pressure in adult aged 25 and over was around $40 \%$ in 2010 because of population growth and ageing, the number of people with hypertension rose from 600 million in 1980 to nearly one billion in 2010. This is prevalence and its role as major risk factor for hypertension for the single most important cause of morbidity and mortality in the world.

The prevalence of raised blood pressure was highest in the African Region where it $46 \%$ for both sexes combined. The lowest prevalence of raised blood pressure was in the WHO region of the American with $35 \%$ for both sexes, men in this region had a slightly higher prevalence than women ( $39 \%$ and $32 \%$ respectively). in all WHO region, men have slightly higher prevalence of raised blood pressure than women.

An epidemiological shift in the prevalence of hypertension in 2010 HTN was responsible for 1.5 million deaths. Males have higher prevalence of raised BP in
almost all countries. the prevalence of hypertension in adults(18 year or older) has estimated to be $23 \%$ in urban area $18 \%$ in rural Pakistan, in Sri Lanka it has estimated to be $17.2 \%$ in urban and $16.7 \%$ in rural areas among 35 year or above age group. Several studies from India have reported 20 to $40 \%$ prevalence in urban area and $12.17 \%$ prevalence in rural area. There little day showing the prevalence of hypertension in Nepal and study about the undiagnosed hypertension is rarely done in the country. Nation wise prevalence of hypertension has not been undertaken some studies have shown that the prevalence of hypertension in adults popular is around $20 \%$ in urban population in Nepal.

### 1.3 Objective of the Study

This Study have to find out the knowledge of hypertension among public school teachers of Itahari.

### 1.3.1 Specific objectives of this study were as follow:

- To identify the determinants of hypertension among public school teacher of Itahari.
- To measure the prevalence of hypertension among public school teachers of Itahari.
- To identify the knowledge of hypertension among public school teachers of Itahari.


### 1.4 Significance of the study:-

Hypertension is a major public health burden due to its causal association with cardiovascular disease, morbidity, Mortality, disability and economic costs. The topic of this research has to enquire the depth of knowledge and attitude of people about knowledge of hypertension among public school teachers of Itahari. The research aimed at targeting of people's thinking behavior towards the subject the significances of the study are as follows:
1.4.1 It would help to find out the real situation of knowledge of hypertension among Public school teachers.
1.4.2 This study would be helpful to further researcher as reference.
1.4.3 This study would be helpful for those who want to gain knowledge on Hypertension among public school Itahari.
1.4.4 This study would be useful for community, government and NGOS/INGOS to Support and management knowledge of hypertension among public school teacher.
1.4.5 This study help to find out the regarding people changed their in the life style when Diagnose of hypertension.

### 1.5 Delimitation of the study:-

Limitation is the most important step in research. It helps to the researcher compel work by limited, time, money and materials. This study has own its delimitation due to time resource, contains. Therefore, it focused only in particular area, which investigated within the limit of research capacity. Therefore this study has delimited in the following area:-
1.5.1 Among the Itahari sub-metropolitan area were selected.
1.5.2 The study had concerned about knowledge of hypertension among public school teachers of Itahari target 365 population.
1.5.3 This study would be selected five school name is Pakali secondary school, Janta Secondary School, Janshayog Secondary School, Jyoti Secondary School, Rastriya Secondary School.
1.5.4 Only 105 teachers were selected on the basis of survey method.
1.5.5 This study would be Simple Random Sampling procedure Technique.
1.5.6 Structure types questions, observation, checklist and interview has used to collect Quantitative data.
1.5.7 Its financing used contextual and has not able in generalization to large area.

### 1.6 Definitions of the Terms Used:-

Knowledge: - Verbal response from hypertensive patients regarding lifestyle medication.

Hypertension :- Hypertension used defined as systolic blood pressure of $\geq 140$ mmHg and/or diastolic blood pressure of $\geq 90 \mathrm{mmHg}$ and/or concomitant use of antihypertensive medication.

Systolic blood pressure: - It measures the greatest amount of pressure exerted against the artery walls when an individual's heart contracts.

Diastolic Blood Pressure: - It measures the amount of pressure exerted against the artery wall when the heart is resting between beats.

Awareness of Hypertension: - Knowing or remembering that the individual uses previously diagnosed of hypertension.

Mortality: - The state of being subject to death, death especially on a large scale.

Morbidity: - Disease, sickness Amount of disease sick rate.

Hypertension treatment: - It has defined as person who is hypertension or has hypertensive for awareness that is talking prescribed medication for hypertension.

Obesity: - It is measured in terms of body mass index for Asian population, A BMI of $<18.5$ as underweight, $18.5-22.29$ as normal weight, 23-24.99 as overweight and $>$ 25 as obese were considered.

Determinants: - It has referred to as underlying risk factors, such as genetic and familial, socio-demographic, co-morbidity and life style.

Alcohol: - A Colorless volatile flammable liquid that is the intoxicating, consistent of wine, beer, whiskey etc.

Smoking: - This is referred to consumption of any tobacco product in tome form like cigarette, bide, or hukka.

Tobacco: - This is referred to Khaini, Gutkha etc.

Physical Activity: - It is defined as any bodily movement produced by skeletal muscle that requires energy expenditure. Every day on physical activity as
I) Heavy $>60$ minutes/day.
II) Moderate $=30-60$ minutes/day
III) Light $<30$ minutes/day
IV) Sedentary = None

Full time Teacher: - Teacher who has available at school throughout the school hour.

## CHAPTER - II

## REVIEW OF RELATED LITERATURE

Literature review is one of the important parts of any research work. It is done to find out the research gap in the related issues reviewing previous studies done by different scholar. Literature review consist theoretical frame work and review of previous studies in this section the researcher summarized those related opinions principle finding and recommendation that may reference for this study.

### 2.1 Theoretical Literature

Hypertension Link between blood pressure and disease is first established by the English Clinician Richard Bright (1836) based on his observations on patients with kidney disease. His work led other to realize the significance of hypertension as a disease.

Hypertension of high blood pressure is a condition in which blood pressure in the arteries is chronically elevated. Hypertension is defined as systolic blood pressure of 140 mmHg or greater and diastolic blood pressure of 90 mmHg or greater. There are two types of hypertension one is essential hypertension or primary hypertension the term essential hypertension is usually reference to high blood pressure without any evident causes most of the hypertensive patient's up to $90-95 \%$ are found to have this types of hypertension. Another secondary hypertension is caused by the renal disease, disorder of endocrine gland and other disease who (2008) stated hypertension as a major public health problem in all age groups but especially the elderly people living in the developing countries where more vulnerable. The global prevalence of hypertension is in clinical pressure. Most patients with hypertension are undiagnosed untreated or sub optimally treated according to Mohan and Campell (2007: n.p.). About $30 \%$ of adult population is verifying between economically developed and urban area of the same population. About 50 million Americans have hypertension or persistently have high blood pressure (tortora and demickson 2007:798). According to a systematic review of global burden of hypertension, the lowest prevalent of hypertension are $3.4 \%$ in rural India and the highest was $72.2 \%$ in police women. According to Nepal (NCD) risk factors survey 2008, about $9 \%$ of the populations are found to have reported prevalence of high blood pressure as told by their health care
professional. The proportion was little more among women compared to their men counter parts $10.2 \%$ and $8.4 \%$ respectively.

In a cross sectional study among adult population of eastern Nepal, hypertension is observed 33.9 \% of the participants (mean systolic $138.72 \pm 18.03 \mathrm{mmHg}$ ) and (mean diastolic $93.09 \pm 8.45 \mathrm{mmHg}$ ). A cross sectional study conducted by Hanan et al:- In female school teacher to assess the prevalence and life style determinants of hypertension in 64 schools of Basrah city revealed that 86 (21.3 \%) teachers were hypertensive (both Stage I and stage II ), 21(24.4 \%) of them were recognized as hypertensive for the first time. About one fifth of the participants (20.4 \%) were prehypertensive.

According to Sinaba, Roberts and Zucker (2007:7) nearly one third of the 10 million British people are running from hypertension and are not even aware of it. First indication of trouble is a stroke or a heart attack. Hypertension is the most often managed problems in general population study in South Africa, Turkey. The determinants prevalence of hypertension are found to be $45 \%$ ( $46.1 \%$ in women and $41.6 \%$ in men ) and pre-hypertension $14.5 \%$ ( $12.6 \%$ in women and $16.8 \%$ in men) overall only $41 \%$ of the hypertensive individual has been previously diagnosed. The blood pressure causes the third greatest burden of disease in South Africa. According to Kowalski ( 2007:9), nearly 3.3 million South African with hypertension which is left determinant of hypertension such as Age, Obesity, tobacco, Alcohol, dietary habit and physical exercise or family history of hypertension uncontrolled, contribute to the progression of cardiovascular disease.

Kowalski (2007 : 22) ; claimed that newly $21 \%$ of South African have hypertension that is almost 10 million men and women, among all hypertensive subject ( known and newly diagnosed), only $5.43 \%$ has their blood pressure under control. According to England Reports, (2014); the prevalence of hypertension in England among all adults who are 16 year and above is $29.6 \%$ this report concurs with previous studies. Colomeischi,(2015); many researcher have reported the status of teachers and its implications, Although is a psychological state, it is also coincides with physical symptom found to be significantly associated with poor physical and physiological
health, coronary heart disease, sleep problems, Backache, Headache and Insomnia are some physical health problems.

### 2.2 Empirical Literature Review:-

The first scientific hypertension survey in Nepal was done in 1981 by Migendra Samjhana medical trust, the prevalence of hypertension according to the Then used WHO criteria ( $160 / 95 \mathrm{mmHg}$ ) in the various parts of the country was follows : 5.3\% in mountain (Jumla ), $6 \%$ in rural Kathmandu, 8.1 \% in Terai Plains (parsauni), and $9.9 \%$ in Urban Kathmandu. Since that, there have been a few studies done in various parts of Nepal.

Wang et al. (2008): Hypertension or high blood pressure of all Adults hypertensive known as silent killer as it showed no symptom. Even though it is simple to diagnose and usually can be controlled by healthy diet, regular exercise, medication prescribed by doctor or a combination of their untreated hypertension will cause serious condition.

Yeh et al. (2009): Hypertension affects the structures and function of small muscular arteries, arterioles and other blood vessels and can causes damage at variable rate to various target organ including kindly, brain and eye, related with the end stage of renal disease and to be the cause of stroke.

WHO (2013): Stated that in worldwide, high blood pressure is estimated to affect more than one in three adults aged 25 used over, or about one billion people. The theme of the world health day 2013 is "measure your blood pressure, reduce your risk" for calling for intensified efforts to prevent and control hypertension.

Agrawal VK et al.: Conducted a cross sectional study or prevalence of hypertension and its determinants in rural teacher population among 406 people ( 218 men and 188 women) of 30 years and above. It was found that prevalence of systolic hypertension in rural community was at $18.5 \%$ and diastolic hypertension $15 \%$ with higher prevalence in the age group of 60 years and above in case of men and women.

Libya (University degree): A cross sectional study was conducted in Libya on the risk of hypertension disease among school teacher. The sample comprised 1200 teachers with an equal proportion of male and female. The error married teacher were $52.1 \%$, half of the sample $56.9 \%$ held a University degree, and minority ( $1.5 \%$ ) obtained a postgraduate degree. About $44.1 \%$ were working $<9$ year, less than one fifth of teacher ( $17.2 \%$ ) worked for 20 to 30 years, and $9.2 \%$ of them worked for $>30$ years. The study finding showed the prevalence of different types of cardiovascular disease among the teachers and found that 181 (15.1\%) of the teacher had hypertension.

Saudi Arabia (2011): A cross sectional study was conducted in Jeddah on the prevalence and determinants of pre-hypertension and hypertension among preparatory and secondary school teacher. A sample of 1476 teachers recruited from 55 deddah preparatory and secondary school were selected, the study revealed that the prevalence of hypertension was $14.4 \%$ for normal weight teacher compared to $21.9 \%$ and $37.1 \%$ for overweight and obese, respectively. The overall prevalence of hypertension among school teacher was $25.2 \%$, so this study reveals necessary precaution to be taken to promote risk of hypertension among school teachers.

Bhandari B. et al (2012): A cross sectional study was conducted in knowledge of hypotension's patients of Nepal were doing regular follow up and $74 \%$ monitoring their blood pressure regularly in the clinic and $40 \%$ were using blood pressure control measure to avoid complication. The study shows that most of the patients diagnose that healthy diet alone effective to control hypertension.

### 2.3 Implication of the review of the study

A review is a text of scholarly paper, which includes the current knowledge including substantive, finding as well as, theoretical and methodological contribution to the particular topic (en.wikipedio.org/ literature review). The review is the vital part of research process. It gives knowledge, awareness and it can improve the chance of obtaining significant result. Therefore it is wrathful for time and resources. It provides information about useful information about research procedure and instrument. Similarly reviews of literature avoid the unintentional replication.

The implication of review for the study are given below
a. Give a new interpretation of old materials or combine new with old interpretation.
b. Trace the intellectual progression in the field, including the major debates.
c. Identifying the new ways to interpret the prior research.
d. Revels the any pass that exist in the literature.
e. Resolve the conflict amongst seemingly contradictory previous research.
f. Point the ways in full filling a need for an additional research.

### 2.4 Conceptual Framework

Conceptual Framework according to educational resection Smyth (2004), are Structured from a jet of broad ideas and theories that help a researcher to property identity the problems they are looking at frame there question and find suitable literature. Most Academic researcher uses a conceptual framework at the outset because it helps the researcher to clarify this research question and objectives. A conceptual framework is a tool researchers use to guide their inquiry; it is a jet of ideas used to structure the research a sort of map that may include the research question. The literature review methods use data analysis.

|  | Drugs and treatment <br> Drugs, audience given, Herbs, adherence |  |
| :---: | :---: | :---: |
| Co-morbidity, Obesity, Kidney, disease |  | Life style Diet, Alcohol consumption, cigarettes, Smoking, Tobacco, Physical activity checking |
| Genetic and Family History of Hypertension | $\left(\begin{array}{l} \text { Level of } \\ \text { Blood } \\ \text { pressure } \end{array}\right)$ | Socio- Demographic Age, Sex, Rate, marital status, Place of residence |

Figure no.:1 Conceptual Framework of knowledge of level of blood pressure.

## CHAPTER - III

## RESEARCH METHODOLOGY

Research methodology is the main part of research work. The term methodology refers to the procedure how the study will be lucked. It provides reliability and validity of research. The details descriptions about methodology that will be used to achieve the objective of the study are as follows:-

### 3.1 Research Design:-

The descriptive methods of research are applying to meet the above started objective. The whole data will analyze through the quantitative technique. This study focuses to find out the knowledge of hypertension among public school teachers of Itahari area.

### 3.2 Source of Data:-

Both primary as well as secondary data will used in this study. Selected respondents will primary source of information. Similarly related book, journals, school profile used the secondary source of data.

### 3.3 Population of the Study:-

All the school teachers residing in the Itahari sub-metropolitan area will be considered as the study population

### 3.4 Sampling procedure and sample size:-

For the collection of data, census method will employ. Sampling is a technique of selection of a significant small group from a population which includes all the essential needed for investigation (kumar, 1998) in this study, census method will employed for the collection of data. There are 365 public school teachers Itahari submetropolitan; altogether 5 schools will be selected. The total number of 105 school teacher will be considered as a respondent interview for this study.

| S.N. | School Name | Teachers Name |  | Total No.=105 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ |  |
| 1 | Pakkali S.S | 16 | 5 | 21 |
| 2 | Janashayog S.S | 14 | 10 | 24 |
| 3 | Janta S.S. | 16 | 6 | 22 |
| 4 | Jyoti S.S. | 11 | 12 | 23 |
| 5 | Rastriya S.S. | 10 | 5 | 15 |

### 3.5 Data collection tools:-

In order to find out the objectives of study; It is necessary to use suitable tools. In this study the researcher used interview schedule, observation, checklist, questionnaire, pre-testing, validity and Reliability.

### 3.6 Data collection procedure:-

First of all, the researcher visit the study area of Itahari sub-metropolitan with an authorized letter from the department of education, T.U., Janata collage and meet school principle and explain about the purpose of visit and request to direct and help in the study. The researcher request to the respondent verbally and explain about the purpose of the study, after getting verbal consent, interview will conduct.

### 3.7 Data analysis and interpretation:-

After collection of data, researcher carefully recheck and tabulated on master chart, then simple statistical method like percentage will adopt for the analysis of data. After that data will analyzed and interpreted with the help of graphs, figures and chart, table in addition, the obtained data of this study was interpret in the composition with national and international findings.

## CHAPTER-IV

## ANALYSIS AND INTERPRETATION OF RESULTS

This chapter's deal about the analysis and interpretation of data collected by the researcher. Across sectional study was conducted among public school teachers in five school of Itahari. In the study Participated total of 105 of public school teachers were eligible for analysis.

### 4.1 Socio-demographic characteristics of public school teachers

Socio-demographic characteristics include, for example, age, sex, education migration, marital status, household, employment and income. Different index variable are formed on the basis of socio-demographics variables. They include, for example, socio-economic status, which combine information on education and income, socio-demographic details and often used to describe realized several and to determine sampling error. The contributions denoted to socio-demographics characteristics provides an over view of available survey instruments or address the measure

### 4.1.1 Table 1:- Distribution of Age/sex of public School Teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Age (Year) | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| $17-30$ | $01(0.95)$ | $06(5.7)$ | $7(6.65)$ |
| $31-40$ | $13(12.4)$ | $14(13.3)$ | $27(25.7)$ |
| $41-50$ | $33(31.42)$ | $12(12.42)$ | $45(42.8)$ |
| $51-60$ | $19(18.0)$ | $07(6.7)$ | $26(24.7)$ |

As demonstrated from table no. 1 there were although 105 participant which 66 ( $62.8 \%$ ) were male and $39(37.14 \%)$ were female. The age of the researches varied from 17 to 60 years, the mean age of the teachers was 32 year. The maximum teachers 45 (42.84\%) were within the age group of 41-50 years and minimum 7 (6.65\%) were within the age group 17-30 years. hypertension was significantly associated with gender. likewise, highly significant associated was observed between hypertension and as $\geq 40$ years.

### 4.1.2 Table 2: Distribution of cast/ethnicity of public school teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Caste/Ethnicity | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Brahman | $32(30.5)$ | $18(17.1)$ | $50(47.6)$ |
| Chhetri | $12(11.4)$ | $10(9.5)$ | $22(20.9)$ |
| Terrai cast | $10(9.52)$ | $1(0.95)$ | $11(10.47))$ |
| Janjati | $11(10.47)$ | $9(8.57)$ | $2620(19.04))$ |
| Dalit | $01(0.95)$ | $1(0.95)$ | $02(1.9)$ |

According to table No. 2 the cast system prerails in Nepal and half of the teachers 50(47.6\%) were among Brahman group, Chhetri 22(20.9\%), Terrai cast 11 (10.47\%), Janjati 20(19.0\%) and Dalit 02 (1.9\%). However, hypertension revealed no significant difference among different cast/ethnic.

### 4.1.3 Table 3: Distribution of religions of public School Teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Religion | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Hindu | $65(65.90)$ | $37(35.23)$ | $102(97.14)$ |
| other | $1(0.95)$ | $02(1.90)$ | $03(2.85)$ |

According Table No. 3 from the religions perspectives majority of the Teachers 102 (97.14\%) were Hindu, other 03(2.85\%) religions. Hypertension revealed no significant difference among different religion.

### 4.1.4 Table 4 :- Distribution of family Types of public School Teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Types of Family | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total n=105 |
| Combined | $14(13.33)$ | $09(8.57)$ | $23(21.9)$ |
| Small | $52(49.52)$ | $30(28.571 .90)$ | $82(78.09)$ |

According to table no. 4 in regards to family types, 82 (78.09\%) teachers belonged to small family type and the remaining 23 (21.9\%) had combined family types. combined Significant association was observed between hypertension and types of family.

### 4.1.5 Table 5: Distribution of Marital Status of Public School Teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Marital Status | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total n=105 |
| Unmarried | $06(5.71)$ | $02(35.23)$ | $8(7.61)$ |
| married | $60(57.14)$ | $37(1.90)$ | $97(92.38)$ |

As demonstrated from table no. 5 of the Teachers ( $92.38 \%$ ), were married and the remaining 8 ( $7.61 \%$ ) had unmarried there being male \& female. But hypertension was not found to be associate with marital status.

### 4.2 Educational background and income of public school teachers.

A career as a school teacher is a good choice for people who education and are interested in teaching abroad range of academic subjects. Teachers in school are responsible for identifying student's academic strength and weakness at early age. These insights help. Teachers plan general and targeted to prepare student for success school the education, salary and job requirement for school.

### 4.2.1 Table 6: Distribution of educational background of Public school teachers:

| Variable | Frequency $\%$ |  |  |
| :--- | :--- | :--- | :--- |
| Level of Education | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Undergraduate | $11(10.47)$ | $18(17.14)$ | $29(27.61)$ |
| Graduate | $30(28.57)$ | $7(6.66)$ | $37(35.23)$ |
| Post Graduate | $25(23.80)$ | $14(13.33)$ | $39(37.14)$ |

According to table No. 6 of their education background almost 39 (37.14) of the teaching had achieved post graduate degree including 18 917.14\%) female37 (35.23\%) hold graduate degree including 7 (6.66\%) female and 29 (27.61\%) were under graduate including 18 (17.14\%) female. There was significant difference in the occurrence of hypertension among under graduate level of education teachers.

### 4.2.2 table 7: Distribution of Level of Teaching of Public School Teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Level of Teaching | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| primary | $20(19.04)$ | $16(15.23)$ | $36(34.28)$ |
| Lower Secondary | $19(50.73)$ | $10(9.52)$ | $29(27.61)$ |
| Secondary | $27(25.71)$ | $13(12.38)$ | $40(38.09)$ |

As a demonstrated from the table no. 7 36(34.28\%) primary level teaching, 29 (27.61\%) were lower secondary levels teaching and 40 (38.09\%) were secondary level teaching teachers. Likewise, significant associated was observed between hypertension and primary level of teaching.

### 4.2.3 Table No. 8: Distribution of Years of Teaching of Public School Teachers

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Years of Teaching | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| $<5$ | $2(1.90)$ | $4(3.80)$ | $6(5.71)$ |
| $5-10$ | $11(10.47)$ | $5(4.76)$ | $16(15.23)$ |
| $10>$ | $53(50.47)$ | $30(28.57)$ | $83(79.04)$ |

According to table no. 8 almost three/fourth 83 (79.04\%) of the teachers had served for more than 10 years, 16 ( $15.23 \%$ ) teachers for 5-10 years. and about 6 (5.71\%) teachers for less than 5 years of teaching. Highly significant association was observed between hypertension and the total no. of years as teachers $<5$.
4.2.4 Table no. 9: Distribution of income (Rs) months of public school teachers.

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Income | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| $<23,000$ | $14(13.33)$ | $09(8.57)$ | $23(21.90)$ |
| $23,000-31,000$ | $40(38.09)$ | $26(24.76)$ | $66(62.85)$ |
| $>31000$ | $13(12.38)$ | $03(2.85)$ | $16(15.23)$ |

As a demonstrated from the table no. 9 regarding their financial income, 23 (21.90\%) teachers were earning less than Nepali rupees 23,000 per month, 66 (62.85\%) teachers earning between Nepali rupees 23,000-31,000, and 16 915.25\%) teachers had salary
more than Nepali Rupees 31000 among which13 (12.38\%) were male including 03 $(2.85 \%)$ were female table no. 09 income (Rs) months of public school teachers. There was also a significant difference in the occurrence of hypertension among $<23,000$ earning group of the teachers.

## 4.3 determinants of hypertensions: Public School teachers

Determinants of hypertension very from country and even different places within the country due to rapid urbanization and social changes, new factors of hypertension are also emerging. There are numerous determinants of hypertension if not controlled will lead to secondary hypertension and many futures is important for prevention and to protect from its consequences as discussed in some public school teachers.

### 4.3.1 Dietary habits

Hypertension cannot be cared but can be controlled though life style modifications and prescriptive medication if at all necessary. A number of different dietary factors have been shaven to be positively related to hypertension including intake of animal protein. Low potassium, low magnesium , inadequate calcium , low fish fatty acid and high coffee consumption. Increased intake of fruits, vegetables, legumes and whole grain and restriction of added sugar and saturated fat have been recommended for their beneficial effect to control hypertension.

### 4.3.2 Table no.10: Distribution of diet of public school teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Diet | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Vegetarian | $11(10.47)$ | $16(15.23)$ | $27(25.75)$ |
| Non-vegetarian | $55(52.38)$ | $23(21.90)$ | $78(74.28)$ |

According to table no. 10 on viewing the food habit, most of the teachers 78 (74.28\%) were no-vegetarian are 27 (25.71) were vegetarian fruits and vegetables intake was quite satisfactory more than of the teachers 88 ( $83.80 \%$ ) were taking fruits and vegetables daily used where as $10(9.52 \%)$ were taking never used and 7 ( $6.66 \%$ ) were taking some times consumed fruits and vegetables of public school teachers among them non-vegetarian teachers about $32(30.47 \%)$ were having meat sometimes used, $28(26.66 \%)$ weekly used, $25(23.80 \%)$ daily used and 20 (19.04\%) were 2-6 day per
week teachers were used non-vegetarian (meat) in their diet life. Regarding dietary habit, vegetarian Vs. non-vegetarian did not appreciably with hypertension.

### 4.3.3 Table no. 11: Distribution of added salt of public school teachers.

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Variable added salt | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total n=105 |
| Yes | $18(17.14)$ | $22(20.9)$ | $40(38.09)$ |
| No | $48(45.71)$ | $23(21.9017(16.19))$ | $65(61.90)$ |

As a demonstrated from table no. 11 of only 40 (38.09\%) teachers reported adding salt to their food on the table, male 18 (17.14\%) and female 22 (20.09\%) among them $30(75 \%)$ teachers were adding salt daily, $7(17.5 \%)$ teachers were adding salt sometimes and $3(7.5 \%)$ teachers were adding shell weekly their food. Regarding added salt 40 (38.09\%) associated with appreciably with the hypertension.

### 4.3.4 Table no. 12: Distribution of salty food of public School Teacher

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Salty Food | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Yes | $50(47.61)$ | $35(33.33)$ | $85(80.95)$ |
| No | $16(15.23)$ | $4(3.80)$ | $20(19.04)$ |

According to table no. 12 almost all the teachers 85 (80.95\%) were taking salty food in their diet among them, more than half 65 (76.47\%) were including salty food only daily in their diet 15 (17.64\%) weekly used and 5 (5.88\%) were taking sometimes used salty food and including 20 (19.04\%) no used their diet. Similarly, salty food did not very appreciably with the hypertension.
4.3.5 Table no. 13: Distribution Type of oil used of public School Teachers:

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
|  | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Sunflower | $12(11.42)$ | $18(17.14)$ | $30(28.57)$ |
| Mustard Oil | $45(42.85)$ | $20(19.04)$ | $65(61.90)$ |
| Others oil | $9(8.57)$ | $1(0.95)$ | $10(9.52)$ |

As a demonstrated from table no. 13 taking about their choice of oil used cooking purpose none them $65(61.90 \%)$ of the teachers were using mustard oil, $30(28.57 \%)$ were using sunflower oil and 10 ( $9.52 \%$ ) were using other oil, so teachers were not specific with single type of oil using. Similarly, sunflower, mustard and other oil like soya bean used as cooking oil were also not found to be associated with hypertension.

### 4.3.6 Table no. 14: Distribution of Added ghee of public School Teachers:

| Variable | Frequency $\%$ |  |  |
| :--- | :--- | :--- | :--- |
| Added Ghee | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Yes | $28(36.19)$ | $12(11.42)$ | $40(38.09)$ |
| No | $38(36.19)$ | $27(25.71)$ | $65(61.90)$ |

According to table no. 14 about 40 ( $38.09 \%$ ) of the teachers were tracked to add ghee to their food. Among them 20 (50\%) were adding sometimes 12 (30\%) were adding 2-6 day in week and $08(20 \%)$ were adding daily used to their food including 65 ( $61.90 \%$ ) were no. adding ghee to their food of teachers. But added ghee was statically significant with hypertension 40 (38.09\%).

### 4.4 Risky Behaviors

Behaviors has long been part of the human condition, although risky behaviors not always seen as problematic the terminology used to describe the symptom of alternation deficit hypertension disorder of high blood pressure (HT) like cigarette tobacco consumption etc.

### 4.4.1 Cigratte Smoking Distribution



Figure 2: Cigarette Smoking
Teachers were broadly grouped as smoker and non- smoker as illustarted in figure 2 prevalence of smoking was 6 (5.71\%) including male 5 (4.76\%), and female 1
( $0.95 \%$ ) were reported to have habit of smoking sigarete than 6 (5.71\%) among the smokers were smoking 1-2 times cigaretes a day including 99 ( $94.28 \%$ ) techers were non smikes habit. Teachers with the history of smoking did not vary significant with hypertension.

### 4.4.2 Tobacco Chewing Distribution



Figure 3 : Tobacco Chewing
In the figure No. 3 that study prevalence of tobacco chewing was 9 ( $8.57 \%$ ), male 7 $(6.66 \%)$ and $2(1.90 \%)$ female khaini (Tobacco) was the most commonly used type by $6(66.66 \%)$ teachers followed by gutkha 3 (33.33\%) teachers were checking tobacco product. But tobaaco was observerd to be higly significant 9 ( $8.57 \%$ ) assciated with hypertension

### 4.4.3 Alcohol Consumption Distribution



Figure 4: Alcohol Consumption
Alcohol is cutluring used in Nepal among certain castes and communities from figures no. 4, the overall prevalence of alcohol conusmption was 14 (13.33\%) among
them 5 ( $35.71 \%$ ) more used whisky 6 (42.85\%) more beer used and teachers followed by vodka 3 (21.42\%) more take alcohol maximum number of teacher consume 12 ( $85.71 \%$ ) more reported to consume alcohol daily. Alcohol consumption teachers 14 ( $13.33 \%$ ) significantly with hypertension. But alcohol consumption did not vary significantly.

### 4.5 Family history of hypertension:

Hypertension was defined as systolic blood pressure of $\geq$ inommwg and or diastolic blood pressure of $\geq 90 \mathrm{mmHg}$ and/or use of antihypertensive medications.


Figure 5: Family history of hypertension
According to figure 5 shows that overall 37 ( $35.23 \%$ ) of teachers had family history of hypertension and 68(64.76\%) Teachers had no family history of hypertension among the group with family history of hypertension 22 ( $59.45 \%$ ) male and 15 $(40.54 \%)$ female were reported to have hypertension among the group with no family history of hypertension 40 (38.09\%) male and 28 (26.66\%) female were reported to have hypertension. That no significant association was established between hypertension and family history of hypertension.

### 4.6 Individual history of other chronic diseases:



Figure no. 6: Individual history of other chronic diseases

Figure 6 : illustrates that 39 ( $37.14 \%$ ) teachers had other chronic diseases among them $30(38.57 \%)$ were male and 09 ( $8.57 \%$ ) were female. more than had 17 ( $43.58 \%$ ) of teachers more reported to have hypertension (B.P), among them 12 ( $70.58 \%$ ) male and 5 ( $29.41 \%$ ) were female furthermore 13 ( $33.33 \%$ ) teachers had diabetes disease with 10 ( $76.92 \%$ ) male and 3 ( $23.07 \%$ ) female, where as 9 ( $23.07 \%$ ) teachers had other disease like heart, anemia, Kidney with 68 (20.51\%) male and 01 (2.56\%) female. As well as individual history of the other chronic disease significant with hypertension.

### 4.7 Life-style Factors:

Hypertension is epidemic worldwide among school teacher's socio-demon graphs and occupational characteristic, health-illness status, behaviors of blood pressure level.
4.7.1 Table no. 15 : Distribution of physical exercise of public school teachers

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Physical exercise | Male n=66 | Female $\mathrm{n}=39$ | Total n=105 |
| Yes | $50(47.61)$ | $30(28.57)$ | $80(76.19)$ |
| No | $16(15.23)$ | $09(8.57)$ | $25(23.80)$ |

According to table no. 15 shows that the overall prevalence of physical exercise was about 80 ( $76.19 \%$ ) with male 50 ( $47.61 \%$ ) and female 30 ( $28.57 \%$ ) of the physical exercise of the teachers. physical exercise did not established effect on the hypertension.

### 4.7.2 table no. 16: Distribution of types of physical exercise of public school teachers

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Types of physical <br> exercise | Male $\mathrm{n}=44$ | Female $\mathrm{n}=36$ | Total $\mathrm{n}=80$ |
| Yoga | $25(31.25)$ | $20(25)$ | $45(56.25)$ |
| Aerobic | $05(6.25)$ | $4(5)$ | $9(11.25)$ |
| Other exercise | $14(17.5)$ | $12(15)$ | $26(32.5)$ |

According table no. 16 of the achieve 45 (56.25\%) were practicing Yoga 9 (11.25\%) were doing aerobic exercise and the remaining 27 (32.5\%) were engaged other
exercise like a cycling walking running etc. Types of physical exercise did not established effect on the hypertension.
4.7.3 Table no 17: Distribution of Duration of physical exercise of public school teachers

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Duration of physical exercise | Male $\mathrm{n}=44$ | Female $\mathrm{n}=36$ | Total n=80 |
| $<30$ Minutes | $22(27.5)$ | $27(33.75)$ | $49(61.25)$ |
| $30-60$ Minutes | $18(22.5)$ | $07(8.75)$ | $25(31.25)$ |
| $>60$ Minutes | $04(5)$ | $02(2.5)$ | $06(7.5)$ |

Table 17 shows that the only 06 (7.5\%) teachers were doing physical exercise for more than 60 Minutes and more than half 49 (61.25) of them were practicing for less than 30 minutes and 25 ( $31.25 \%$ ) were teachers practicing 30-60 minutes of Duration of physical exercise $>60$ Minutes effect on the hypertension.

### 4.7.4 Table no. 18: Distribution of frequency of physical exercise of public school

 teachers.| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Frequency of <br> physical exercise | Male $\mathrm{n}=44$ | Female $\mathrm{n}=36$ | Total $\mathrm{n}=80$ |
| Daily | $30(37.5)$ | $17(21.25)$ | $47(58.75)$ |
| Weekly | $5(6.25)$ | $3(3.75)$ | $8(10)$ |
| Sometimes | $9(11.25)$ | $16(20)$ | $25(31.25)$ |

According table no. 18 however 47(58.75\%) teachers were doing exercise daily, 8 (10\%) were doing weekly and remaining 25 ( $31.25 \%$ ) were doing exercise sometimes frequency of physical exercise of public school teachers. frequency of physical exercise daily effect on hypertension.

### 4.7.5 Table no. 19: Distribution of Jogging of public school teachers

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Jogging | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total $\mathrm{n}=105$ |
| Yes | $40(38.09)$ | $27(25.71)$ | $67(63.80)$ |
| No | $26(24.76)$ | $12(11.42)$ | $38(36.19)$ |

According to table no 19 of 97 was in interesting to know that 67 (63.80\%) teachers do Jogging interesting no 38 (36.19\%) of teacher for Jogging a day. Jogging did not establish effect on the hypertension.
4.7.6 Table no 20: Distribution of Duration of Jogging of public school teachers.

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Duration <br> Jogging | Male $\mathrm{n}=37$ | Female $\mathrm{n}=30$ | Total $\mathrm{n}=67$ |
| $<30$ Minutes | $21(31.3)$ | $15(22.38)$ | $36(53.73)$ |
| $30-60$ Minutes | $9(13.43)$ | $11(16.41)$ | $20(29.85)$ |
| $>60$ Minutes | $7(10.44)$ | $4(5.97)$ | $11(16.41)$ |

According to table no. 20 of the teachers among Jogging population 36 (53.73\%) teachers Jogging less than 30 Minutes a day 20 (29.85\%) Jogging for 30-60 minutes and 11 ( $16.41 \%$ ) teachers Jogging for more than 60 minutes a day. Duration of jogging more than 60 Minutes effect on hypertension.
4.7.7 Table no. 21: Distribution of frequency of Jogging of public School Teachers.

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Frequency <br> Jogging | Male $\mathrm{n}=37$ | Female $\mathrm{n}=30$ | Total $\mathrm{n}=67$ |
| Daily | $19(28.35)$ | $20(29.85)$ | $39(58.20)$ |
| Weekly | $5(7.46)$ | $3(4.47)$ | $8(11.9)$ |
| Sometimes | $13(19.48)$ | $7(10.44)$ | $20(29.85)$ |

Table no 21 shows that 39 (58.20\%) were teachers Jogging daily, 8 (11.9\%) were teachers Jogging weekly and 20 (29.85\%) were teachers Jogging sometimes. Frequency of jogging did not established effect on the hypertension.

### 4.8 Prevalence of Hypertension of Public School Teachers

The global prevalence of hypertension is estimated to be $30 \%$ of adult population, varying between economically developed and developing countries and between rural and urban areas of the same population according to Nepal NCD risk factors surrey

2008, about $9 \%$ of the population was found to have reported prevalence of high blood pressure as told by their health care professional and public school teacher.
4.8.1 Table no 22: Distribution of Prevalence of hypertension of public school teacher.

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
|  | Male $\mathrm{n}=66$ | Female $\mathrm{n}=39$ | Total n=105 |
| Hypertension | $12(11.42)$ | $5(4.76)$ | $17(16.19)$ |
| diagnosed Hypertension | $30(28.57)$ | $15(14.28)$ | $45(42.85)$ |
| Undiagnosed Hypertension | $24(22.85)$ | $19(18.09)$ | $43(40.95)$ |

Table 22 shows that the overall prevalence of hypertension was 30 (28.57\%) higher among makes 12 ( $11.42 \%$ ) them females $5(4.76 \%)$. The overall prevalence of diagnosed hypertension was 45 (42.85\%) the prevalence was higher among males 30 ( $28.57 \%$ ) than female 15 ( $14.28 \%$ ) Again, the overall prevalence of undiagnosed hypertension was 43 ( $40.25 \%$ ) the prevalence was higher among males $24(23.85 \%)$ than females 19 (8.69\%).

### 4.8.2 Age and Sex distribution of the prevalence of hypertension



Figure no. 7: Age and sex distribution of the prevalence of hypertension of public school teachers.

As depicted in figure 7, the prevalence age group the overall prevalence was 7 ( $6.65 \%$ ), 27 ( $25.7 \%$ ), 45 ( $42.8 \%$ ) and 26 ( $24.7 \%$ ) for the age groups 17-30 years, 3140 years, 41-50 years all the groups, the prevalence was higher among than female. Among male, the prevalence was $1(0.95 \%), 13$ (12.4\%), 33 (31.42\%) and 19(18.0\%) whereas among female the prevalence was (5.7\%), 14 (13.3\%), 12 (11.42\%) and 7 (6.7\%) for the age groups $17-30$ years, $31-40$ years, 41-50 years and 51-60 years respectively. Average (40-50) age and sex distribution of teachers were significant hypertension.

### 4.8.3 Treatment used blood pressure control

To measure year blood pressure, you doctor or a specifies will usually place an inflatable arm around your arm cuff and measure your blood pressure using a pressure-measuring gage. Changing your lifestyle can go a long way toward controlling high blood pressure your doctor may recommend you eat a healthy diet with less salt, exercise equality, quit smoking and maintain a healthy weight, but sometimes life style changes aren't enough, your blood pressure treatment goal depends on low healthy you are.

### 4.8.4 Table no. 23: Distribution of medication used of public school teachers.

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Medication | Male $\mathrm{n}=30$ | Female $\mathrm{n}=15$ | Total $\mathrm{n}=45$ |
| Yes | $10(22.22)$ | $6(13.33)$ | $16(35.55)$ |
| No | $20(44.44)$ | $9(20)$ | $29(64.44)$ |

As demonstrated in table 23 among teachers who were previously diagnosed as hypertensive, $16(35.55 \%)$ were on treatment of which $10(22.22 \%)$ were male and 6 $(13.33 \%)$ were female $29(64.44 \%)$ were not on treatment of which $20(44.44 \%)$ were male and $9(20 \%)$ were female.
4.8.5 Table no. 24: Distribution of Blood Pressure controlled of public School teachers.

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Blood Pressure controlled | Male $\mathrm{n}=30$ | Female $\mathrm{n}=15$ | Total $\mathrm{n}=45$ |
| Yes | $11(24.44)$ | $5(11.11)$ | $16(35.55)$ |
| No | $19(42.22)$ | $10(22.22)$ | $29(44.44)$ |

As demonstrated in table 24, among teachers who were on treatment 16 (35.55\%) had well controlled blood pressure of which $11(24.44 \%)$ were male and 5 (11.11\%) were female.

### 4.8.6 Table no. 25: Distribution of type of drugs of public school teachers

| Variable | Frequency \% |  |  |
| :--- | :--- | :--- | :--- |
| Types of Drugs | Male $\mathrm{n}=10$ | Female $\mathrm{n}=6$ | Total $\mathrm{n}=16$ |
| Allopathic | $7(43.75)$ | $3(18.75)$ | $10(62.5)$ |
| Ayurvedic | $1(6.25)$ | $3(18.75)$ | $4(25)$ |
| Others | $2(12.5)$ | $0(0.0)$ | $2(12.5)$ |

As demonstrated in table 25, among teachers medication use as well as control of hypertension was higher in male than female of teacher who were on treatment, 10 ( $62.5 \%$ ) were taking allopathic medicine of which 7 (43.75\%) were male and 3(18.75) were female, $4(25 \%)$ were on ayurvedic medicine which $1(6.25 \%)$ were male and 3 ( $18.75 \%$ ) were female and 2 ( $12.5 \%$ ) were on other medicine like a homeopathic where all were male.

### 4.9 Knowledge of hypertension of public school teacher's advice given

Hypertension link between blood pressure and disease was first established by the English clinical Richard bright (1836) base on his observation on patients with kidney disease, hypertension or high blood pressure of $140 \mathrm{~mm} / \mathrm{Hg}$ or greater and diastolic blood pressure of $90 \mathrm{~mm} / \mathrm{Hg}$ or greater so hypertension for decreased many many further needed such as reduce salt in the diet, reduce salty food, stop alcohol, stop tobacco, Quit smoking, reduce body weight, and visit also hospital.
4.9.1 Table no. 26: Distribution of Advice given to hypertension public school teachers.

| Variable | Frequency \% |
| :--- | :--- |
| Advice | Hypertension |
| Reduce salt in the Diet | $40(30.09)$ |
| Reduce Salty Food | $85(80.95)$ |
| Start Exercise | $25(23.80)$ |
| Stop/Reduce alcohol | $14(13.33)$ |
| stop Tobaco | $9(8.57)$ |
| Quit Smoking | $6(5.71)$ |
| Visit Hospital | $39(37.14)$ |

As shown in table 2640 (38.09\%) hypertension teachers were advised to reduce salt in their diet, $85(80.95 \%)$ teachers were advised to reduce salty food intake, 25 $(23.80 \%)$ hypertension. Teacher were advised to start exercise continuously, 14 $(13.33 \%)$ hypertension, Teachers were counseled to stop reduce alcohol consumption, $9(8.57 \%)$ hypertension. Teachers were advised to stop tobacco chewing 6 (5.71\%) hypertension teachers were advised to quit smoking and 39 (37.14\%) hypertension teachers and also 17 ( $43.58 \%$ ) chronic hypertension diagnosed were advised to visit the nearby hospital for evaluation and management of hypertension.

### 4.10 Summary of Findings

### 4.10.1 Summary

The study carried out to examine "Knowledge of hypertension among public school teachers of Itahari." Sunsari district state number one of Nepal based on primary data. the detailed study was limited on 105 School teacher who's age 40 years above. The specific objective of the study is: to asses the demographic and socioeconomic situation of public school teacher, to identify, determinant, prevalence, knowledge hypertension of public school teachers.

After the collection of data, it is tabulated, analyzed and interpretation by simple statistical tools, tables, diagrams, percentage etc.

This study is description in nature. The questionnaire was the only used for the collection of primary data. Researcher was visited 5 school of respondent's school. Necessary information was collected from 105 respondents from their school.

### 4.10.2 Findings

After analyzing and interpreting the data the following result were obtained.

1. 66 (62.85) percent was male teachers and 39 (37.14) Percent was female teachers population in this study area.
2. In this study area according to age average 40 years above teacher teaching occupation
3. $50(47.6 \%)$ percent was Brahman and $2(1.9 \%)$ percent was dalt teachers.
4. 102 (97.14) percent was Hindu and 3 (2.85) percent was other religion of the teacher in this study.
5. Only $23(21.9)$ percent respondents was combined family and 82 (78.09) percent respondents was small family.
6. 97 (92.38) percent respondents was married and 8 (7.61) percent respondents was unmarried.
7. 39 (37.14) percent respondents was post graduate, 37 (35.23) percent respondents was graduated and 29 (27.61) percent respondents was undergraduate that's mean 100 percent respondent was literate.
8. 40 (38.09) percent respondents was secondary teaching, 29 (27.61) percent respondents was lower secondary teaching and 36 (34.28) percent-respondents was primary teaching.
9. 83 (79.04) percent respondent who was 10 year above teaching occupation.
10. Only 16 ( 15.23 ) percent respondents were income more than 31000 thousands.
11. Only 78 (74.28) percent respondents were Non-Vegetarian.
12. 40 (38.09) percent respondents was habit added salt in cooked food.
13. Only 85 ( $8 / 0.95$ ) percent respondents were habit taking salty food.
14. 65 (61.90) Percent respondents was using mustard oil for cooking.
15. 401 (38.09) percent respondents was habit added ghee cooked food.
16. 6(5.71) percent respondents were used cigarette smoking.
17. 9 (8.71) percent respondents were used tobacco chewing.
18. 14 (13.31) percent respondents were consumed alcohol.
19. Family history of hypertension 37 (35.23) percent respondents were identified.
20. There were 17 (43.58) percent respondents chronic disease of hypertension.
21. Among the physical exercise user respondents 80 (76.19) percent were be carefully from that disease.
22. Only 45 (56.25) percent respondents were adopted yoga exercise from awareness of blood pressure.
23. Most of the respondents exercise 49(61.25) percent were than 30 minutes.
24. Most of the respondents exercise 47 (58.75) percent were daily.
25. Only 67 (63.80) Percent respondents were jogging less then two minutes of daily.
26. Only 17 (16.19) percent respondents were hypertension disease from diagnosed 45 (42-85) percent.
27. 16 (35.55) percent respondents were taking medicine.
28. Blood Pressure controlled 16 (35.55) percent of 45 respondents were used allopathic 10 (62.5) percent, 4 (45) Percent used ayurved and 2 (12.5) percent used other medicines.
29. Most of the respondents 39 (37.14) percent were visit hospital after disease.

## CHAPTER-V

## CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusion

In conclusion the prevalence of hypertension among public school teachers was high the prevalence was higher in males than females and with increasing age. The proportion of hypertension teachers being aware of their hypertension status were high but those on treatment and with well controlled blood pressure was low physical exercise and jogging were prevalent whereas cigarette, smoking, tobacco chewing and alcohol consumption were infrequent

Male gender age of 40 year or older, low level of education married 97 teachers, 39 identify post graduate teacher mustard oil, and alcohol consumption and family history of hypertension were identified as the predictors of hypertension. In contrast to various previous studies, cigarette smoking was significantly protective for hypertension on the other hand saying in combined family and high level of teaching were non-significantly protector for hypertension.

Unless addressed the mortality and disease burden from hypertension and obesity, the prevalence of hypertension among school teacher is bound to increase in the next few decades if the current treatment and control measure are not improved, there is likely to be a significant increase in the hypertension morbidity and mortality among public school teacher. Hypertension and its related clinical complication and educational programs regarding healthy diet and lifestyle are vital to reduce the burden of hypertension of public school teachers.

### 5.2 Recommendations

According to the conclusion of this study, following recommendation have been made which is especially focused on improvement of the managing hypertension among public school teachers reduce in salt stop smoking stop Alcoholism adoption of better practice as well as further similar study.

### 5.2.1 Recommendation for practice relation

a. Health seduction emphasizing the importance of a balanced diet and the role of regular physical activity including yoga and aerobic exercise should be recommended.
b. High risk groups such as teacher aged forty year above and those with family history of hypertension should be encouraged to have more regular blood pressure checkups.
c. Periodical medical checkups for school teachers to detect cardiovascular disease and its related factors should done as early as possible..

### 5.2.2 Recommendation for the National Policy

a. Knowledge of hypertension among public school teachers related information should be launched

### 5.2.3 Recommendation for further study

a. This study reinforces the need of further research with large sample size better measurement techniques and more advanced the extent to which different determinants influence the high rate of hypertension in defined population as well as in whole Nepalese population.

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# ANNEX - I <br> QUESTIONNAIRE <br> Janta Multiple Campus <br> Departement of HPE, Itahari Sunsari 

## KNOWLEDGE OF HYPERTENSION AMONG PUBLIC SCHOOL

## TEACHERS OF ITAHARI

Name:-
Age/sex:-
Name of School:-
Cast:-
Religion:-

1. What is your family size?
a) Small
b) Combined
2. Marital Status: Unmarried / Married / widow other
3. Educational Status: SLC / +2 / PCL / Bachelor / Master / Other $\qquad$
4. In which level you are?
a) Primary
b) Lower secondary
c) Secondary
5. How many years are you in teaching profession?
a) Less than 5 years
b) 5-10 years
c) More than 10 years
6. What is your monthly earning in Nepali rupees? $\qquad$
7. Are you suffering from any disease listed below?
a) Yes /Previously
b) No
8. If yes/ was then what disease?
a) Hypertension (B.P.)
b) Diabetes
c) Heart disease
d) Others $\qquad$
9. Are you suffering from high blood pressure (HTN)?
a) Yes.
b) No.
10. If yes, are you under medication?
a) Yes, I do.
b) No, I don't.
11. If you are taking medicine, what type of medicine is it?
a) Allopathic
b) Ayurvedic
c) Other $\qquad$
12. Is anyone in your family is suffering from below listed disease?
a) Yes
b) No
13. If yes/someone was suffering then what disease?
a) HTN
b) Diabetes
c) Others $\qquad$
14. What is your relation with him? $\qquad$
15. Are you a vegetarian or Non vegetarian? $\qquad$
16. If you are Non vegetarian, how often consume it.
a) Regularly
b) 2-6 day in weeks
c) Weekly
d) Sometimes
17. Do you consume fruits and vegetable? How often?
a) Regularly
b) Never
c) Sometimes
18. Do you add salt in coked food?
a) Yes I add
b) No
19. If you add, how often do you add?
a) Daily
b) weekly
c) Sometimes
20. Do you eat salty food?
a) Yes
b) No
21. If Yes how often do you eat?
a) Daily
b) Weekly
c) Sometimes
22. Which oil do you used to cooked food?
a) Mustard oil
b) Sunflower
c) Others
23. Do you add ghee in cooked food?
a) Yes, I do.
b) No, I don't.
24. If you add ghee in cooked food, how often?
a) Daily
b) 2-6 day in week
c) Sometimes
25. Do you do exercise?
a) Yes
b) No
26. If yes, what type of exercise do you do?
a) Yoga
b) Aerobics
c) Others.......
27. How long do you do exercise?
a) Below 30 minute
b) 30- 60 minute
c) above 60 minutes....
28. How often do you do exercise?
a) Daily
b) weekly
c) Sometimes
29. Do you go for jogging?
a) Yes
b) No
30. If yes how long do you do?
a) Below 30 minute
b) 30-60 minute
c) 60 minute more
31. How often do you go?
a) Daily
b) Weekly
c) Sometimes
32. Do you smoke?
a) Yes
b) No
c) I used to
33. If you do, what kind of smoke do you use?
a) Cigarette
b) Bidi
c) Other $\qquad$
34. How often do you smoke in a day?
a) 1-2 times
b) 3-5 times
c) 5 times more
35. Do you use tobacco?
a) Yes
b) No
c) I used to
36. What types of tobacco do you use?
a) Tobaco
b) Gutkha
c) Other.
37. Do you take alcohol?
a) Yes
b) No
c) I used to
38. If yes what type of alcohol do you use?
a) Beer
b) Vodka
c) Whisky
d) Other.
39. How often do you take?
a) Daily
b) weekly
c) Sometimes
