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# NURSING STAFFS KNOWLEDGE AND PRACTICE REGARDING NURSING INTERVENTIONS FOR HYPERTENSIVE PATIENTS

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## ABSTRACT

**Background of the study:**Hypertension is the most common preventable risk factor for cardiovascular disease (CVD; including coronary heart disease, heart failure, stroke, myocardial infarction, atrial fibrillation and peripheral artery disease), chronic kidney disease (CKD) and cognitive impairment, and is the leading single contributor to all-cause death and disability worldwide.Hypertension has become a significant problem in many developing countries experiencing epidemiological transition from communicable to non-communicable chronic diseases. Blood pressure is physiological variable in an individual and is influenced by many factors such as environment, emotional status, drug, obesity. Nowadays hypertension is also prevalent among adults due to competitive nature of the present situation in life wherein the individual is subjected to increased pressures, demands and sophisticated living conditions.

**Aim of the study:** Lack of knowledge of the care givers on hypertension is one of the major problems in preventing, controlling and ending hypertension, therefore we assessed the knowledge of nursing staff regarding management of hypertension.

**Material and Methods:**The study has adopted a quantitative research approach with non-experimental descriptive research design. The sampling technique used was purposive sampling technique to select 100 nursing staffs from a selected hospital, who fulfilled the inclusion and exclusion criteria for selection of the sample. Data was

 

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collected by preparing a structured knowledge questionnaire to assess the knowledge and a self prepared checklist to assess the practice regarding nursing management of hypertensive patients.The collected data was tabulated and analyzed by using descriptive and inferential statistics.

**Results:**The result revealed that among majority of the samples (81%) respondents had inadequate knowledge, (19 %) respondents had moderate knowledge regarding nursing management of hypertensive patient. Unfortunately, none of the participants had adequate knowledge.

**Conclusion:** it was found through this study that there was a knowledge gap among the care givers of hypertensive patients exist, they are in need of tailored, periodic hypertensive education to boost up the knowledge. This calls the health workers to initiate the strict action plan.

**Key words:** Knowledge, Practice, Hypertension, Nursing staff

## INTRODUCTION

Hypertension is the silent killer disease, and it has common modifiable risk factor for the development of various diseases. That leads to heart, kidney, and brain disorders, which shows the high prevalence with age in both sexes [1]. Hypertension is one of the crucial problems in developing countries where there is without treatment; it leads to serious and life-threatening conditions [2].

The statistical report estimated that hypertension accounts for 7.5 million deaths, but worldwide, it is about 12.8% of annual deaths. Around the world, the prevalence of hypertension in person belonging to the age group of 25 years or more is almost 40%, increase of prevalence from 600 million in 1980 to approximately 1 billion in 2008[3]. It is usually easily treatable disorder, and if untreated, it often leads to complications such as coronary heart disease, stroke, and other vascular complications[4].

 

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The global burden of disease due to cardiovascular diseases (CVDs) is escalating, principally due to a sharp rise in the developing countries which are experiencing rapid health transition. Contributory causes include: demographic shifts with altered population age profiles; lifestyle changes due to recent urbanisation, delayed industrialisation and overpowering globalisation; probable effects of foetal under nutrition on adult susceptibility to vascular disease and possible gene–environment interactions influencing ethnic diversity. Altered diets and diminished physical activity are critical factors contributing to the acceleration of CVD epidemics, along with tobacco use. The pace of health transition, however, varies across developing regions with consequent variations in the relative burdens of the dominant CVDs. A comprehensive public health response must integrate policies and programmes that effectively impact on the multiple determinants of these diseases and provide protection over the life span through primordial, primary and secondary prevention.[5]

**Aim of the study:** Lack of adequate knowledge regarding hypertension among the care givers is one of the major problems in preventing, controlling and ending hypertension, therefore we assessed the knowledge of nursing staff regarding management of hypertension.

**Review of literature**

**Oyeyemi Olaniran, Olayinka O Ogunleye and Funke Ojomu(2020)** conducted a descriptive cross-sectional study regarding screening for Hypertension, Overweight and Obesity among Companions of Patients Attending the Family Medicine Clinic of a Nigerian Tertiary Hospital. 422 companions of patients attending the Family Medicine Clinic, LASUTH were recruited and screened for hypertension and obesity. A total of 24.4% of patients attended the clinic with companions during the duration of the study. Companions of patients were mostly family members (95.8%). The prevalence of hypertension, overweight and obesity in them was 50.47%, 31% and 61.8% respectively. Raised blood pressure was found to increase with age. Awareness of hypertension was low (26.8%). Forty-two (42.4%) percent of the companions had BP readings in the pre-hypertension range.[6]

 

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**Kang-Ju Son, Hyo-Rim Son, Bohyeun Park, Hee-Ja Kim, and Chun-Bae Kim(2019)** conducted non-equivalent control group design that assessed patients with hypertension in the regions regarding whether the community-based intervention was implemented or not. This study aimed to assess the effect of a community-based hypertension intervention intended to enhance patient adherence to prescribed medications. The study involved a cohort of patients with hypertension aged >65 and <85 years, among residents who lived in the study area for five years . The final number of subjects was 2685 in both the intervention and control region. The proportion of hypertensive patients who continuously received insurance benefits for >240 days was 81.0% in the intervention region and 79.7% in the control region. The number of dispensations hypertensive patient in the intervention region increased by approximately 10.88% and 2.2 days on average by month, respectively, compared to those in the control region. The intervention program encouraged elderly patients with hypertension to receive continuous care.[7]

## RESEARCH METHODOLOGY

The present study was conducted by using non-experimental descriptive research design. The population in the study consisted of nursing staff giving care to hypertensive patients at selected tertiary care hospital. Out of whom 100 care givers were selected as a sample by using non-probability convenient sampling technique. The study included the samples who were care givers at selected Hospital. Nursing staff who are ANM health attendants& post graduate in nursing were excluded.The data collection tool included three sections, the first one consists socio demographic characteristics such as Age, Gender, Professional qualification, Professional experience, workingarea and the second one was structured knowledge questionnaire for measuring the knowledge regarding nursing management of hypertensive patients. The third section included checklist for assessing the level of practice regarding nursing management of hypertensive patients. The total score was calculated by summing up the answers given to the questions and categorized as inadequate, moderate,

 

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andadequate. The reliability of the self structured questionnaire was measured by using split half correlation. The correlation coefficient for these data is +0.85.The split half correlation of +.80 or greater generally considered good internal consistency.

## DATA COLLECTION AND ANALYSIS PROCESS

A formal permission was obtained from Medical Superintendent of selected hospital,. After a brief self introduction and building the rapport with nursing staff who were selected by purposive sampling technique. The investigator had given brief details about the nature of the study and a written consent was obtained from the sample and confidentiality of the responses to be assured. First the knowledge of the nursing staff regarding nursing management of hypertensive patients will be assessed by structured questionnaire. The practice regarding nursing management of hypertensive patients will be assessed by the self prepared checklist.Data collection process was extended up to two months and completed when the desirable samples (100) were obtained. Data were analyzed by using descriptive statistics (The mean and standard deviation).

## RESULTS

A total of 100 care givers were included in the final study for analysis. The majority of the participants were (77%) age group of 20-25 years among them 73% were female.63% belongs to B.Sc. Nursing among them 76% were 0-3 years of experience and maximum (52%) were working in critical wards. **(Table no:1)**

| VARIABLES | CATEGORY | FREQUENCY |
|---|---|---|
| AGE | 20-25 | 77% |
| | 26-30 | 17% |
| | 31-35 | 2% |
| | 36-40 | 4% |
| GENDER | MALE | 27% |
| | FEMALE | 73% |
| PROFESSIONAL QUALIFICATION | GNM | 30% |
| | POST BASIC | 7% |
| | B.SC NURSING | 63% |
| PROFESSIONAL | 0-3 | 76% |

 

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| | | |
|---|---|---|
| EXPERIENCE | 4-8<br>MORE THAN 9 | 16%<br>8% |
| WORKING AREA | CRITICAL WARD<br>INTERMEDIATE WARD<br>GENERAL WARD<br>OTHER | 52%<br>4%<br>35%<br>9% |

**Distribution of knowledge score of nursing staff regarding nursing management of hypertensive patient. (Table:2)**

| Range of score | % score | Level of knowledge | No. of Nursing staff | % of Nursing staff |
|---|---|---|---|---|
| 0-10 | 50 % | Inadequate | 81 | 81% |
| 11-15 | 51-75% | Moderate | 19 | 19% |
| 16-20 | 76-100% | Adequate | 0 | 0 |
| TOTAL | | | 100 | |

The result pertaining to knowledge revealed that 81 % respondents had inadequate knowledge, 19 % respondents had moderate knowledge regarding nursing management of hypertensive patient.

**Association of demographic variable with knowledge score and selected demographic variable. (Table:3)**

n=100

| Sr no. | Characteristics | frequency | Level of knowledge | | | Df | Chi sq. test | Table value | Significance |
|---|---|---|---|---|---|---|---|---|---|
| | | | inadequate | Moderate | Adequate | | | | |
| 1. | Age | | | | | | | | |
| A | 20 to 25 | 77 | 61 | 16 | - | 3 | 1.58 | 2.3 | NS |
| B | 26 to 30 | 17 | 14 | 3 | - | | | | |
| C | 31 to 35 | 2 | 2 | 0 | - | | | | |

 

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| D | 36 to 40 | 4 | 4 | 0 | - | | | | |
| | Total | 100 | 81 | 19 | - | | | | |
| 2. | Gender | | | | | | | | |
| A | Male | 27 | 21 | 6 | - | 2 | .943 | 2.91 | NS |
| B | Female | 73 | 60 | 13 | - | | | | |
| | Total | 100 | 81 | 19 | - | | | | |
| 3. | Professional qualification | | | | | | | | |
| A | GNM | 30 | 27 | 3 | - | 2 | 2.42 | 2.91 | NS |
| B | Post Bsc | 7 | 5 | 2 | - | | | | |
| C | Bsc Nursing | 63 | 49 | 14 | - | | | | |
| | Total | 100 | 81 | 19 | - | | | | |
| 4 | Professional experience | | | | | | | | |
| A | 0-3 year | 76 | 63 | 13 | - | 2 | .739 | 2.91 | NS |
| B | 4-8 year | 16 | 12 | 4 | - | | | | |
| C | more than 9 | 8 | 6 | 2 | - | | | | |
| | Total | 100 | 81 | 19 | - | | | | |
| 5 | Working area | | | | | | | | |
| A | Critical ward | 52 | 39 | 13 | - | 3 | 3.84 | 2.35 | S |
| B | intermediate ward | 4 | 3 | 1 | - | | | | |
| C | General ward | 35 | 32 | 3 | - | | | | |
| D | Other | 9 | 7 | 2 | - | | | | |
| | Total | 100 | 81 | 19 | - | | | | |

Depicts that among all socio demographic variables the obtained x2 value is only working area was found to be significant with knowledge score remaining age, gender, professional qualification & professional experience are less than the table of x2 at 0.05 level of significance & found not to be associated with knowledge score.

**Association of demographic variable with practice score and selected demographic variable (Table:4)**

 

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| Sr no. | Characteristics | Frequency | Level of practice | | | Df | Chi sq. test | Table value | Significance |
|---|---|---|---|---|---|---|---|---|---|
| | | | Poor | Good | Excellent | | | | |
| 1. | Age | | | | | | | | |
| A | 20 to 25 | 77 | 0 | 16 | 61 | 3 | 6.922 | | S |
| B | 26 to 30 | 17 | 0 | 4 | 13 | | | | |
| C | 31 to 35 | 2 | 0 | 0 | 2 | | | | |
| D | 36 to 40 | 4 | 0 | 3 | 1 | | | | |
| | Total | 100 | | | | | | | |
| | | | | | | | | | |
| 2. | Gender | | | | | 2 | .999 | | NS |
| A | Male | 27 | 0 | 7 | 18 | | | | |
| B | Female | 73 | 0 | 16 | 59 | | | | |
| | Total | 100 | | | | | | | |
| | | | | | | | | | |
| 3. | Professional qualification | | | | | | | | |
| A | GNM | 30 | 0 | 7 | 23 | 2 | 2.297 | | NS |
| B | Post Bsc | 7 | 0 | 0 | 7 | | | | |
| C | Bsc Nursing | 63 | 0 | 16 | 47 | | | | |
| | Total | 100 | | | | | | | |
| | | | | | | | | | |
| 4 | Professional experience | | | | | | | | |
| A | 0-3 year | 76 | 0 | 16 | 60 | 2 | 1.149 | | NS |
| B | 4-8 year | 16 | 0 | 4 | 12 | | | | |
| C | more than 9 | 8 | 0 | 3 | 5 | | | | |
| | Total | 100 | | | | | | | |
| | | | | | | | | | |
| 5 | Working area | | | | | | | | |
| A | Critical ward | 52 | 0 | 9 | 43 | 3 | 2.367 | | Significant |
| B | intermediate ward | 4 | 0 | 1 | 3 | | | | |
| C | General ward | 35 | 0 | 11 | 24 | | | | |
| D | Other | 9 | 0 | 2 | 7 | | | | |
| | Total | 100 | | | | | | | |

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Depicts that among all socio demographic variables the obtained x2 value is only age & working area was found to be significant with practice score, remaining gender, professional qualification & professional experience are less than the table of x2 at 0.05 level of significance & found not to be associated with practice score.

**Correlation of knowledge and practice regarding nursing management of hypertensive patients. (Table:5)**

| Correlation | | Knowledge score total | Practice score total |
|---|---|---|---|
| Knowledge score total | Pearson correlation | 1 | .070 |
| | Sig.{2-tailed} | | .487 |
| | N | 100 | 100 |
| Practice score total | Pearson correlation | .070 | 1 |
| | Sig.{2-tailed} | | .487 |
| | N | 100 | 100 |
| Correlation is significant at the 0.01 level (2- tailed) | | | |

The correlation statistical analysis was obtained by the help of Pearson correlation formula, and the correlation found significant.

## DISCUSSION

The present study concluded that knowledge and practice among nursing staff regarding hypertensive management was dismal. Similar to our findings, ChowdhauryUrmi Rahman[8], on nursing staff in Bangladesh noted that large number of respondents were having good knowledge regarding hypertension but have limitation in knowing causes and symptoms of hypertension. Meanwhile, they were having quite poor knowledge regarding controlling hypertension.

A study conducted by Shima Begum[9], in 2019 reported an average level of knowledge regarding nursing care and management of hypertensive patients among selected

 

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hospital in Dhaka city. Which shows that 60% of the respondents were female and majority (51.3%) had B.SC in nursing similarly in our study 73% were female and 63% respondents had B.SC in nursing.

The current finding indicates that 81% of the nursing staff were having inadequate knowledge regarding management of hypertensive patient which is similar to the study conducted by NYIRABAZUNGU Eugenie[10] shows that 57.14% of nurses had poor knowledge and 70% of them had poor practice and there was no correlation between nurses knowledge and practice regarding management of hypertensive patient.

## Conclusion

Health-care professionals are known to be the leading source of information and it should utilize the opportunity by educating the public on primary prevention of hypertension and its management. It should be a top priority. This can intend empower the individual as caretakers of their own health. Educating of the population, especially women, will have a great impact on the health of their family members, society. Widespread public education is necessary in the current

## Ethical approval

Since the study involved human subjects, a formal ethical approval received from institutional ethical committee.

## Informed Consent

Informed consent was obtained from participants and assured for anonymity.

## Conflict of Interest

The author declares that they have no conflicts of interest.

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The study is not funded by any external sources and all expenses were borne by the principal investigator.

 

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