



ORIGINAL RESEARCH ARTICLE

OPEN ACCESS

A DESCRIPTIVE STUDY TO ASSESS THE PREVALENCE OF HYPERTENSION AND MENTAL HEALTH STATUS OF KNOWN HYPERTENSIVE INDIVIDUALS OF AGE 40 TO 80 YEARS AT NANGAL PANNUA VILLAGE OF AMRITSAR DISTRICT, 2018

*Rupinder Singh

Msc Community Health Nursing, Govt College of Nursing, Amritsar

ARTICLE INFO

Article History:

Received 29th July, 2018
Received in revised form
19th August, 2018
Accepted 19th September, 2018
Published online 30th October, 2018

Key Words:

Prevalence, Known hypertensive individuals,
Mental health status.

ABSTRACT

Over the last decade, the global burden of hypertension has increased for the people especially in rural area. Moreover, hypertension is at the root cause of cognitive decline. Patients with chronic conditions like hypertension may experience many negative emotions which increase their risk for the development of mental health disorders particularly anxiety and depression. This increase in the prevalence rate of hypertension and its affect on the mental health status means that health care team need to be prepared to recognize these conditions in order to refer these cases to the appropriate health care resources. A quantitative research approach and descriptive research design was used and the research setting was in the Nangal Pannua village of Amritsar district. Total 72 known hypertensive individuals of age 40-80 years were selected by non-probability purposive sampling technique. Self Reporting Questionnaire was used to evaluate the mental health status of subjects. Results depicted that prevalence of hypertension in Nangal Pannua was 6.61%. 08(11.11%) known hypertensive subjects were severely prone to mental illness, 35(48.61%) were moderately prone to mental illness, 29(40.28%) were not prone to mental illness. Hence, it was inferred that known hypertensive individuals of age 40-80 years had affected mental health status. This study can be done on large sample in different research settings in Urban area and a follow up study can be conducted to evaluate the effectiveness of the health education.

Copyright © 2018, Rupinder Singh. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Rupinder Singh. 2018. "A descriptive study to assess the prevalence of hypertension and mental health status of known hypertensive individuals of age 40 to 80 years at nangal pannua village of amritsar district, 2018", *International Journal of Development Research*, 8, (10), 23863-23867.

INTRODUCTION

Like many other non-communicable diseases, hypertension is gradually assuming epidemic dimensions with the dawn of epidemiological transition (Olarinmoye, 2013). It is the most common cardio-vascular disorder. Hypertension is a long term medical condition in which the blood pressure in the arteries is persistently elevated. It is also called as "silent killer" because it often has no warning signs and symptoms (Onyango, 2017). According to WHO, the four major risk factors are behavioural, metabolic, social determinants and cardiovascular diseases. The behavioural risk factors associated with the hypertension includes unhealthy diet, tobacco use, physical inactivity and use of alcohol. The metabolic risk factors such as high blood pressure, obesity, diabetes and raised blood lipids.

Social determinants include globalisation, urbanisation, ageing, education and housing. Lastly, cardiovascular diseases that are directly related to hypertension are heart attacks, stroke, and heart failure and kidney diseases (Kretchy, 2014).

Research Problem: A descriptive study to assess the prevalence of hypertension and mental health status of known hypertensive individuals of age 40 to 80 years at Nangal Pannua village of Amritsar district, 2018."

Aim of the study: The aim of the study is to assess the prevalence and mental health status of known hypertensive individuals of age 40-80 years.

Objectives

- To assess the prevalence of known hypertensive individuals in Nangal Pannua village of Amritsar district.

- To assess mental health status of known hypertensive subjects.
- To determine the relationship of mental health status of known hypertensive subjects with their selected socio-demographic variables.
- To prepare and give health education to subjects and their families on hypertension.

Operational definitions

Hypertension: Hypertension is defined as a systolic blood pressure greater than 140 mm of Hg and a diastolic pressure greater than 90 mm of Hg based on average of two or more accurate blood pressure measurements taken during two or more contacts with a health care provider.

Mental Health: Mental health is defined as a state of well-being in which every individual realizes his or her potentials, can cope with the normal stresses of life, can work productively and fruitfully and is able to make contribution to his or her community.

Mental health status: here mental health status refers to psychological well-being of known hypertensive individuals.

Assumptions: The study assumed that mental health status of known hypertensive individuals will be influenced by socio-demographic variables.

Delimitations

This study was limited to:

- 72 known hypertensive individuals.
- 40 to 80 years of age group
- Selected village of Amritsar.

Conceptual Framework

Conceptual framework of the present study is based on Modified Attribution Theory. It is focussed on the basis that deals with how the social perceiver uses the information to arrive at casual explanations for events. It examines what information is gathered and how it is combined to form a casual judgement (FISKE AND TAYLOR, 1991)⁸

MATERIALS AND METHODS

Research methodology indicates the general pattern for organising the procedure for gathering reliable data for investigation purpose. This chapter deals with the methodology adopted to assess the prevalence of hypertension and mental health status of among the known hypertensive individuals of age 40 to 80 years residing in the village Nangal Pannua, Amritsar district during the month of June 2018.

Research approach: Quantitative research approach was used in the present study to assess the mental health status of known hypertensive individuals of age 40 to 80 years at Nangal Pannua village of Amritsar district, 2018.

Research design: In the present study, quantitative and descriptive research without the manipulation of variables or control over the research setting to assess the mental health

status of known hypertensive individuals of age 40 to 80 years at village Nangal Pannua of Amritsar district.

Research setting: As permission was taken, the study was conducted in the village Nangal Pannua, Amritsar. It is a rural area with population of 1376. (as per population register of sub-centre Naag Kalan)

Inclusion and exclusion criteria

Inclusion criteria

- Known hypertensive individuals of age 40 to 80 years in village Nangal Pannua of Amritsar district were taken as sample.
- Known hypertensive individuals of age 40 to 80 years in village Nangal Pannua of Amritsar district who were available during the time of data collection.

Exclusion criteria

- Known hypertensive individuals of age 40 to 80 years in village Nangal Pannua of Amritsar district who were not willing to participate in the study.

Data collection procedure

Door to door survey was conducted in the month of March 2018 in order to assess the prevalence of hypertension in the village. Total number of the houses was 335 out of which, 330 houses were visited and 5 were locked. The total population of the village is 1376, number of identified known hypertensive individuals is 91(target population) and sample size was 72 selected by purposive sampling technique. The prevalence rate of hypertension is 6.61%.Data was collected in the first week of June, 2018 after getting the approval of Sarpanch of village Nangal Pannua. The selected subjects were assessed by using socio-demographic tool and SRQ-20 through interview method. The study subjects were divided among the 8 interviewers i.e., 9 subjects were assigned to each interviewer and average time taken by each interviewer for data collection from a subject was 15 -20 minutes.

Ethical Considerations: Ethical clearance was taken from the ethical committee of the Government College of Nursing, Guru Nanak Dev Hospital Complex, Amritsar Permission was taken from the Sarpanch of Nangal Pannua village of Amritsar. Informed consent was taken from the subjects before conducting the study.

Analysis and Interpretation of Data: This chapter deals with analysis and interpretation of data collected to assess the mental health status of known hypertensive individuals of age 40-80 years at Nangal Pannua village of Amritsar district. Total 72 subjects were selected using non probability purposive sampling technique. This study was carried out in the month of June 2018.

Objectives

- 1) To assess the prevalence of known hypertensive individuals in Nangal Pannua village of Amritsar district.
- 2) To assess mental health status of known hypertensive subjects.

- 3) To determine the relationship of mental health status of known hypertensive subjects with their selected socio-demographic variables.
- 4) To prepare and give health education to subjects and their families on hypertension.

SECTION I: Description of socio-demographic variables by using frequency and percentage

Socio-demographic variables	Frequency (f)	Percentage (%)
1. Age(in years)		
a. a. 40 to 50	30	41.67
b. 51 to 60	25	34.72
c. 61 to 70	14	18.05
d. 70 to 80	05	05.56
2. Gender		
a. Male	20	27.78
b. Female	52	72.22
3. Dietary habits		
a. Vegetarian	59	81.94
b. Non vegetarian	13	18.06
4. Family type		
Nuclear	48	66.67
Joint	24	33.33
5. Marital status		
Married	68	94.44
Un-married	00	00.00
Divorced	00	00.00
Widow/widower	04	05.56
6. Educational status		
Illiterate	29	40.28
Primary	21	29.17
Secondary	21	29.17
Graduation	00	00.00
Post-graduation	01	01.38
7. Occupation		
Private	10	13.89
Government	02	02.78
Housewife	51	07.83
Others	09	12.50
8. Family income		
<5000 per month	38	52.78
5000 – 10000 per month	22	30.56
10000 – 20000 per month	11	15.28
>20000 per month	01	01.39
9. Substance abuse		
Alcoholic	06	08.33
Tobacco use	00	00.00
Other drugs	01	01.39
None	65	90.28
10. Lifestyle		
Hardworking	12	16.67
Moderate	51	70.83
Sedentary	09	12.50

Table 1 shows that the subjects were distributed into various categories according to age, gender, dietary habits, type of family, marital status, educational qualification, type of job, family income, substance abuse and lifestyle. According to age, 30 subjects (41.67%) were in age group of 41-50, 25 subjects (34.72%) were in the age group of 51-60, 13 subjects (18.05%) were in the age group of 61-70 and 4 subjects (5.56%) were in 71-80. Out of 72 subjects, 20(27.78%) were male and 52(72.22%) were female. According to dietary habits, 59(82%) were vegetarian and 13(18%) were non-vegetarian.

According to type of family, 48(66.67%) belong to nuclear family and 24(33.33%) belong to joint family. According to marital status, 68(94.44%) were married, 4(5.56%) were widow/widower and 0% belong to unmarried and divorcee. According to educational qualifications, 29(40.28%) were illiterate, 21(29.17%) had primary education, 21(29.17%) had secondary education, 1(1.38%) qualified post-graduation and

0% belong to graduates. According to type of job, 10(13.89%) were in private jobs, 2(2.78%) were in government jobs, 51(70.83%) were house-wives and 9(12.50%) belong to others. According to family income, 38(52.78%) had monthly income less than 5000/-, 22(30.56%) had monthly income 5000-10000/-, 11(15.28%) had monthly income of 10000-20000/- and 1(1.39%) had monthly income of more than 20000/-. According to substance abuse, 6(8.33%) were alcoholics, 0 belong to tobacco use, 1(1.39%) belong to others and 65(90.28%) were in category of no drugs. According to lifestyle, 12(16.67%) belong to hard, 51(70.83%) belong to medium and 9(12.5%) belong to easy. Hence it can be said that, among 72 subjects, 30(41.67%) were in age group 41-50, 52(72.22%) were females, 59(82%) were vegetarian, 48(66.67%) belongs to nuclear family, 68(94.44%) were married, 29(40.28%) were illiterate, 51(78.83%) were house-wives, 38(52.78%) had monthly income of less than 5000/-, 65(90.28%) had no substance abuse and 51(71.83%) had medium lifestyle.

Section II: Assessment of mental health status of known hypertensive subjects.

Objective 2: To assess mental health status of known hypertensive subjects.

Table 2. Mean score of assessment of mental health status of known hypertensive subjects

Known hypertensive subjects	n	Mean	SD	Mean percentage
Mental health status	72	09.00	04.00	12.50%
Maximum score = 20				
Minimum score = 00				

Table 2 shows that mean score of assessment of mental health status of known hypertensive subjects. It shows that, mean score of known hypertensive subjects was 09.00±04.00 and mean percentage was 12.50%. Hence, it can be said that known hypertensive subjects has average mental health status.

Section III: Frequency and percentage distribution of mental health status of known hypertensive subjects.

Table 3. Frequency and percentage distribution of mental health status of known hypertensive subjects

Mental health status	N=72	
	N	Percentage (%)
Severely prone to mental illness(15-20)	08	11.11
Moderately prone to mental illness(8-14)	35	48.61
Not prone to mental illness(<7)	29	40.28

Maximum score = 20
Minimum score = 00

Table 3 and Figure 4 shows the frequency and percentage distribution of mental health status of known hypertensive subjects. It shows that 08(11.11%) were severely prone to mental illness followed by 35(48.61%) were moderately prone to mental illness and 29 (40.28%) were not prone to mental illness. Hence, it can be said that known hypertensive subjects were having average mental health status. Table 4 depicts the item wise analysis of SRQ-20 tool and ranking of the items in accordance with their respective scores. It was observed that item 20 (Do you have uncomfortable feelings in your stomach?) Ranked number 1 with 63 positive responses (yes)

Table 4. Item wise analysis of SRQ-20 tool and ranking of the items in accordance with their respective scores

SRQ Item	N=72		
	Yes	No	Ranking
1. Do you often have headaches?	56	16	03
2. Is your appetite poor?	24	48	11
3. Do you sleep badly?	29	43	08
4. Are you easily frightened?	26	46	10
5. Do your hands shake?	30	42	07
6. Do you feel nervous, tense or worried?	51	21	04
7. Is your digestion poor?	41	31	05
8. Do you trouble thinking clearly?	27	45	09
9. Do you feel unhappy?	30	42	07
10. Do you cry more than usual?	14	59	15
11. Do you find it difficult to enjoy your daily activities?	23	49	12
12. Do you find it difficult to make decisions?	26	46	10
13. Is your daily work suffering?	29	43	08
14. Are you unable to play a useful part in life?	20	52	14
15. Have you lost interest in things?	21	51	13
16. Do you feel that you are a worthless person?	11	61	16
17. Has the thought of ending your life been on your mind?	06	66	17
18. Do you feel tired all the time?	61	11	02
19. Are you easily tired?	34	38	06
20. Do you have uncomfortable feelings in your stomach?	63	09	01

out of 72 and item 17(Has the thought of ending your life been on your mind?) was on rank 17 i.e.; last with only 06 positive responses out of 72. Hence, it was concluded that common neurotic problem observed in known hypertensive subjects while collecting data with SRQ-20 tool, was uncomfortable feelings in stomach whereas least common was thought of ending life.

DISCUSSION

This study intends to assess the prevalence of hypertension and mental health status of known hypertensive individuals of age 40 to 80 years at Nangal Pannua village of Amritsar district with view to deliver health education on hypertension to them. The findings of the studies have been discussed with the references to the objective along with findings of the other studies. Analysis of data regarding the first objective of the study i.e. to assess the prevalence of known hypertensive individuals in Nangal Pannua village of Amritsar district. The prevalence rate of hypertension was 6.61% in population of 1376. Analysis of data regarding the second objective of the study i.e. to assess mental health status of known hypertensive subjects indicated that 08(11.11%) were severely prone to mental illness followed by 35(48.61%) were moderately prone to mental illness and 29(40.28%) were not prone to mental illness. hence, it can be said that known hypertensive individuals of age 40-80 years were moderately prone to mental illness. Findings according to age, gender, dietary habits, family type, marital status, educational status, substance abuse and lifestyle showed that socio-demographic variables have no effect on the mental status of known hypertensive individuals of age 40-80 years in Nangal Pannua village of Amritsar district. These findings are supported by Singh S., Shankar R., Parkash Singh G., 2017 conducted study on hypertensive individuals. Analysis of data according to occupation showed that the occupation affect the mental health status of known hypertensive individuals of age 40-80 years in Nangal Pannua village of Amritsar district. Analysis of data according to family income per month (in Rs) showed that family income per month (in Rs) affect the mental health status of known hypertensive individuals of age 40-80 years in Nangal Pannua village of Amritsar district.

The fourth objective was to prepare and give health education to subjects and their families on hypertension. So health education was prepared on different aspects of hypertension, which includes definition, types, causes and risk factors, clinical manifestations, home remedies and treatment.

Conclusion and Recommendations

The present study was undertaken among population of Nangal Pannua village of Amritsar district to assess the prevalence of hypertension in that village from which sample of known hypertensive individuals of age 40-80 years was selected to assess their mental health status and determination of its relationship with selected socio-demographic variables. There was significant association of mean of mental health status of known hypertensive subjects with the selected socio-demographic variables such as occupation and family income per month (in Rs).

Recommendations

- Study can be replicated on the large sample.
- Urban area can be included in the study.
- A follow up study can be conducted to evaluate the effectiveness of the health education.
- An exploratory study can be conducted to identify the cause of hypertension.

Implications of the study: The findings of the study suggest many implications for the nursing education, nursing practice, nursing administration and nursing research.

In Nursing Education: There is evidence that, there is little knowledge regarding the effect of hypertension on the mental health status of the patients among the health professionals because they are not properly trained in this area of the subject. The curriculum should incorporate activities like booklets, pamphlets and discussion sessions regarding the hypertensive patients with affected mental health status. As a nurse educator, there are abundant opportunities for the professional nurse to educate patients and their family regarding the hypertension and its affect on cognitive decline.

In Nursing Practice: The nurse plays a key role in educating patients and family members regarding hypertension and its affect on mental health in hospitals. Increasing the awareness and understanding of the phenomenon among the general population resulting in early detection of cases of hypertension with cognitive decline. From the present study it is found that known hypertensive individuals of age 40-80 years are moderately prone to mental illness. The investigator as a nurse felt the need that nurses should act as facilitators to educate patients, family members and general population regarding the effect of hypertension on mental health status.

In Nursing Administration: Nurse administrators are the backbone to provide facilities to improve information related to relationship of hypertension and mental health status. Nurse administrator can plan for periodic population based service to assess information level of public and health care team to check the status of mental health of hypertensive individuals which is mostly a hidden aspect during assessment of patient's condition. The nurse administrator should explore their potentials and encourage innovative ideas in preparation of appropriate information and modalities.

In Nursing Research: In nursing there is scarcity of research done on mental health status of hypertensive individuals. There is great need for more study of the problem of neglect of nurses being the largest group in health care delivery system should take initiative to conduct further research studies on hypertension. This study will motivate the beginning researchers to conduct the same study with different variables on a large scale considering individual aspects. The public and private agencies should also encourage research in the field through materials and funds.

REFERENCES

Grimsrud A., Stein D.J., Seedat S., Williams D., Myer L., The Association between Hypertension and Depression and Anxiety disorders, PLOS One.2009;4(5):52-55

Kishore J, Gupta N, Kohli C, Kumar N, Prevalence of hypertension and determination of its risk factors in rural Delhi. *International Journal of Hypertension*. 2016; 26(11):261-265

Kretchy I., Daaku F., Danquah S., 2014. Mental health in hypertension: assessing symptoms of anxiety, depression and stress on anti-hypertensive medication adherence. *International Journal of Mental Health Systems*. <https://www.psychologytoday.com/us/articles/200306/blood-pressure-and-the-brain>

Neeraj Ahuja; a textbook of psychiatry; 6th edition:2-5.

Ojike N., Sowers JR., Sexias A., Ravenell J., Rodriguez-Figueroa G., IS., et al., Psychological Distress and Hypertension. *Cardio-renal Med*.2016;6(3):198-208

Olarinmoye EO., Akinwusi PO., Adebimpe WO., Isawumi MA., Hassan MB., Olowe OA., et al. 2013. Prevalence of hypertension in the rural adult population of Osun state, southwestern Nigeria. *International journal of General Medicine*.2013; 6:317-322.

Onyango M., Kombe I., Nyamongo D., Mwangi M., 2017. A study to determine the prevalence and factors associated with hypertension among employees working at a call centre Nairobi Kenya. *The Pan African Medical Journal*. 27: 178.

Pan Y., Cai W., Cheng Q., Dong W., An T. and Yan J., Association between anxiety and hypertension : a systemic review and meta-analysis of epidemiological studies, *Neuropsychiatric Disease and Treatment*; 2015; 11(22):1121-1130.

Singh S, Shankar R, Parkash Singh G, Prevalence and associated risk factors of hypertension: A cross-sectional study in Urban Varanasi. *International Journal of Hypertension*. 2017; Article ID 5491838:1-10.

Suresh K. Sharma; Nursing Research and Statistics; Review of literature; 2nd edition; Elsevier:101-102

Suresh K. Sharma; Nursing Research and Statistics; Theories, Models, and Frameworks in Nursing Research; 2nd edition; Elsevier: 122-123.
