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A study to assess the knowledge regarding prevention of cerebrovascular accident among hypertensive clients at selected hospitals, Sikar with a view to develop an informational booklet

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Abstract
Introduction: Cerebrovascular accidents (CVA), or strokes, are a leading cause of disability and death worldwide, with hypertension being a major risk factor. Effective prevention depends on awareness of risk factors and appropriate lifestyle choices.
Aim of the study: To assess the knowledge regarding CVA prevention among hypertensive clients at a selected hospital in Sikar and to develop an informational booklet.
Design and Methods: A descriptive study was conducted on 100 hypertensive patients using a structured questionnaire. Socio-demographic variables including age, gender, smoking, occupation, marital status, dietary habits, drinking habits, and hypertension history were recorded. Data were analyzed using descriptive statistics and chi-square test.
Results: About 42% had poor knowledge, 51% average, and only 7% good knowledge. Significant association was observed between knowledge and variables like occupational status and drinking habits. No significant association was found with age, gender, smoking, marital status, diet, or hypertension history.
Conclusion: The overall knowledge about CVA prevention among hypertensive patients was average to poor. Targeted educational interventions like informational booklets are essential to improve awareness and prevention practices.

Keywords: Cerebrovascular accident, hypertension, knowledge, prevention, informational booklet.

Introduction

Health consists of many different aspects, according to the WHO; there are four aspects to health physical, mental, social and spiritual. Health has four main aspects: physical, social, mental, and spiritual. Each plays a vital role in overall well-being. Physical health refers to the body's well-being and proper functioning. It includes eating a balanced diet, exercising regularly, getting enough rest, and avoiding harmful habits. Regular medical checkups and good hygiene also help maintain physical health [1].

Social health focuses on relationships and interactions with others. Having strong connections with family, friends, and the community provides emotional support and reduces stress. Good communication skills and the ability to build and maintain positive relationships are key to social well-being. Mental health is about emotional and psychological well-being. It involves managing stress, coping with challenges, and maintaining a positive mindset. Good mental health allows a person to think clearly, make sound decisions, and handle emotions effectively. Seeking help when needed, such as talking to a trusted person or professional, is essential [2].

Spiritual health relates to finding meaning and purpose in life. It can involve religious beliefs, personal values, or a connection to nature and the universe. Practicing mindfulness, gratitude, and self-reflection helps in achieving inner peace and emotional balance. Balancing these four aspects leads to a healthier and more fulfilling life. The biological aspect of health emphasizes that every cell, tissue, and organ should function at optimum capacity and perfect balance of the human body. The factors which influence health are present in both within the individual and externally in the society.

The term lifestyle is used when we talk about the way people live, their habits, attitude, tastes, moral standards, and economic level. Healthy habits and lifestyle are necessary for the promotion of health. There is evidence which shows that there is an association between the health and lifestyle of people. A majority of the health problems in developed countries occur due to unhealthy lifestyle [3]. Cerebrovascular accident represents a significant health concern globally, particularly among individuals with hypertension sedentary life style and high bed cholesterol [4]. According to WHO annually, 15 million people worldwide suffer a stroke. Of these, 5 million die and another 5 million are left permanently disabled, placing a burden on family and community. Stroke is uncommon in people under 40 years; when it does occur, the main cause is high blood pressure. However, stroke also occurs in about 8% of children with sickle cell disease [5].

A WHO report published in January 2015 shows that non-communicable diseases are estimated to have accounted for 60% of the deaths in India in 2014. Most of the Indians were in the age group of 30-70 years. 26% of the population are dying at present from the four main non-communicable diseases-diabetes, cancer, stroke, and respiratory problems. Death occurrence due to non-communicable diseases is expected to increase to 52 million in 2030 from 38 million in 2012 [6].

According to the WHO, 8.5 million people died of non-communicable diseases in the Southeast Asian region in 2012. If action is not taken to stop the epidemic of stroke, the numbers of dying people will increase [7].

The results of a study conducted by Indian council of medical Research Delhi show that the urban residents of Tamilnadu, Jharkhand, Chandigarh, and Maharashtra (31.5%, 28.9%, 30.7%, and 28.1%) had a significantly higher prevalence of hypertension compared with rural residents (26.2%, 21.7%, 19.8%, and 24.0%, respectively). The prevalence of stroke caused by hypertension is 57% and cad is 24%. Stroke has multiple risk factors and largely occurs when patients suffer from a combination of risk factors present. Risk factors of stroke which are modifiable are blood pressure, tobacco use, physical activity, low fruit and vegetable intake, alcoholism, overweight, and diabetes mellitus [8]. Indian council of medical research Delhi, 10th October 2023-according to the report published in the esteemed lancet neurology journal today, stroke, a highly preventable and treatable condition, could lead to nearly 10 million deaths annually by 2050, primarily affecting low- and middle-income countries. The report underscores that stroke deaths are expected to surge from 6.6 million in 2020 to a daunting 9.7 million by 2050. By 2050, it is estimated that the contribution of stroke deaths will see an increase from 86% to 91% [9].

Need of the study

A WHO report published in January 2019 shows that non-communicable diseases are estimated to have accounted for 50% of the deaths in India in 2014, Most of the Indians were in the age group of 40-70 years. 26% of the populations are dying at present from the four main non-communicable diseases-Cerebrovascular accident, cardio vascular disorder, cancer, and Respiratory problems, Death occurrence due to non-communicable diseases is expected to increase to 52 million in 2030 from 38 million in 2012. (According to the WHO) [10].

Dr. Poonam Khetrapal Singh, WHO Regional Director for South-East Asia the WHO South-East Asia Region is committed to strengthening health care services to prevent, treat and manage stroke, and to provide quality rehabilitative care for stroke-related disability. Globally, stroke is the second leading cause of death and the third leading cause of disability. One in four people are in danger of stroke in their lifetime. Lifestyle risk factors for stroke include being overweight or obese, physical inactivity, tobacco use and alcohol abuse. Medical risk factors include high blood pressure, high cholesterol, diabetes and a personal or family history of stroke or heart attack. An estimated 70% of strokes occur in low-and middle-income countries, which also account for 87% of stroke-related deaths and disability-adjusted life years. To help address this inequity, WHO continues to support all countries of the Region to identify and apply "best buy" interventions that reduce the risk of stroke, and which strengthen access for all to quality stroke services [11].

The current pattern of diseases is different from the history of human diseases as a new pattern of diseases are seen every 10 years. When the leading cause of death was checked worldwide in 2000 and 2016 there were 56.9 million deaths worldwide in 2016. Ischemic heart disease and stroke caused the death of 15.2million people in 2016. In the last 15 years ischemic heart disease and stroke were the leading causes of Death worldwide. From the last 10 years, there is a change in the pattern of disease in Developed countries as they have developed ways to prevent many communicable Diseases. In developed and developing countries, there is an increase in non-Communicable diseases which include cardiovascular, renal, nervous, and mental Diseases. The prevalence of chronic diseases is increasing in most countries and with the increase in life expectancy, there is a higher risk of various types of chronic

Diseases. In developed and developing countries, there is an increase in non-communicable diseases which include cerebrovascular accident, cardiovascular disorder, renal disorders. The prevalence of chronic diseases is increasing in most countries and with an increase in life expectancy. A cerebrovascular accident is a functional abnormality of the central nervous system that occurs when the blood supply to the brain is disrupted, which is also known as a stroke [12].

Cerebrovascular accident in hypertensive patients are four times more prone than the normal healthy person, control of blood pressure and life style modification decreases the risk of stroke among pre-hypertensive and hypertensive patients, in comparison with developed countries, the prevalence of stroke is less in India, but it may increase in India as the life expectancy of Indian population is increasing [13].

During my job at UPHC Ramnagar, Sodala, Jaipur, I observed that patient who was coming for checkup and follow up in OPD had poor awareness regarding cerebrovascular accident and hypertension. They should improve the prevention and importance of personal protection by improve the healthy life style by provide the information booklet, I also provide the knowledge those people who are in high risk group that is hypertension, high cholesterol and having sedentary life style.

Objectives of the study

- To assess the knowledge regarding prevention of cerebrovascular accident among hypertensive client at

selected hospitals Sikar.
- To find out the association between knowledge regarding prevention of cerebrovascular accident among hypertensive client at selected background variable.
- To develop an informational booklet on knowledge regarding prevention of cerebrovascular accident among hypertensive clients.

Methodology

Research approach

Research approach indicates the broad procedure for collection of data in a particular situation to conduct the study. The choice of the appropriate approach depends on the purpose of the study. In this study, a quantitative research approach was adopted to assess the knowledge regarding prevention of CVA among hypertensive client at SK hospital, Sikar.

Research design

Research design of a study spells out the basic strategies that the researcher adopts to develop information that is accurate and interpretable. For the present study, based on the statement of the study and the objectives, a non-experimental descriptive research design was adopted.

Sampling technique and sample size

The sample refers to subset of the population that is selected to be participating in a particular research study. The sample size selected were 100 hypertensive patients. Non-probability convenience sampling technique was found to be appropriate for the present study.

Criteria for selection of sample

Inclusion Criteria

- Hypertensive age group of 40 to 70 years and above client obtained treatment in OPD at SK hospital, Sikar.
- Hypertensive client who are present at the time of data collection.
- Hypertensive client who voluntarily participate in the study.
- Hypertensive client who can communicate effectively in the language of the questionnaire. (E.g.-English).

Validity and reliability of tool

Validity refers to whether a tool accurately measures what it is intended to measure. In this study, content validity was established through consultation with the research guide and seven nursing experts. The developed questionnaire was reviewed by 7 experts. Based on their suggestions, necessary modifications were made and final tool was created in consultation with the research advisor. The reliability of the tool was assessed using the KR-20 method, resulting to be was found to be 0.81, indicating that the tool is reliable and feasible.

Result and Discussion

Table 1: Frequency and percentage table showing socio-demographic characteristics among hypertensive client, (N=100)

Socio-demographical variables		Frequency	(%)
1. Age in Years	a) 41-50 Years	31	31.00
	b) 51-60 Years	24	24.00
	c) 61-70 Years	22	22.00
	d) Above 70 Years	23	23.00
2. Gender	a) Male	59	59.00
	b) Female	41	41.00
3. Smoking habit	a) Smoker	69	69.00
	b) Non smoker	31	31.00
4. Occupational status	a) Employed	35	35.00
	b) Un employed	25	25.00
	c) Pensioner	40	40.00
5. Marital Status	a) unmarried	21	21.00
	b) Married	42	42.00
	c) Separate	37	37.00
6. Dietary pattern	a) mixed	50	50.00
	b) Vegetarian	50	50.00
7. Drinking Habit	a) Alcoholic	23	23.00
	b) Non alcoholic	77	77.00
8. History of hypertension	a) 1-3 years	21	21.00
	b) 3-5 years	22	22.00
	c) 5-7 years	29	29.00
	d) More than 7 years	28	28.00

Table 1 illustrates the socio-demographic characteristics of hypertensive clients (N=100). The majority of the participants were aged between 41 and 50 years (31%), followed by those aged 51 to 60 years (24%), 61 to 70 years (22%), and above 70 years (23%). In terms of gender, males constituted 59% of the sample, while females made up 41%. Regarding smoking habits, 69% of the participants were smokers, whereas 31% were non-smokers. The occupational status showed that 35% were employed, 25% were unemployed, and 40% were pensioners. Marital status revealed that 21% of the participants were unmarried, 42% were married, and 37% were separated.

Dietary patterns were evenly distributed, with 50% following a mix diet and the remaining 50% being vegetarian. Concerning drinking habits, 23% of the clients were alcoholic, while 77% were non-alcoholic. The history of hypertension varied, with 21% having the condition for 1 to 3 years, 22% for 3 to 5 years, 29% for 5 to 7 years, and 28% for more than 7 years.

Table 2: Level of knowledge regarding prevention of cerebrovascular accident among hypertensive client in a selected hospital Sikar, (N=100)

S. No.	Level of Knowledge	Frequency	Percentage (%)
1	Poor	42	42.00
2	Average	51	51.00
3	Good	7	7.00

Table 3: Association between knowledge regarding prevention of cerebrovascular accident among hypertensive client and selected socio-demographic variables

Socio Demographic Variables		Knowledge			Chi-Square	Tabulated Value @ 0.05 LOS	DF	Result
		Poor	Average	Good				
1. Age in Years	a) 41-50 Years	9	20	2	5.501	12.59	6	Non-Significant
	b) 51-60 Years	12	10	2				
	c) 61-70 Years	12	8	2				
	d) Above 70 Years	9	13	1				
2. Gender	a) Male	20	35	4	4.213	5.99	2	Non-Significant
	b) Female	22	16	3				
3. Smoking habit	a) Smoker	26	38	5	1.732	5.99	2	Non-Significant
	b) Non smoker	16	13	2				
4.Occupational status	a) Employed	6	12	17	12.24	9.49	4	Significant
	b) Unemployed	10	12	3				
	c) Pensioner	19	21	0				
5. Marital Status	a) Single	6	15	0	6.992	9.49	4	Non-Significant
	b) Married	17	20	5				
	c) Separate	19	16	2				
6. Dietary pattern	a) Non-Vegetarian	22	25	3	0.258	5.99	2	Non-Significant
	b) Vegetarian	20	26	4				
7. Drinking Habit	a) Alcoholic	3	4	16	6.922	5.99	2	Significant
	b) Non alcoholic	29	41	7				
8. History of hypertension	a) 1-3 years	10	9	2	6.587	12.59	6	Non-Significant
	b) 3-5 years	13	8	1				
	c) 5-7 years	8	18	3				
	d) more than 7 years	11	16	1				

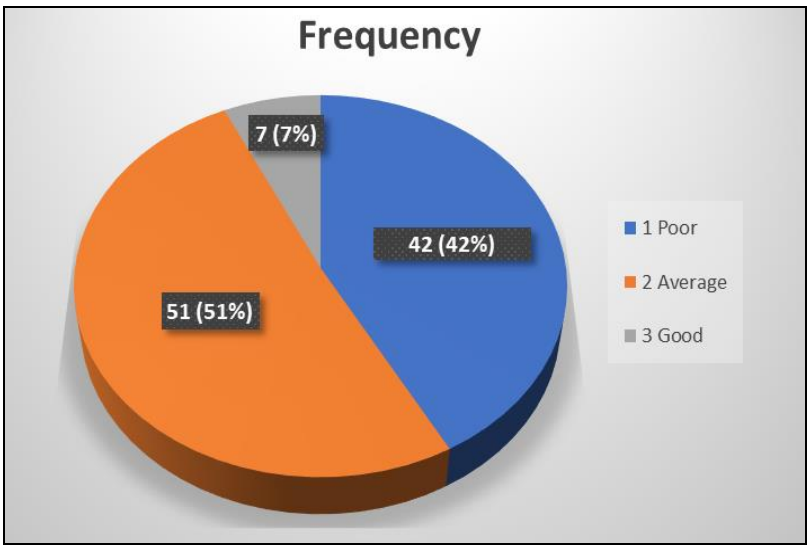

Fig 1: Depicts level of knowledge regarding prevention of cerebrovascular accident among hypertensive client in a selected hospital Sikar

There was a significant association between knowledge regarding prevention of cerebrovascular accident among hypertensive client with respect to occupational status and drinking habit. No significant association between knowledge regarding prevention of cerebrovascular accidents and the variables such as age, gender, smoking habit, marital status, dietary pattern, and history of hypertension among hypertensive clients.

Conclusion

The study assessed knowledge regarding the prevention of cerebrovascular accidents (stroke) among 100 hypertensive patients at a hospital in Sikar. Results showed that a majority of clients had only average knowledge of stroke prevention, highlighting a significant gap in awareness. Occupational status and alcohol consumption were found to be significantly associated with knowledge levels, while factors like age, gender, smoking, and diet showed no significant influence. With non-communicable diseases like stroke rising in India, particularly among the hypertensive population, the study emphasizes the need for targeted health education. An informational booklet was developed

to raise awareness and promote lifestyle modifications to reduce stroke risk.

Conflict of Interest
Not available

Financial Support
Not available

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