TREATMENT SEEKING BEHAVIOUR AMONGST STROKE SURVIVORS AND IMPACT OF COVID 19 PANDEMIC IN NAGPUR DISTRICT

By

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INTRODUCTION

- World is going through numerous social and economic changes leading to various phase of epidemiological transition.
- At present, Non communicable diseases (NCDs) take lives of 38 million people each year. More than 75% of NCD deaths, around 28 million, occur in developing countries. India, like other developing countries, is in the midst of a stroke epidemic
- Stroke, the sudden death of some brain cells due to lack of oxygen when the blood flow to the brain is lost by blockage or rupture of an artery to the brain. It is also a leading cause of dementia , depression and partial or complete disability.
- Worldwide, stroke is the commonest cause of mortality after coronary artery disease. Also, it is the commonest cause of chronic adult disability. The lifetime risk of stroke after 55 years of age is 1 in 5 for women and 1 in 6 for men

- The common risk factors, that is, hypertension, diabetes, smoking, and dyslipidemia are quite prevalent and inadequately controlled; mainly because of poor public awareness and inadequate infrastructure.
- The Person starts experiences severe headache, sudden numbness or weakness on the face, arm, or leg (especially one side), sudden trouble in walking, sudden trouble in speaking, some person becomes unconscious for some time.
- Stroke survivors are in a state of shock for few months or even a year at a stretch. Some survivors recover with time whereas some takes years to cope up with situation.
- Having a stroke is often a traumatic and demoralizing experience for survivors and their family. It is obvious to have seen in emotional and psychological problems with stroke survivors, either present immediately or at later phase.

RESEARCH QUESTIONS

1. What is the pattern of stroke cases reported at hospitals?
2. What is the treatment seeking behavior after recovery from stroke attack?
3. What experiences stroke patient had faced during lockdown and due to Covid-19 situation?

OBJECTIVES

Broad Objective: The broad objective of the study had been to understand the Treatment Seeking Behaviour in the study population.

Specific Objectives: The specific objectives of the study were as follows:

- To understand the pattern of stroke cases reported in hospitals across age, sex and social groups in India.
- To examine the pathways of treatment seeking behavior of stroke patients.
- To evaluate the stroke patients experience during lock down and analyze its consequences.

DESIGN OF THE STUDY

- In order to answer the meanings, Qualitative styles are used with a set of data collection tools that have helped in cutting the study in a better way.
- Qualitative investigation styles were used to conduct the telephonic interview and know the extent health problems and treatment seeking demeanor in the study population. It also reflected the socioeconomic status and also the challenges faced due to Covid 19 infection restrictions of the study population

REVIEW OF LITERATURE

- This literature review aims to identify relevant publications in peer reviewed journals, reports and books that address the issue of healthcare-seeking for stroke.
- The main objective of this study has been to understand the Treatment Seeking Behaviour among stroke survivors.

What is Stroke?

- Stroke is often viewed as a disease of elderly, in the past, stroke was referred to as cerebro-vascular accident or CVA, but the term “stroke” is now preferred
- The most common types of strokes are-

Blockage of an artery (Ischemic Stroke):-

- Ischemic stroke is like a heart attack, except it occurs in the blood vessels of the brain. Clots can form either in the brain's blood vessels, in blood vessels leading to the brain, or even blood vessels elsewhere in the body which then travel to the brain.
- These clots block blood flow to the brain's cells. Ischemic stroke can also occur when too much plaque (fatty deposits and cholesterol) clogs the brain's blood vessels. About 80% of all

Rupture of an artery (hemorrhagic stroke):-

- Hemorrhagic Strokes occur when a blood vessel in the brain breaks or ruptures. The result is blood seeping into the brain tissue, causing damage to brain cells. The most common causes of hemorrhagic stroke are high blood pressure and brain aneurysms.
- An aneurysm is a weakness or thinness in the blood vessel wall that causes it to balloon outward.
- Hypertension leads to atherosclerosis and hardening of the large arteries. This, in turn, leads to blockage and weakening of the walls of small blood vessels in the brain, causing them to balloon and burst. The risk of stroke is directly related to how high the blood pressure is.

Risk Factors and Complications of stroke

- **Hypertension**
  - Hypertension, if left untreated, can damage arteries and lead to atherosclerosis. This reduces blood flow and increases the risk of developing blood clot(***Ischemic Stroke)***
  - Uncontrolled hypertension can cause blood vessels to weaken .This can result in a burst blood vessel in the brain(***Hemorrhagic Stroke)***
- ***Smoking:-***The nicotine and carbon monoxide in cigarette smoke damage the cardio vascular system in many ways
- ***High cholesterol:-***High blood cholesterol is a significant danger factor for coronary illness and builds the danger of stroke. Studies show that ladies' cholesterol is higher than men's from age 55 on
- ***Diabetes mellitus:-***Adults with diabetes have heart disease death rates that are two to four times those of adults without diabetes. People with diabetes often have high blood pressure, which can cause abnormalities in the small blood vessels of the brain and lead to stroke.

Symptoms of Stroke

- Difficulty speaking or understanding speech (aphasia)
- Difficulty walking
- Dizziness or light headedness (vertigo)
- Numbness, paralysis, or weakness, usually on one side of the body
- Seizure (relatively rare)
- Severe headache with no known cause
- Sudden confusion
- Sudden decrease in the level of consciousness
- Sudden loss of balance or coordination
- Sudden vision problems (e.g., blurry vision, blindness in one eye)
- Vomiting

Burden of Stroke in Developed World

- Stroke often causes deaths or gross physical impairment or disability and thus, is one of the most devastating of all non-communicable diseases. Every year, there are 15 million people worldwide who suffer a stroke. Nearly six million people die because of stroke annually and another five million are left with permanently disability
- In America each year 700,000 people suffer from stroke, out of these 500 thousand are first recurrence and others are repeat stroke. Stroke is the third most common cause of death in United States.(The American Heart Association Statistics (2002) committee and Stroke Statistics Subcommittee)
- Nearly three-quarter of all strokes occur in people over the age of 65. The risk of having a stroke more than doubles each decade after the age of 55. The risk of ischemic stroke in current smokers is about double that of nonsmoker
- Approximately 130,000 people each year in England under the age of 55 years suffer from stroke. It is also estimated that approximately 1000 young people under the age of 20 years will have a stroke every year (Stroke Association, 2002).

Burden of Stroke in India

- India, like other developing countries, is experiencing an increased burden of stroke, suggesting a stroke epidemic. There is not exact data present of stroke in India. As per recent survey of community from different regions in India, a crude prevalence rate for strokes was to be about 203 per 1, 00, 000 populations. The male to female ratio was estimated to be 1.7.
- However, a report published by WHO suggests that India’s growth of Gross Domestic Product (GDP) has fallen by 1% due to combined impact of CHD, stroke, and diabetes. (WHO, 2005)

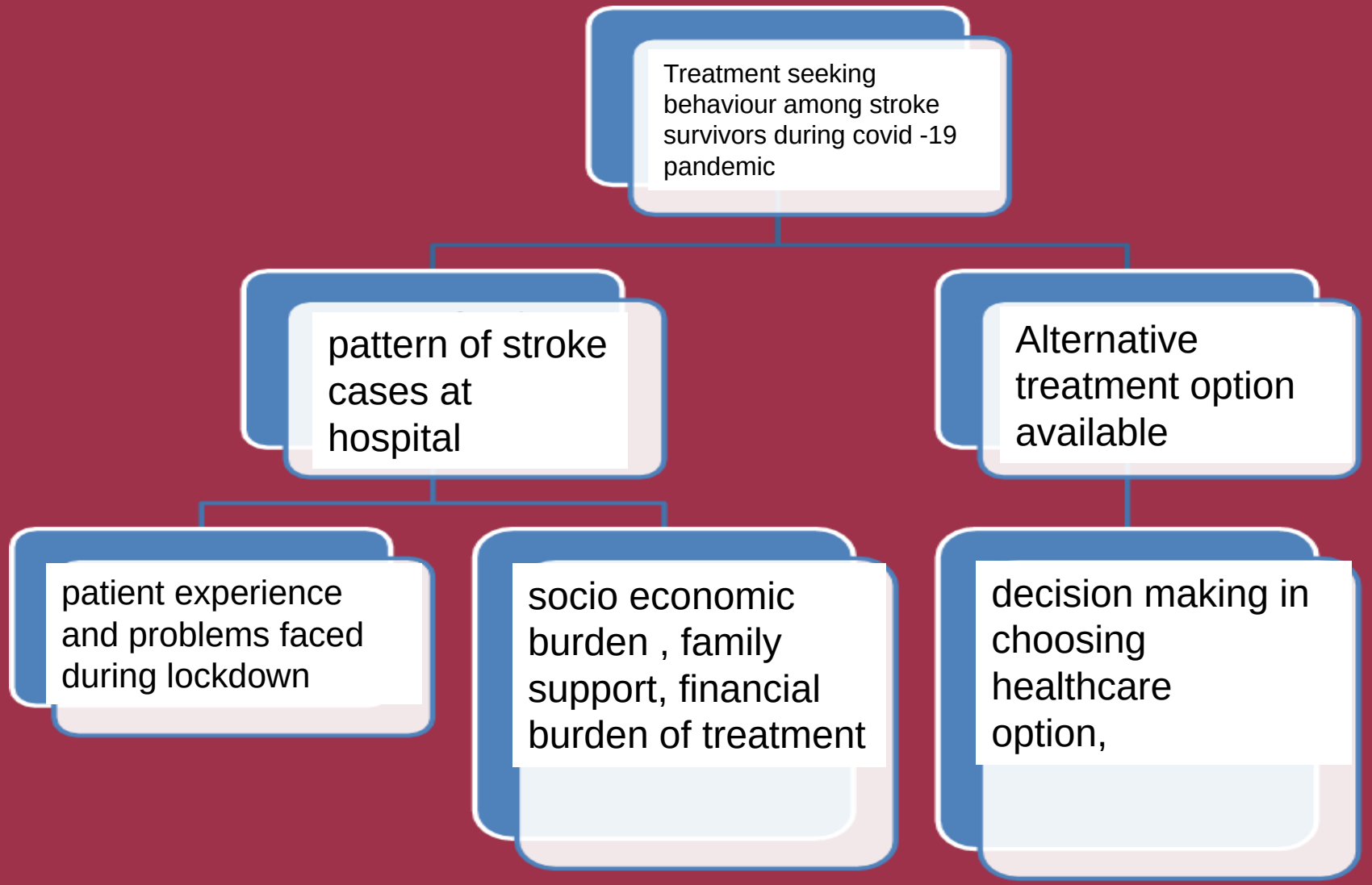
Healthcare for Stroke in India

- Healthcare available for stroke in India can be divided into two broad categories- formal and informal healthcare.
- Formal healthcare includes management of stroke with the use of modern medicine whereas, informal healthcare involve management of stroke with the help of Complementary Alternative Medicines (CAM). There is no scientific evidence on the effectiveness of these alternative therapies for stroke rehabilitation.

Summary of Literature Review and Identified Gap in Literature

There are plenty of individual studies, systemic reviews and meta-analysis available on the current burden of stroke and its projection for near future for developed countries. Large scale studies like, global burden of diseases, have data on burden of stroke from developing world, but the data on healthcare seeking for stroke in India is scarce there is no available literature describing reasons for the choice of healthcare provider, and treatment seeking behavior among stroke patients in India.

METHODOLOGY



Design of the Study

- In order to answer the objectives, Qualitative methods are used with a set of data collection tools that have helped in analyzing the study in a better way.
- Qualitative research methods were used to conduct the telephonic interview and know the extent of health problems and treatment seeking behavior in the study population

Sampling Procedure

- The sampling procedure involved of two steps

- In the first stage researcher decided to look for the literature supporting the objectives of the study and perform systematic review to draw a pattern of stroke cases reported in hospitals and analyze them.
- Second stage researcher tried to capture the lived experiences of the stroke cases through in-depth interview with stroke survivor who had stroke during lockdown due to covid-19 pandemic.

Unit of Analysis

For this research, the unit of analysis taken were individuals

Data collection method

- Researcher carried out in-depth interviews with the help of study tools developed for in- depth interview
- No cases were visited home in order to maintain the safety protocol.
- Before beginning the interviews, participants were informed about the purpose of the study and informed consent were taken
- Duration-10 to 20 minutes.

Ethical Consideration

- Oral consent were obtained from every respondent before the commencement of the telephonic interview.
- The anonymity and confidentiality of all information shared was assured to them.
- The choice of the respondent to refuse to answer or skip any query was respected and adhered to.

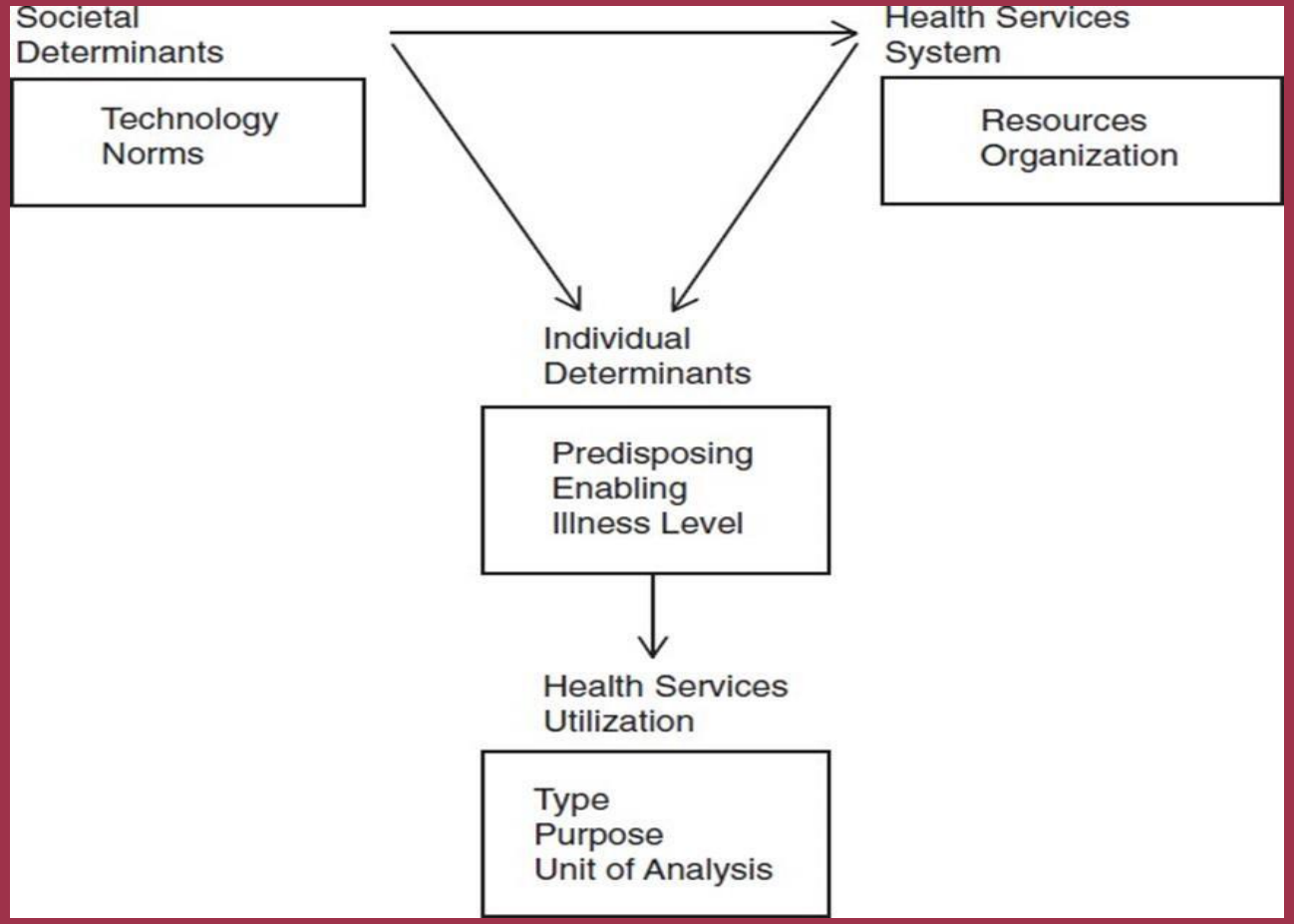
LIMITATIONS OF THE STUDY

- The study constitutes of very small sample size which is a major limitations of the study.
- The study conducted in depth interview telephonically due to Covid 19 social distancing norms which have affected the quality of data as many attributes were unable to capture more intensely on phone.
- Being a qualitative study, the findings are very context-specific with a limited scope for generalization.

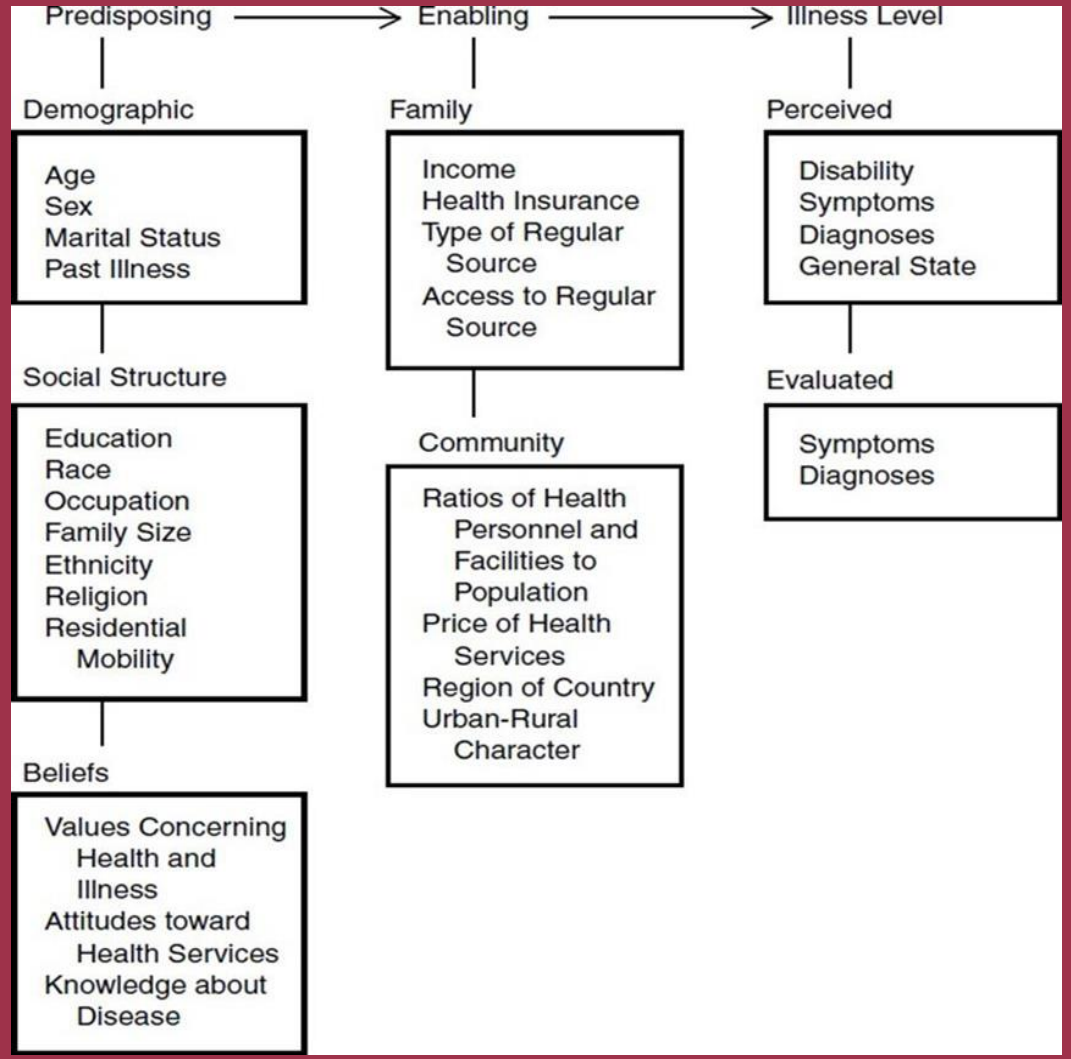
DISCUSSION

A hospital-based observational cross-sectional study conducted in the Department of Neurology, AIIMS, New Delhi, India, over a period of 15 months from March 2012 to May 2013. The study was conducted to look for triggering factors of stroke. In all, 290 patients who had recent and first attack of stroke were included in the study the mean age of entire study population was 54.1 years.

Conceptual framework of model



Individuals determinants of health



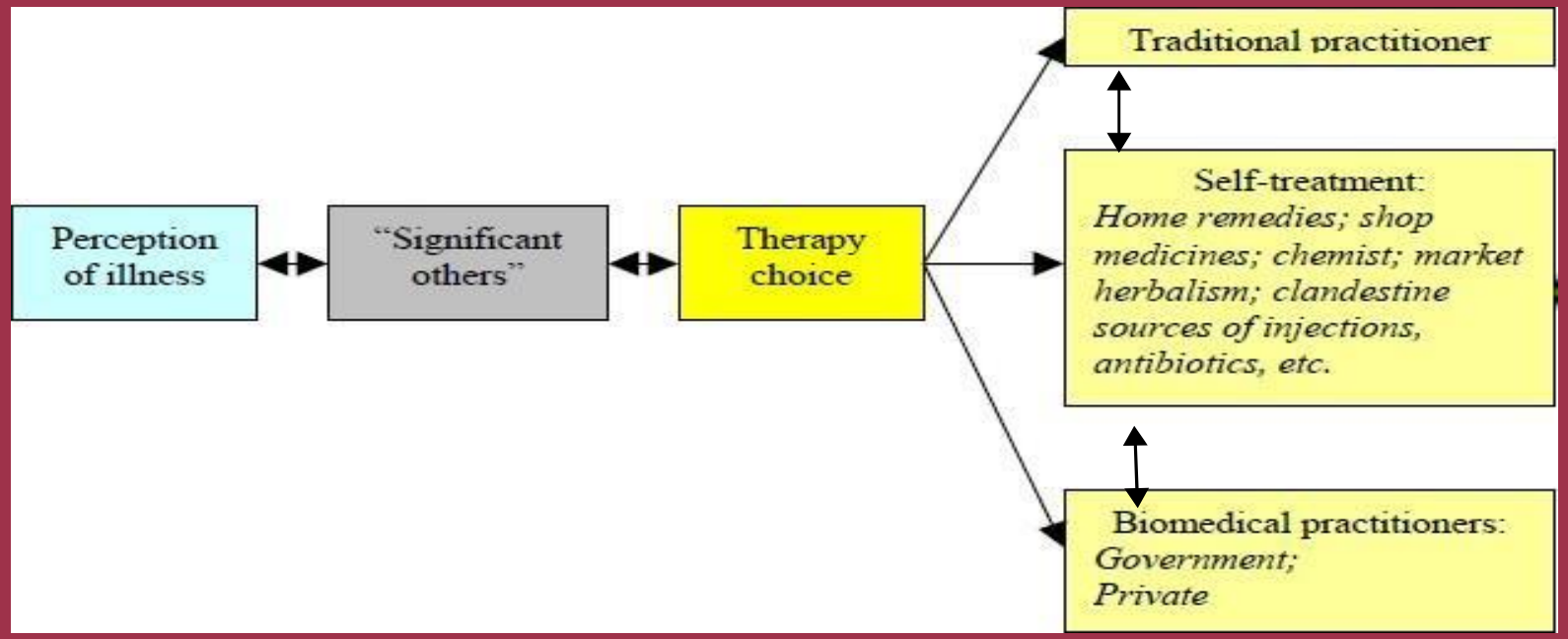
The concept of Treatment Seeking Behaviour

A Socio-Behavioural Health Care Utilization model proposed by Weller et al in 1997 categorizes all the interplaying factors influencing treatment utilization patterns as:

- Predisposing factors which include age, gender, religion, global health assessment, prior experience with illness, formal education, general attitudes towards health services, knowledge about the illness etc.
- Enabling factors which include availability of services, financial resources to purchase services, health insurance, social network support etc.
- Need factors which comprise of the perception of severity, total number of sick days for a reported illness, total number of days in bed, days missed from work or school, help from outside for caring etc.

Pathway models have been used by researchers to explain Health Care Utilization Behaviour.

- This is a model where paths taken from symptom recognition to the use of different health services (home treatment, traditional healer, biomedical facility) are followed



Distribution of stroke cases across age, gender:

- **AGE**:-Our review showed that the mean age of the patients in each of the study varies from 54.5 year – 67 year.
- It is assumed that the average age of patients with stroke in developing countries is usually 15 years younger than those in developed countries. (Jeyaraj Durai Pandian, 2013).
- Among the respondents characteristics the mean age is observed to be 56 years with age ranging from 39 years to 75 years, which is significantly same as observed in the secondary review
- **GENDER** has an important attribute to look for occurrence of disease. Male and female variations is observed in all of the studies. The number of male cases reported are observed to be more than that of female.
- Study shows that male cases reporting to hospital is two third of the female cases reporting for stroke. It is observed that age factor is common among male and female cases in India but the incidence of stroke reporting is more among men. There is no evidence in literature review of reason behind the low reporting of female patients compared to male

Covid-19 lockdown and Stroke treatment

- The growing coronavirus disease 2019 (COVID-19) pandemic has posed major challenges on acute stroke care in several aspects. As the pandemic is rapidly evolving, there has been a rise in calls for social distancing, limiting unnecessary interactions and physical contacts, and even mandatory quarantine and isolation in many countries.
- Many people did not went to government hospitals due to fear of getting quarantined or covid positive.
- There was a significant delay in seeking medical care and eventually not being eligible for the treatment. Covid 19 has affected the treatment seeking behavior in many ways.
- There was no satisfaction by the treatment given by the doctor as there was already burden of covid cases.
- In many hospitals beds were not available
- Denial of treatment due to Covid-19 burden

CONCLUSION

- Literature review on treatment seeking behavior suggests that it follows a fixed model in light of which a few significant elements that can be perceived by individual point of view get disparaged and a more profound understanding from the beneficiaries and a deeper insight from the beneficiaries is missed out, this was also observed specifically in case of stroke
- The point focused here is the need to incorporate the individual viewpoints of the recipients to use the existing resources in a productive manner.
- A comprehensive methodology towards every one of these choices should be utilized to get a more extensive image of the situation.
- Lack of knowledge about the disease and certain misconceptions about the symptoms of stroke changes the entire course of treatment is observed
- Past experiences with health care provider and facility emerged as one of the key themes for healthcare seeking for stroke. Experiences of respondents were mainly negative when it came to the government facility-such as lack of attention by the health staff, delay in the admission process and asking more money for drugs and intravenous fluids and shifting the patient from one place to other
- These issues mainly originate because of the structural and managerial problems like, shortage of health staff, management of drug supply etc.

- Non availability of modern medicines in rural areas are more likely to rely on herbal medicine.
- There is no security in terms of availability of work and money which makes the situation far more difficult in an event like stroke, as people do not have enough savings to bear the catastrophic expenditure.
- Covid -19 lockdown has also impacted the treatment seeking behavior, fear of getting quarantine and isolation had made people to choose for private or alternative health systems provider for stroke. Roadblocks and travel restrictions have also impacted as it cause delay in seeking treatment. Availability of other facilities and admission of patient at the hospital was also seemed to have impacted the treatment seeking behavior.
- Hospitals involved in providing care to covid patients have somehow shown less concern for non covid patient those having other illness. Public health facility seems to be more engaged in covid 19 patient management, thus patients seems to rely more on private facility for emergency care , who also have set there protocol for hospitalizing patient , changes in the admission fees, availability of specialist doctors for specific illness.
- The awareness for stroke needs to be increased to increase the utilization of available qualified health care providers

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