

# Awareness of Various Forms of Treatment Approaches in Stroke amongst Rural Population

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## Abstract

**Background:** Stroke is one of the leading cause for mortality and disability. As a medical emergency, timely and appropriate treatment is necessary to save the life and disabilities in patients. Based on the impairments and clinical outcomes of the disease its awareness on knowledge about the condition and treatment approaches should be done especially in rural population.

**Objectives:** 1. To study awareness about stroke 2. To study awareness of various forms of treatment approaches in stroke amongst rural population

**Material and Method:** It is a questionnaire-based survey. 100 subjects participated in the survey. The questionnaire was based on the awareness of treatment approaches. subjects with age 20 and above were included in this study. After the reception of responses, data was analyzed with help of appropriate statistical methods.

**Results:** Out of all respondents, 53% was female population and 47% was male population. Out of which 48 % of female population was aware about stroke and 5% females was unaware. 43% of male populations was aware about stroke and 4%of male population was unaware. The treatment approaches preferred were Medicine and physiotherapy.

**Conclusion:** In rural population, people are well aware about stroke but are less aware about various treatment approaches used.

**Keywords:** stroke, awareness, treatment approaches.

## Introduction

Stroke is the sudden loss of neurological functions caused by an interruption of the blood flow to the brain.<sup>1</sup>Stroke is one of the leading causes of death and disability in India.<sup>3</sup> Globally; stroke is a devastating neurological disorder and a leading cause of death and acquired disability. Women have lower age-adjusted stroke incidences than men. Women with early menopause have twice the risk of ischemic stroke as

women with late menopause. Women over 85 years of age have an elevated risk compared to men.<sup>1</sup>

The majority of the stroke patients experience motor impairments, which affects movements of the face, leg and/or arm on one side of the body and sometimes both leg and arms of the body affects. Unfortunately, most stroke patients recover incompletely after stroke, despite intensive rehabilitation strategies. Although there is a diverse range of interventions aimed at improving motor outcomes after stroke, there is still a pressing need for novel treatment therapies and continued research to reduce disability and improve functional recovery after stroke.<sup>9</sup>

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The best form of treatment for stroke that emerged over last several decades is stroke unit.<sup>9</sup> Rehabilitation of a stroke patient begins as soon as any impairment is perceived and comprises traditional exercise programs and neuropsychological approaches with the primary aim of restoring mobility and function of patient.<sup>4</sup>

Different ways of handling stroke patients:

- Medicine
- Physiotherapy<sup>17,18</sup>
- Acupuncture
- Ayurveda (Panchakarma)
- Chiropractic
- Cupping
- Dry needling
- Brain stem stimulation
- Stem cell therapy
- Miscellaneous quack practice, 2,4-16 etc.

Awareness:

Lack of knowledge could be one of the reasons for variety of handling methods in both doctors and society. Ways of approaches are different for different places due to diversity in geographic distribution, traditional methods of practice, etc.

As stroke is one of the leading causes of mortality and disability its awareness in society needs to be analysed. Although, all such diverse range of treatment approaches are available for stroke, there is still a pressing need of awareness for such novel treatment therapies to reduce disability.<sup>13</sup> Hence, we conducting the study of awareness of various forms of treatment approaches in stroke amongst rural population.

## Material and Method

Type of Study: Observational study

Study Design: Survey study

Place of Study: Rural Population in and around Karad (Dist.: Satara, State: Maharashtra, India).

Sample Size: Supposed to be 100. 4

$n = 4pq$

L2

Where,  $p = 95.9$ ,  $q = 4$

Statistical analysis: A questionnaire-based Observational study was done. Data was anonymously coded and entered into a spreadsheet program before being analyzed using statistical method. Percentage, frequency was calculated to summarize the response.

Sampling Duration: Approximately 6 months

Inclusion Criteria:

- population of age 20 and above.
- Both sexes

Exclusion Criteria:

- Subjects having mental illness, speech abnormalities.

Equipment's and Materials required:

Assessment Charts

Writing Material

Computer for online access

Outcome Measures

- Stroke Questionnaire

## Findings

Out of all respondents, 53% was female population and 47% was male population. Out of which 48 % of female population is aware about stroke and 5% females is unaware. 43% of male population is aware about stroke and 4% of male population is unaware.

44% of female population have seen  $\leq 5$  stroke patients and 9% of population have seen  $> 5$  stroke patients. 27% of male population have seen  $\leq 5$  stroke patients and 20% of male population have seen  $> 5$  stroke patients. (Fig 1)

22% of female population is aware about the warning signs/ signs and symptoms about the stroke where 31 % of female population is unaware. 21% of male population is aware about the warning signs/ signs and symptoms about the stroke where 26 % of male population is unaware.

33% of females are aware about the treatment approaches and 20% were unaware.34% of males are aware about the treatment approaches and 13% were unaware. 21% of female population and 13% of male population is aware about the medicine approach.25% of female population and 29% of male population is aware about physiotherapy for stroke.17% of female population and 12% of male population is aware about Ayurveda.20% of female population and 19% of male population is aware about the other approach. (Table1)

Various forms of treatment approach available in stroke out of which 12% of female population seen medicine as an approach used the most. 8% of male population agreed with medicine.19% of female population seen physiotherapy as an approach used the most. 24% of male population agreed with physiotherapy approach.11% of female population seen Ayurveda as an approach used the most. 10% of male population agreed with Ayurveda.16% of female population seen other methods as an approach used the most. 13% of male population agreed with medicine approach.(Table 2)

42% female and 29% male out of population will prefer medicine as treatment approach. 23% female and 32% male out of population will prefer physiotherapy as treatment approach.20% female and 14% male out of population will prefer Ayurveda as treatment approach. 0% female and 1% males out of population will prefer Homeopathy as treatment approach.18% female and 12% male out of population will prefer other approaches as treatment approach. (Table 3)In this study, 32% females out of population have seen recovered patients.34% of male population have seen patients recovered from stroke. (Fig 3)

44% of female population knows about physiotherapy and will prefer physiotherapy for stroke and 9% of female population won't prefer.41% of male population knows about physiotherapy and will prefer physiotherapy for stroke and 6% of male population won't prefer. 42% of female population knows about medicine and will prefer medicine for stroke and 11% of female population won't prefer.41% of male population knows about medicine and will prefer medicine for stroke and 6% of male population won't prefer.2% of female population knows about homeopathy and will prefer homeopathy for stroke and 51% of female population won't prefer.2% of male population knows about homeopathy and will prefer homeopathy for stroke and 45% of male population won't prefer.0% of female population knows about Ayurveda and will prefer Ayurveda for stroke and 53% of female population won't prefer.18% of male population knows about Ayurveda and will prefer Ayurveda for stroke and 29% of male population won't prefer.36% of female population knows about massage and will prefer massage for stroke and 17% of female population won't prefer.35% of male population knows about massage and will prefer massage for stroke and 12% of male population won't prefer.

15% of female population knows about quack practice and will prefer quack practice for stroke and 41% of female population won't prefer.8% of male population knows about quack practice and will prefer quack practice for stroke and 39% of male population won't prefer. (Fig2)

As per their awareness, the treatment approaches more preferred are Physiotherapy and Medicine.

**Table 1: What form of treatment can be given in stroke?**

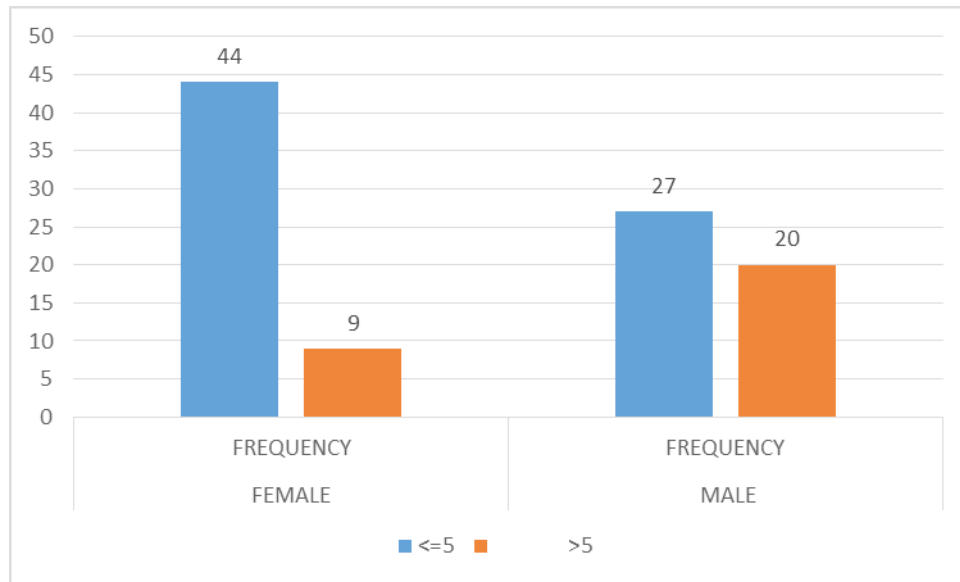
APPROACHES	GENDER			
	FEMALE		MALE (%)	
	YES	NO	YES	NO
MEDICINE	21	32	13	34
PHYSIOTHERAPY	25	28	29	18
AYURVEDA	17	36	12	35
OTHERS	20	33	19	28

**Table 2: Which treatment have you seen used most?**

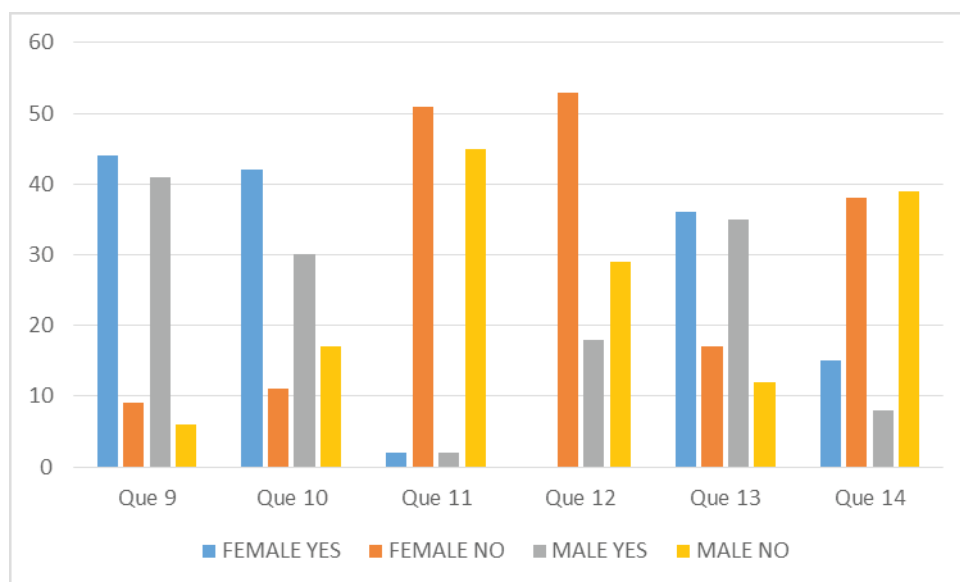
APPROACHES	GENDER			
	FEMALE		MALE (%)	
	YES	NO	YES	NO
MEDICINE	12	41	8	39
PHYSIOTHERAPY	19	34	24	23
AYURVEDA	11	42	10	37
OTHERS	16	37	13	34

**Table 3: Which treatment do you think prefer most?**

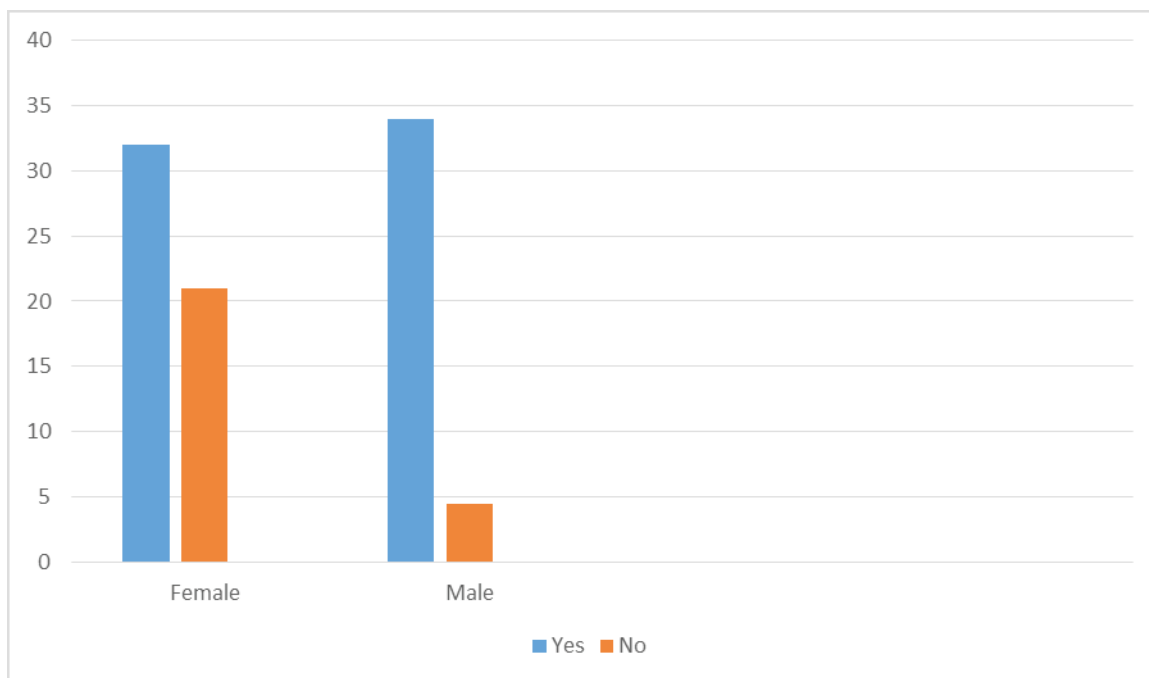
APPROACHES	GENDER			
	FEMALE		MALE (%)	
	YES	NO	YES	NO
MEDICINE	42	11	29	18
PHYSIOTHERAPY	23	30	32	15
AYURVEDA	20	33	14	33
HOMEOPATHY	0	53	1	46
OTHERS	18	35	12	35



**Fig 1: How many cases of stroke have you seen?**



**Fig 2: Do you think this is effective in stroke? Would you prefer this for stroke?**  
 Que9: Physiotherapy Que10: Medicine Que11: Homeopathy Que 12: Ayurveda  
 Que13: Massage Que14: Quack therapy



**Fig 3: Have you seen any one recovered from stroke and is able to do activities of daily living**

### Conclusion

On the basis of this study we conclude that there is awareness of stroke in rural population but there is less aware about various treatment approaches used for recovery.

### Discussion

Despite of advsances in the acute management of stroke, a large population of stroke patients are left with significant impairments. Over the coming decades the prevalence of stroke related disability is expected to increase worldwide and this will impact greatly on families, healthcare system and economics. Effective

treatment approaches is a key factor in reducing disability after stroke. In this study, 100 participants were taken in which 53% was female population and 47% was male population. According to our survey 48% of females and 43% of male population was aware.

Cardiovascular diseases affecting the brain and heart have common risk factors in developing atherosclerosis. Major risk factors for stroke are hypertension, Diabetes mellitus, disorders of heart and disorders of heart rhythm. There are some modifiable risk factors- Smoking, physical inactivity, obesity and diet. With some nonmodifiable risk factors- Family history, age, gender and race. 22% of female population is aware about the warning signs/ signs and symptoms about the stroke where 31 % of female population is unaware. 21% of male population is aware about the warning signs/ signs and symptoms about the stroke where 26 % of male population is unaware.

Rehabilitation of a stroke patient begins as soon as any impairment is perceived and comprises traditional exercise programs and neuropsychological approaches with the primary aim of restoring mobility and function of patient. According to this study, 33% of females are aware about the treatment approaches and 20% were unaware. 34% of males are aware about the treatment approaches and 13% were unaware. Medicine and physiotherapy are the two approaches preferred the most.

Literature and clinical experiences suggest that timely admission to hospital and proper care enhances neuronal plasticity, speeds the recovery and limits the impairments. In this study, 32% females out of population have seen recovered patients. 34% of male population have seen patients recovered from stroke. (Fig 3)

Though rehabilitation is proved to be the best treatment patients also prefer other mode of treatment approaches such as Medicine, Acupuncture, Ayurveda, Chiropractic, Cupping, Dry needling, Brain stem stimulation, Stem cell therapy and Miscellaneous quack practice. Most of the population involved in the study was aware about physiotherapy and medicine and would prefer more as a treatment approach.

Quack is one who practice a form of medical system without qualification, training and registration from the

appropriate council or authority. Still 15% of female population knows about quack practice and will prefer quack practice for stroke and 41% of female population won't prefer. 8% of male population knows about quack practice and will prefer quack practice for stroke and 39% of male population won't prefer. (Fig2)

**Conflict of Interest:** There were no conflicts of interest in my study.

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**Ethical Clearance:** The Institutional Ethics committee has hereby given permission to initiate the research project(Protocol number 0458/2018-2019) titled, " AWARENESS OF VARIOUS FORMS OF TREATMENT APPROACHES IN STROKE AMONGST RURAL POPULATION"

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