

Post Stroke Rehabilitation Awareness Among Stroke Patients - A Questionnaire Study

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Abstract

Background: The burden of stroke is increasing in India. Stroke is now the fourth leading cause of death and the fifth leading cause of disability. Following the acute phase of stroke management, rehabilitation becomes a cornerstone of recovery. However, despite the advancements in stroke rehabilitation, there exists a notable gap in patient awareness, with many individuals and their caregivers lacking sufficient knowledge about post-stroke rehabilitation options and the significance of their involvement in the recovery journey. Therefore, this survey was done to investigate the post stroke rehabilitation awareness among stroke patients and their family.

Aims: The objective of this survey is to assess stroke rehabilitation awareness among family members and individuals undergoing inpatient or outpatient post-stroke rehabilitation, focusing on knowledge of stroke risk factors, warning signs, prevention measures, and available rehabilitation services.

Method: From September'2023 to October'2023, 97 Participants were chosen, who underwent stroke rehabilitation either in-patient or out-patient rehabilitation for stroke recovery. Participants were made to fill out a structured questionnaire through an online link which consisted of 13 multiple-choice questions.

Results: Out of 97 respondent 40% of respondents were fully aware of the key symptoms of a stroke. 80% of respondents were aware of physical therapy importance post stroke; 58% awareness on speech therapy. Only 27% and 26% were aware about occupational therapy & robotic therapy as a post stroke rehabilitation option respectively. Around 73% of the respondents felt that post stroke rehabilitation at the Center is more effective than post stroke rehabilitation care at home.

Conclusion: These findings underscore the need for improved education and outreach efforts to enhance rehabilitation access for stroke survivors.

The data utilized in this research article are accessible upon reasonable request to the corresponding author, contingent upon adherence to applicable data protection regulations and ethical guidelines.

Introduction

The burden of stroke is increasing in India. Stroke is now the fourth leading cause of death and the fifth leading cause of disability. There has been more than 100 per cent increase in incidence of stroke in low- and middle-income countries including India from 1970-1979 to 2000-2008¹². One out of every four strokes are recurrent¹³. The risk of stroke recurrence varies from 7.4% at three

months,¹⁴ 5.1% at six months¹⁵ and 11.1% at 1 year¹⁶. Previous research suggests that the incidence of stroke in India ranges between 105 and 152/100,000 people per year. However, there is a paucity of available data and a lack of uniform methods across published studies. About one in four stroke survivors suffers a second stroke¹.

A stroke can cause lasting brain damage, long-term disability, or even death. Signs of a stroke can range from mild weakness to paralysis or numbness on one side of the face or body. Other signs may include a sudden and severe headache, sudden weakness, trouble seeing, and trouble speaking or understanding speech².

Following the acute phase of stroke management, rehabilitation becomes a cornerstone of recovery, focusing on restoring lost functions and promoting independence³. The disability that a person with stroke experiences and the rehabilitation that is needed depends on the size of the brain injury and the particular brain circuits that are damaged. The brain has an intrinsic ability to rewire its circuits after a stroke, which leads to some degree of improved function over months to years. Stroke rehabilitation substantially helps stroke survivor achieve the best long-term outcomes⁴.

Neuro - Rehabilitation following stroke helps relearn skills that are suddenly lost when part of the brain is damaged. Equally important in rehabilitation is to protect the individual from developing new medical problems, including pneumonia, urinary tract infections, injury due to fall, or clot formation in large veins⁵.

The neuro-rehabilitation program must be customized to practice those skills impaired due to the stroke, such as weakness, lack of coordination, problems walking, loss of sensation, problems with hand grasp, visual loss, or trouble speaking or understanding⁶. Therefore, the optimal approach to post-stroke rehabilitation is multifaceted, encompassing a diverse range of treatment modalities, interventions, and therapeutic strategies. A stroke rehabilitation team comprises diverse specialists including physiatrists, Physiotherapists, occupational therapist, speech-language therapist, respiratory therapist, nurses, psychologists, dietician and caregiver, working collaboratively to address the multifaceted needs of stroke survivors and optimize their recovery⁷.

However, despite the advancements in stroke rehabilitation, there exists a notable gap in patient awareness, with many individuals and their caregivers lacking sufficient knowledge about post-stroke rehabilitation options and the significance of their involvement in the recovery journey⁸. The importance of stroke awareness and effective rehabilitation becomes even more apparent when considering the staggering impact of stroke in India. According to Global Burden of Diseases.

GBD), India bears the majority of the burden of stroke, accounting for 68.6% of stroke incidence, 70.9% of stroke-related deaths, and 77.7% of Disability Adjusted Life Years (DALYs) lost⁹.

Therefore, the objective of this survey is to assess the level of stroke awareness among individuals undergoing inpatient or outpatient post-stroke rehabilitation, focusing on knowledge of stroke risk factors, warning signs, prevention measures, and available rehabilitation services. By gaining insights into the perspectives of those directly affected by stroke, this study seeks to identify areas for improvement in patient education and support, ultimately empowering individuals to take an active role in their rehabilitation and facilitating a smoother transition to life after stroke.

Methodology

97 Participants who have had a stroke in the past and have chosen either in-patient or out-patient rehabilitation for stroke recovery were included in the study from September 2023 to October 2023.

Inclusion criteria

All Participants and their family members who had the ability to fill the online survey form were included. Participants belong to different socio-economic groups. Stroke survivors who had a lower cognitive level, primary family members were included as participants for the survey. Number of strokes/ recurrent stroke survivors were considered for the survey.

Exclusion criteria

Those participants who did not have smart phone/ web access.

This study used a structured questionnaire which consisted of 13 closed ended (multiple-choice) questions aimed to assess participants knowledge of stroke risk factors, warning signs, preventive measures, rehabilitation options and their benefits (Annexure 1)^{10,11}. Participants were shared the survey through an online link to ensure confidentiality. Quantitative data from questions was analyzed by calculating the percentage of participants selecting that option.

Results

The Survey captured 13 multiple choice simple questionnaires available for the survivor/their family member to answer. The response of 97 respondents were captured and analyzed. Out of 97 patients, 37% were Female and rest Males. Age group of respondents were as follows >60 years (61); 40-60 (28); below 40years (8) Graph.1. Out of the 97 respondents 13% (13) patients had opted for IP Rehab; 79 (81%) went for Home-based

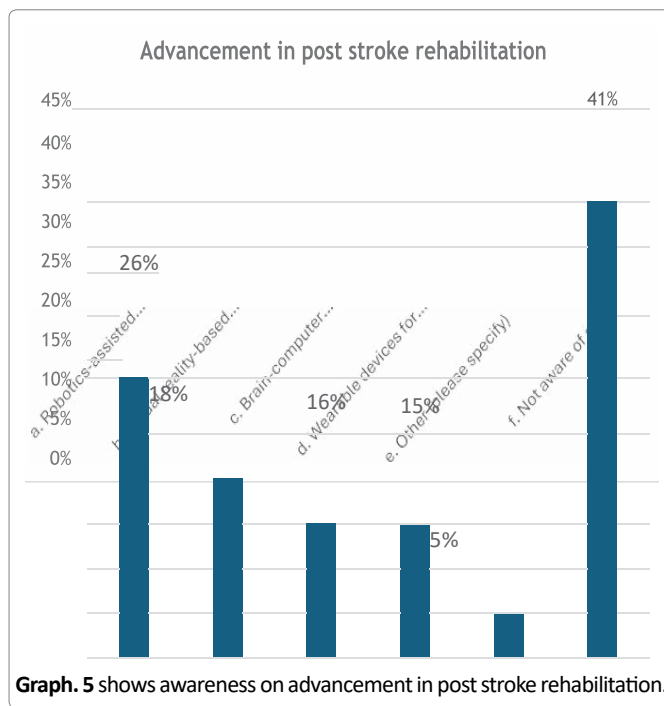
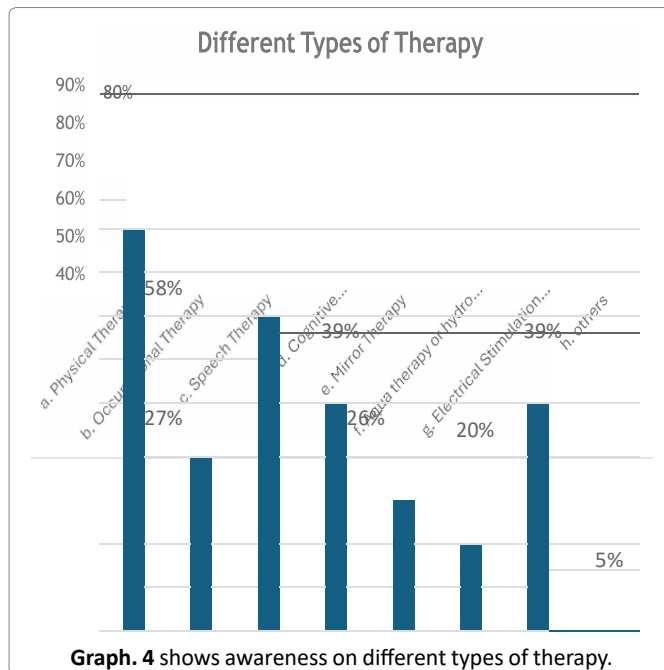
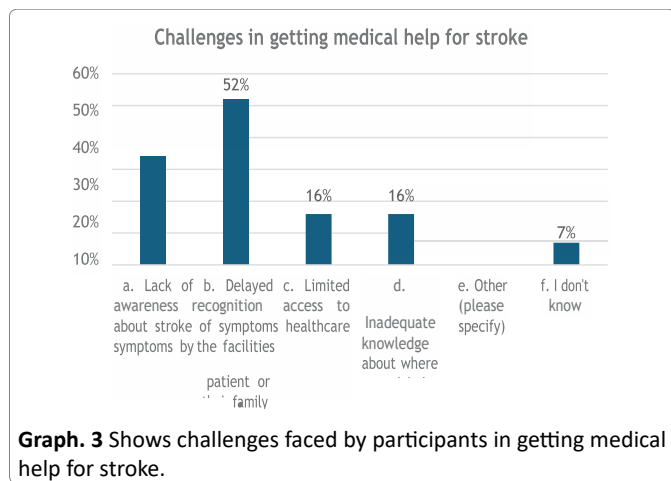
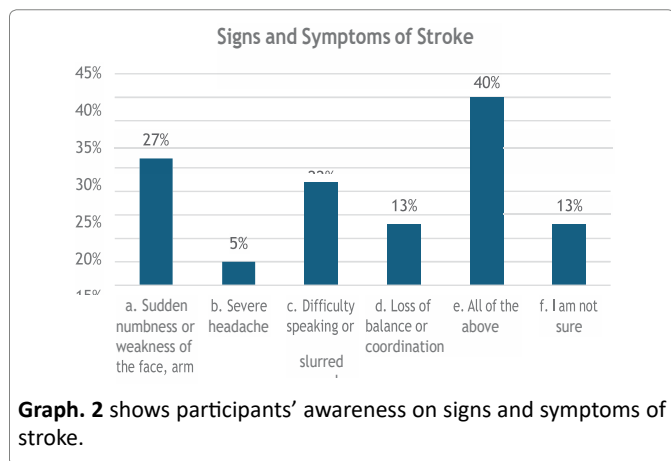
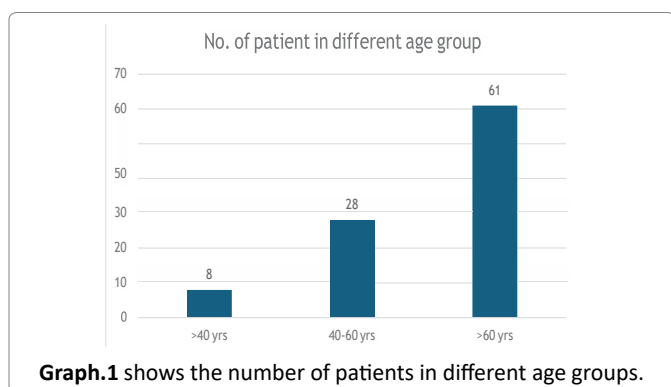
Rehab services. 78% of respondents were aware to call for emergency help whenever a stroke is suspected. Only 40% of respondents were fully aware of the key symptoms of a stroke Graph.2. Further, more than half of them (52%) believe that delayed recognition of stroke symptoms by the patient or their family is a significant obstacle to receiving timely medical assistance Graph.3. 80% of respondents were aware of physical therapy importance post stroke; 58% awareness on speech therapy Graph.4; 39% awareness regarding cognitive rehabilitation exercises and 27% awareness on occupational therapy was reported. 35% of respondents rated that holistic stroke rehabilitation care

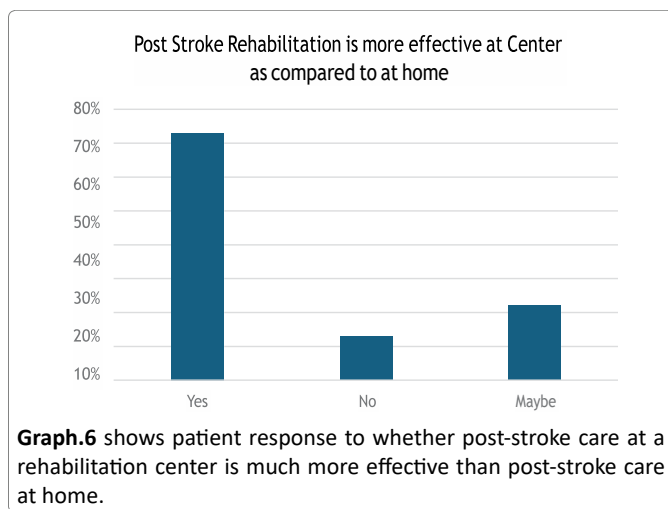
was moderately accessible and Only 26% of respondents were aware of robotic therapy in post stroke rehabilitation Graph.5. Around 73% of the respondents felt that post stroke rehabilitation at the Center is more effective than post stroke rehabilitation care at home Graph 6.

Survey questionnaire and data clearly projects the need for promoting awareness on inpatient, holistic stroke recovery program for survivors and their families.

Discussion

In a recent survey on stroke rehabilitation awareness,





participants were asked about their knowledge and perceptions regarding post-stroke recovery. The results shed light on crucial gaps that exist in public understanding, emphasizing the need for increased awareness and education on this critical aspect of healthcare.

Astonishingly an awareness gap exists regarding the primary symptoms of a stroke, even among those who have personally experienced a stroke or have a family member who did, with only 40% of respondents fully aware of the key symptoms of a stroke. Further, more than half of them (52%) believe that delayed recognition of stroke symptoms by the patient or their family is a significant obstacle to receiving timely medical assistance. This highlights a critical need for public education and awareness programs.

The survey revealed diverse levels of knowledge regarding the various rehabilitation options available. While most participants were well-informed about physical therapy (80%), speech therapy (39%) but were unaware of other crucial components of stroke recovery (occupational therapy 27%, robotic assisted therapy 26%). Around 73% of the respondents felt that post stroke rehabilitation at the Center is more effective than post stroke rehabilitation care at home. Post stroke rehabilitation at home takes a relatively longer time and has a residual recovery scope in most cases. Enhancing public knowledge about the range of rehabilitation services is vital for fostering informed decision-making.

The survey uncovered diverse perceptions of what constitutes successful rehabilitation. While some participants focused on regaining physical abilities, others emphasized cognitive and emotional well-being. Understanding these varied perspectives is crucial for tailoring rehabilitation plans to meet individual patient goals and expectations.

Further analysis on the Socio-economic parameters would help give better insights on the awareness need in post stroke patients and their family members. Ensuring multilingual questioner will help in reaching out bigger

sample size. Duration of the survey period was limited to 1 month, which has limited the sample size for the survey.

Participants who were well-informed about stroke rehabilitation recognized the significance of early intervention. However, a significant portion expressed uncertainty about the optimal timeframe to commence rehabilitation. This emphasizes the need for healthcare providers to emphasize the benefits of prompt initiation of rehabilitation for improved outcomes.

Conclusion

The stroke rehabilitation awareness survey underscores the critical need for comprehensive education campaigns to bridge the gaps in understanding different stages and options of stroke rehabilitation. By addressing knowledge gaps, promoting the benefits of early intervention, and fostering transparent communication between healthcare providers and patients, we can enhance the overall rehabilitation experience for individuals recovering from stroke. This survey serves as a valuable foundation for developing targeted strategies to empower patients and optimize their engagement in the rehabilitation process.

Annexure 1 Stroke Survey Questionnaire

Conflict of Interest

The authors declare that they have no financial or non-financial conflict of interest.

Source of Funding

No funding was provided to this research study.

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Ethical Clearance

Ethical clearance was not required in this study.

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