

Awareness and Knowledge About Role of Physiotherapy in Stroke Rehabilitation in Adults of Ahmedabad City

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DOI: <https://doi.org/10.52403/ijhsr.20250608>

ABSTRACT

Background: Stroke is a leading cause of disability, with physiotherapy playing a vital role in rehabilitation. However, there is limited public understanding of physiotherapy's role in stroke recovery, particularly in Ahmedabad. Public awareness is crucial to promote early intervention, improve recovery outcomes, and reduce long-term disability.

Aims and Objectives: To evaluate awareness and knowledge about the role of physiotherapy in stroke rehabilitation among adults in Ahmedabad City.

Methods: A random sampling method was used to distribute a self-administered, multiple-choice questionnaire via Google Forms to students and employed young adults, yielding 122 responses. The questionnaire was reviewed for validity by senior physiotherapists, included sections on demographics, knowledge about stroke and physiotherapy, awareness of physiotherapy in stroke rehabilitation, and perceptions of its effectiveness. Statistical analysis was performed using Microsoft Excel. Descriptive analysis was done.

Results: Among respondents, 47.5% were familiar with what stroke is, and 82.8% were aware of physiotherapy as a treatment option after stroke. While 75.4% recognized its benefits in recovery and 74.6% would recommend it to family members, only 35% believed physiotherapy should start immediately after stroke. Additionally, 38.5% felt there is insufficient information about physiotherapy for stroke rehabilitation in Ahmedabad.

Conclusion: The findings suggest that while awareness of physiotherapy's role in stroke recovery is high, understanding the importance of early intervention remains limited. Enhanced education and awareness initiatives are needed to ensure timely access to physiotherapy, improving recovery outcomes and quality of life for stroke survivors.

Keywords: Stroke Rehabilitation, Physiotherapy Awareness, Young Adults, Ahmedabad City

INTRODUCTION

Stroke is a medical emergency caused by decreased blood flow to the brain, resulting in cellular damage [1]. It is the second most common cause of death and the primary cause of disability globally [2]. In Gujarat, a clinical study found that 17.14% of ischemic

stroke cases occurred in individuals aged 45 or younger, highlighting the rising incidence of stroke among the younger population [3]. It can cause long-term emotional, mental, and physical problems that have a major impact on the survivor's quality of life. Physiotherapy is central to the recovery

process by improving motor function, restoring mobility, enhancing balance, and encouraging independence to the recovery process following a stroke [4].

Inadequate infrastructure and human resources are a major obstacle to post-stroke rehabilitation services [5]. Many stroke survivors also experience cognitive, behavioral, and sensorimotor impairments that restrict their daily living, societal, and family roles. Lack of proper rehabilitation services increases the severity of impairment and poststroke consequences for stroke survivors, increasing their rehabilitation requirements. A significant barrier to access is the lack of awareness among patients and families of stroke and related rehabilitation services, which often masks the actual need for care [6]. This information gap can be especially detrimental in metropolitan areas like Ahmedabad City, where rising rates of stroke necessitate increased public health awareness and education. In addition to being expensive and scarce, this results in many unmet rehabilitation demands and raises the need for easily accessible and reasonably priced services [6].

The cumulative incidence and crude prevalence of stroke are higher in India than in high-income countries, fueled by lifestyle-related risk factors such as obesity, diabetes, alcoholism, hypertension, and sedentary lifestyles. This implies that stroke is a significant health burden in India, which is a serious issue. Economic expansion exacerbates these factors, necessitating quick preventive measures and lifestyle changes. India reports a lower average age of stroke onset than Western nations, placing young adults, the key members of the workforce, at heightened risk, which causes issues in both the economy and culture. Addressing these risk factors and educating the next generation about them is essential [7]. In stroke patients, rehabilitation is thought to be crucial for avoiding issues associated with muscle weakening and immobility. It has also been noted that early rehabilitation can help lower medical costs, enhance physical function, lower mortality rate, improve

neurological functioning, everyday activities, and self-care skills of stroke patients [8,9,10].

Patient satisfaction can rise and functional recovery can be improved with active family involvement. Family members' participation in rehabilitation programs has been associated with a better quality of life for stroke survivors and their caregivers, creating a supportive and understanding environment within the family [11]. Patients can attain the results they are most comfortable with when they and their families are involved in the decisions regarding the therapies they receive following a major stroke [12]. More successful public health initiatives and education campaigns can be developed by taking into account the general public's awareness level, particularly that of young adults, who frequently assist in making healthcare decisions for their families.

This study aims to assess the awareness and knowledge of the role of physiotherapy in stroke rehabilitation among adults in Ahmedabad City, and to identify key gaps, misconceptions, and barriers that may hinder optimal recovery in stroke survivors

MATERIALS & METHODS

Permission to conduct this study was granted by the ethical committee of the institute. A descriptive, cross-sectional study was conducted among adults aged 18–30 years residing in Ahmedabad City to assess their awareness and knowledge about the role of physiotherapy in stroke rehabilitation.

Participants were selected using a simple random sampling method, and a total of 122 individuals who met the inclusion criteria completed the online questionnaire distributed via Google Forms. Adults within the specified age range living in Ahmedabad who provided informed consent were included in the study, while individuals outside the age range, those residing outside Ahmedabad, or lacking internet access were excluded.

The study tool consisted of a self-administered, structured questionnaire that

was reviewed and validated by eight senior physiotherapists for content and face validity. Changes suggested were made in the questionnaire. The questionnaire comprised sections on demographic information, general awareness of stroke, knowledge about physiotherapy and its role in stroke rehabilitation, and perceived barriers to accessing rehabilitation services. The data collection process was carried out digitally through Google Forms.

STATISTICAL ANALYSIS

The responses were compiled and analysed using Microsoft Excel. Descriptive analysis was done and the results are described in charts and graphs.

RESULT

The response rate of the study was 100%. Figure 1 illustrates the gender distribution among 122 participants, where 64 were female. The age of the subjects ranged between 18 and 30 years. The majority of the study population had an education level of Graduate or above (83.6%, n = 102) followed by Higher Secondary (13.9%, n = 17), Secondary education (1.6%, n = 2), and no formal education (0.8%, n = 1) (as shown in Figure 2). Most of the subjects were students (50.8%, n = 62), followed by employed individuals (47.5%, n = 58) and unemployed individuals (1.6%, n = 2) (as shown in Figure 3).

Figure 4 shows that 95.1% of subjects had never experienced a stroke. 42.6% of participants had a family member or friend who had suffered from stroke (as shown in Figure 5).

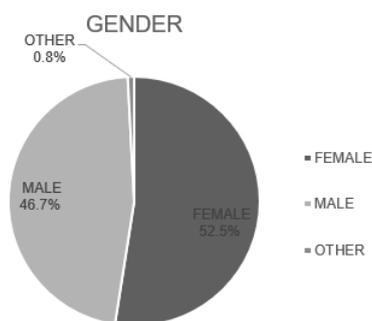


Figure 1: Gender distribution (n = 122).

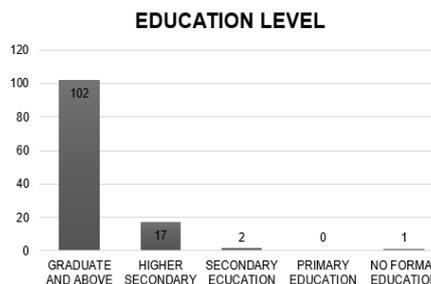


Figure 2: Education level (n = 122)

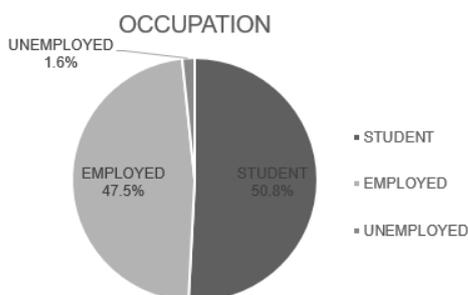


Figure 3: Occupational status (n = 122).

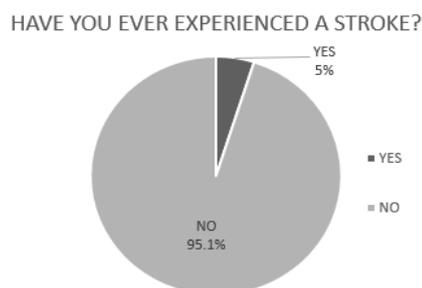


Figure 4: Participants who have experienced a stroke (n = 122).

HAS A FAMILY MEMBER OR FRIEND EVER EXPERIENCED A STROKE?

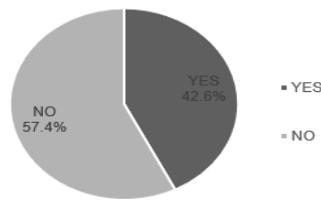


Figure 5: Participants who had a family member/friend who experienced stroke (n = 122).

HOW FAMILIAR ARE YOU WITH WHAT STROKE IS?

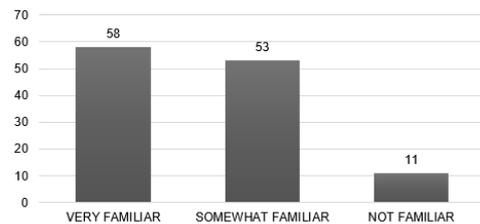


Figure 6: Participant knowledge about what is stroke (n = 122).

Of the 122 participants, only 47.5% (n = 58) were very familiar with what stroke is, 43.4% (n = 53) were somewhat familiar and 9% (n = 11) were not familiar at all (as shown in Figure 6). The most commonly identified cause of stroke was high blood pressure (79.5%, n = 97), followed by high cholesterol (67.2%, n = 82), smoking (61.5%, n = 75), and a family history of stroke (41%, n = 50), only a small proportion (3.3%, n = 4) reported being unsure about the causes of stroke (as shown in Figure 7) (Participants were allowed to select multiple options). A substantial majority (82.8%) indicated that they had

heard of physiotherapy as a treatment option following a stroke, whereas 17.2% reported no prior awareness of physiotherapy in stroke rehabilitation (as shown in Figure 8). When asked where they first learned about physiotherapy, 71.6% of participants cited medical professionals, 43.1% reported family or friends, 22.9% mentioned media sources such as television, radio, or social media, 13.8% attributed their knowledge to personal experience, and only 0.9% each reported learning through a medical camp or other sources (as shown in Figure 9) (Participants were allowed to select multiple sources).

IN YOUR OPINION, WHAT ARE COMMON CAUSES OF STROKE ?

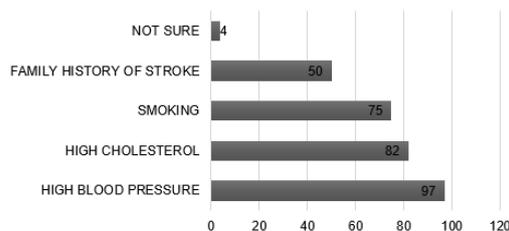


Figure 7: Participant knowledge about common causes of stroke (n = 122).

HAVE YOU EVER HEARD OF PHYSIOTHERAPY AS A TREATMENT OPTION AFTER STROKE ?

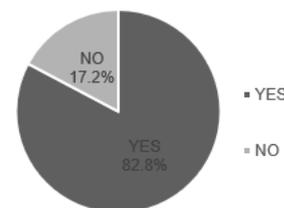


Figure 8: Participant knowledge about physiotherapy as a treatment option after stroke (n = 122).

IF YES, WHERE DID YOU FIRST LEARN ABOUT PHYSIOTHERAPY ?

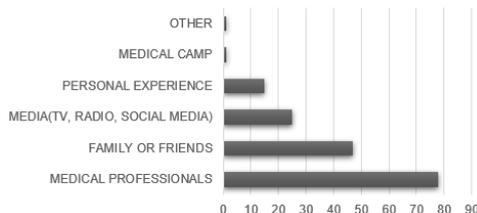


Figure 9: Sources from which participants first learned about physiotherapy (n = 109).

DO YOU BELIEVE PHYSIOTHERAPY IS HELPFUL FOR STROKE RECOVERY ?

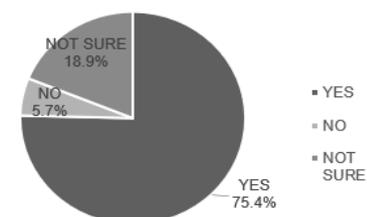


Figure 10: Participants' awareness regarding the helpfulness of physiotherapy in stroke recovery (n = 122).

Regarding awareness of physiotherapy in stroke recovery, 75.4% of participants (n = 92) believed that physiotherapy is beneficial, 5.7% (n = 7) did not believe it would aid in recovery, while 18.9% (n = 23) were unsure about its effectiveness (as shown in Figure 10). When asked about awareness of the role of physiotherapy in stroke rehabilitation, 68.9% (n = 84) of participants identified improving mobility and strength, 62.3% (n = 76) identified enhancing balance and coordination, 58.2% (n = 71) believed it helps in reducing disability, and 44.3% (n =

54) associated it with pain management, a small proportion, 5.7% (n = 7), reported being unsure of physiotherapy's role (as shown in Figure 11) (participants were allowed to select multiple options). A total of 62.3% of participants (n = 76) considered physiotherapy to be very important for stroke recovery, while 36.9% (n = 45) regarded it as somewhat important, and only 0.8% (n = 1) did not perceive it as important for stroke rehabilitation (as shown in Figure 12).

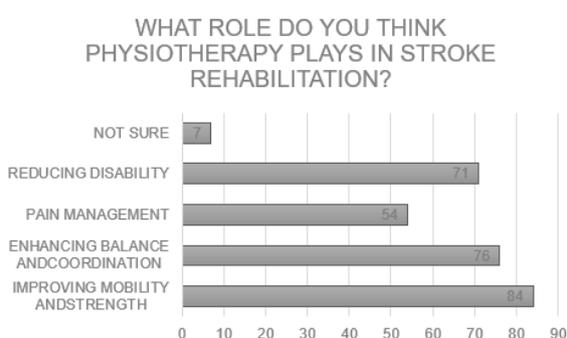


Figure 11: Awareness of the role of physiotherapy in stroke rehabilitation (n = 122).

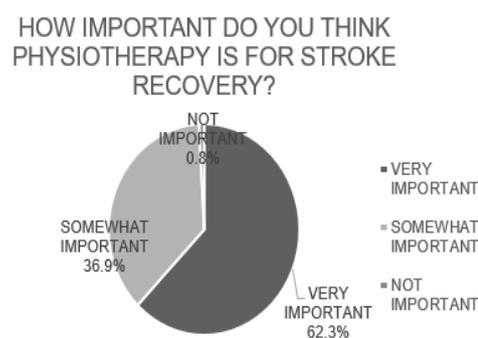


Figure 12: Awareness of the importance of physiotherapy in stroke recovery (n = 122).

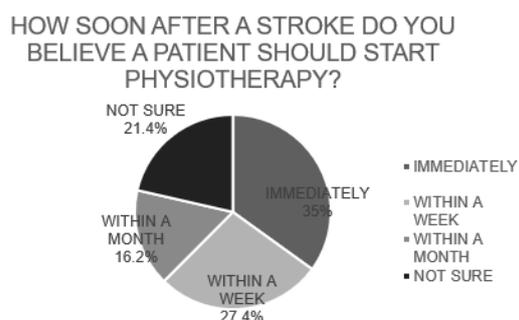


Figure 13: Beliefs on the optimal timing for initiating physiotherapy after a stroke (n = 122).

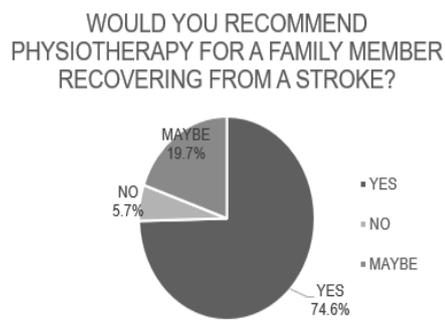


Figure 14: Participants' willingness to recommend physiotherapy for stroke (n = 122).

When asked about participants' opinion on the optimal timing for initiating physiotherapy after a stroke, 35% of participants (n = 41) believed it should start immediately, 27.4% (n = 32) recommended within a week, 16.2% (n = 19) suggested within a month, and 21.4% (n = 25) were uncertain (as shown in Figure 13). When asked about participants' opinions on whether they would recommend physiotherapy for a family member

recovering from a stroke, 74.6% of participants (n = 91) responded affirmatively, 19.7% (n = 24) were uncertain, and 5.7% (n = 7) would not recommend it (as shown in Figure 14). Regarding barriers to accessing physiotherapy for stroke rehabilitation, 79.3% of participants (n = 96) identified a lack of knowledge about physiotherapy, 50.4% (n = 61) cited the cost of treatment, 40.5% (n = 49) mentioned disbelief in its

effectiveness, 30.6% (n = 37) reported distance to physiotherapy centers as a barrier, and 0.8% (n = 1) indicated improper disease management as a challenge (as shown in Figure 15).

When asked about the availability of information regarding physiotherapy for stroke rehabilitation in Ahmedabad, 38.5% of participants (n = 47) felt that there was insufficient information, 32.8% (n = 40) believed adequate information was available, while 28.7% (n = 35) were unsure (as shown

in Figure 16). When asked about trusted sources for information on physiotherapy in stroke rehabilitation, 76.7% of participants (n = 92) identified healthcare professionals, 61.7% (n = 74) trusted hospitals or clinics, 40% (n = 48) relied on government health departments, 30% (n = 36) considered friends or family, and 19.2% (n = 23) trusted media sources such as newspapers, television, or social media (as shown in Figure 17).



Figure 15: Participants' perceived barriers to accessing physiotherapy for stroke rehabilitation. (n = 121).

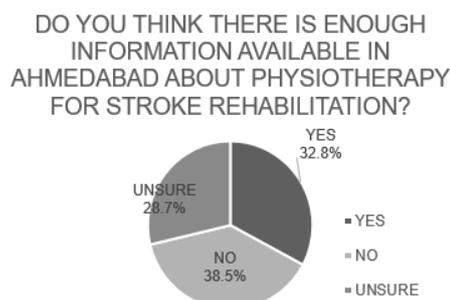


Figure 16: Perceived availability of physiotherapy information in Ahmedabad (n = 122).

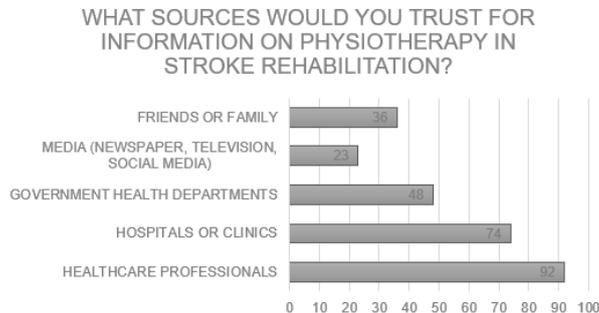


Figure 17: Participants' trusted information sources on stroke rehabilitation (n = 120).

DISCUSSION

The present study aimed to assess the awareness and knowledge about the role of physiotherapy in stroke rehabilitation among adults in Ahmedabad City. The findings provide valuable insights into the current level of public understanding and perceptions regarding physiotherapy interventions following a stroke. The response rate of the study was 100%, indicating strong participant engagement and interest in the topic. The demographic characteristics showed a higher representation of females and a

predominantly young adult population (aged 18–30 years), with most participants being either students or employed individuals. A significant majority of the study population had attained graduate-level education or higher, which may have positively influenced their baseline knowledge about health-related topics. Despite a general understanding of stroke among participants, a notable proportion (9%) reported being unfamiliar with what a stroke is, highlighting a persistent gap in basic neurological health literacy even among educated individuals. Similar findings were

reported by Yoon et al. (2001), who demonstrated low awareness of stroke risk factors and warning signs among urban populations [13].

Regarding stroke risk factors, high blood pressure, high cholesterol, and smoking were most commonly identified by participants, aligning with well-established clinical evidence. However, a small proportion of respondents (3.3%) were unsure about the causes of stroke, suggesting that further community education initiatives remain necessary. Encouragingly, a majority (82.8%) of participants were aware that physiotherapy could be beneficial in stroke rehabilitation. This finding is supported by similar studies, such as Hafsteinsdóttir et al. (2011), who emphasized the critical role of physiotherapy in improving mobility, functional independence, and quality of life after stroke [14]. Furthermore, most participants associated physiotherapy with improvements in mobility, strength, balance, coordination, and disability reduction, indicating a reasonably good understanding of its multifaceted benefits. However, despite this overall positive awareness, a substantial proportion (18.9%) of respondents expressed uncertainty regarding the effectiveness of physiotherapy, and a small fraction (5.7%) did not believe in its benefits.

These findings indicate that although the majority recognize the importance of physiotherapy post-stroke, a notable proportion of respondents still lack full confidence or understanding of its role in rehabilitation. This highlights the need for better dissemination of evidence-based information to bridge knowledge gaps and address misconceptions about physiotherapy outcomes. Participants' opinions on the timing of physiotherapy initiation revealed that only 35% recommended starting immediately after a stroke. Early rehabilitation is critical, as emphasized by Langhorne et al. (2017), who demonstrated that early physiotherapy interventions significantly improve long-term functional

outcomes in stroke survivors [15]. The hesitation or uncertainty among participants regarding the urgency of physiotherapy suggests a need for public education on stroke recovery protocols. When evaluating participants' willingness to recommend physiotherapy to a family member post-stroke, 74.6% responded affirmatively, reflecting a positive perception of its value. However, a notable 19.7% were uncertain, which may again point toward gaps in complete understanding or trust in physiotherapy services.

Barriers to accessing physiotherapy were identified, with lack of knowledge being the most cited barrier, followed by concerns about cost and distance from physiotherapy centers. Similar barriers have been reported by Shaughnessy et al. (2006), who found that lack of knowledge, transportation difficulties, and financial concerns were significant factors limiting stroke survivors' access to rehabilitation services [16]. Finally, when asked about trusted sources for information regarding stroke rehabilitation, healthcare professionals and hospitals were the most trusted, while media and non-medical sources were less relied upon. This underscores the critical role that healthcare providers must play in not only delivering care but also educating the community about stroke management strategies.

Overall, the results highlight a generally positive but incomplete level of public awareness regarding the role of physiotherapy in stroke rehabilitation among the adults surveyed. Targeted awareness programs, early rehabilitation promotion, and improved community education efforts are necessary to ensure that patients and their families are empowered with accurate knowledge to make timely and informed decisions in stroke recovery.

CONCLUSION

The present study assessed the awareness and knowledge about the role of physiotherapy in stroke rehabilitation among adults in Ahmedabad City. While the

majority of participants recognized the importance of physiotherapy in stroke recovery and were aware of major risk factors, notable gaps in detailed knowledge and confidence regarding its role still persist. Awareness levels were found to be moderate overall, with a significant portion of the population demonstrating only a basic understanding. These findings highlight the urgent need for improved community education, increased public health initiatives, awareness campaigns, and stronger collaboration with healthcare providers to bridge existing knowledge gaps and promote early rehabilitation for stroke survivors.

The study's strengths include its focus on an important and under-researched area, being the first of its kind in Ahmedabad, and the use of random sampling to minimize selection bias within the targeted young adult population. However, certain limitations should be acknowledged. The study sample was restricted to adults aged 18–30 years, predominantly those with higher education, potentially limiting generalizability to the broader community, especially older populations at higher stroke risk. The use of an online survey method may have introduced selection bias, favoring technologically adept individuals, and the cross-sectional design restricted assessment of awareness changes over time. Despite these limitations, the study provides valuable insights into current public perceptions and emphasizes the need for targeted educational strategies to strengthen stroke rehabilitation outcomes and improve neurological health literacy. Future research should aim to include a wider demographic range and adopt longitudinal approaches to better capture evolving trends in awareness and knowledge over time.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

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How to cite this article: Anjali Chawla, Mihirdev Jhala. Awareness and knowledge about role of physiotherapy in stroke rehabilitation in adults of Ahmedabad City. *Int J Health Sci Res*. 2025; 15(6):52-60. DOI: <https://doi.org/10.52403/ijhsr.20250608>
