

Original Research Article

Outlook of Stroke Patients towards Physical Therapy

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ABSTRACT

Introduction: Physical therapy is an integral part of the stroke rehabilitation in the cities like Mumbai and Navi Mumbai. The present study attempted to find the perspective of the patients undergoing physical therapy after discharge from the hospital. The survey focused on understanding the patients' needs and wants as well as their outlook towards physical therapy.

Methodology: 31 stroke patients with hemiparesis participated in the study with the informed consent. It consisted of a questionnaire based survey that explored the patient's perspective on physical therapy regime received by them and therapist-patient relation/rapport.

Results: 97% of the patients stated that the functional/task related training has helped them achieve a good level of functional independence. 84% of the patients said that their treatment was regularly reviewed and 77% of the patients had a good variation in the therapy regime. Only 58% were able to perform the exercises comfortably after the instructions and 67.74% felt comfortable in communicating their thoughts and doubts. 90% of the patients concluded that the therapy is very good.

Conclusion: The patients appreciated participation in goal setting, variation of exercise, use of different equipments, regular review of therapy and inclusion of functional training in physical therapy regime. They suggested changes in terms of more interesting exercise sessions, inclusion of functional training in personal care, better way of explanation of exercises and more comfort level between the therapist and patients. They believed that physiotherapy has benefitted them in terms of improvement in movements and functional independence.

Key words: Stroke, Physical Therapy, patients' outlook.

INTRODUCTION

Developing country like India is facing the risk of Stroke endemic with increase in life expectancy and lifestyle diseases. A recent review estimated adjusted prevalence rate of stroke, 84-262/100,000 in rural, 334-424/100,000 in urban areas and the incidence rate 119-145/100,000. [1] There is also an alarming trend of young stroke. Stroke is regarded as the major contributor of causing death and disability in adults. Majority of stroke

survivors suffer from sensory, motor, cognitive, speech disability depending on the location of lesion. This puts a huge socioeconomic burden on the family as well as society as a whole. Since stroke causes disability in a multi faceted fashion, the approach to combat the issues related to the same have a multi disciplinary approach.

It has been proved that rehabilitation is very crucial to improve functional independence in stroke patients.

The role of a physical therapist is extremely essential in rehabilitation of stroke patients. The neuro-rehabilitation within the scope of physical therapy primarily deals with impairments of the sensory-motor system to maintain the joint function and flexibility, normalize tone and movement control and strength of the muscle, provide sensory re-education, reduce pain, improve Postural control and gait. Ultimately physical therapist provides functional training to help the patient back to his activities of daily living or cope physically with the work/social demand. Physical therapist also works to improve the cardiorespiratory /aerobic capacity of the patient, teaches to deal with impact of chronic disability and psychological aspect and improve the quality of life of the patient. The unequivocal, certain, positive impact of physical therapy on quality of life of stroke patients can be proved by evidence. ^[2] A review found that functional strength training and higher-intensity physiotherapy resulted in lower costs and improved outcomes over a lifetime. ^[3] A Cochrane review suggested Physical rehabilitation, comprising a selection of components from different approaches, is effective for recovery of function and mobility after stroke. Physiotherapist should give more importance to evidence based practice. ^[4]

Physical therapy propagates the model of holistic approach wherein the patient's expectation and functional requirements are the ultimate goal during the course of therapy. Awareness of physical therapy post stroke is increasing, however it's benefits, though proved positive by various studies, is significantly directed by what the patient feels towards the therapy given to him/her. Recuperation takes its own course when it comes to stroke rehabilitation. Patients may feel that rehabilitation is hard work. They may feel tired and discouraged at times because things that used to be easy before the stroke are now difficult. Motivated

patients are believed to perform better in rehabilitation activities and to make more gains than those patients described as being less enthusiastic for the treatment. Thus a motivated, positive and satisfied patient serves as a positive signal for physical therapy rehabilitation post stroke leading to optimum recovery.

The goals of rehabilitation are to prevent complications, minimize impairments, and maximize function as per the patient's work/role in the society. Physical therapist uses neurotherapeutic approaches where patient's participation is utmost important. The attitude and opinion of a patient taking therapy influences the quality of the therapy. A recent systematic review of qualitative studies reported the perspectives, experiences and preferences of stroke survivors undertaking inpatient physical rehabilitation. ^[5] The study documented positive as well as negative experiences of inpatient rehabilitation. Another narrative synthesis of qualitative studies explored perspective of patient and physiotherapist on patients' participation in the rehabilitation process. ^[6]

As we follow the common language of ICF (The International Classification of Functioning, Disability and Health of the World Health Organization), importance is given to the functional goal as per the patients' requirement considering his environment. Thus their outlook towards the physical therapy delivered to them as a whole is crucial and essential for the better outcome. The present study tried to explore the perspective of the patient towards the physical therapy received after the discharge from the hospital in a metropolitan city like Mumbai or Navi Mumbai. Physiotherapy services are available in both Government and private sector hospitals in outpatient departments in Mumbai. Physiotherapists also offer home visits. The questionnaire prepared for the survey focused on understanding the patients' needs and wants as well as

their attitude towards physical therapy .The study tried to explore the physical therapy received, the comfort level of the patient, the rapport built between the patient and the therapist, patient's attributes and expectations from it and most importantly the outcome of the therapy as per the patient.

MATERIALS AND METHODS

31 stroke patients (mean age 63 years) with the informed consent participated in the survey from hospital set ups in Mumbai and Navi Mumbai. The patients diagnosed with cerebrovascular accident for the first time having single, unilateral lesion and received at least 2 months of regular physical therapy and no other type of alternate therapies were included in the study. Patients with aphasia and Mini mental score below 24 were excluded from the study.

The questionnaire was validated by two senior neurophysiotherapist working in the adult stroke unit. The participants were questioned in the absence of their therapist so that they could answer comfortably. The questionnaire focused on the patient's perspective on two major aspects i.e. physical therapy regime received by the patients and therapist-patient relation/rapport. The first part of questionnaire included information on physical therapy regime viz. frequency of exercise, various exercise positions used, Inclusion of functional training and home program, use of equipments etc. The second part included therapist's communication skills, patient - relative education, comfort level of the patient etc. At the end, overall feedback on physical therapy was obtained.

STATISTICAL ANALYSIS AND RESULTS

- Following are the demographic characteristics of the sample.

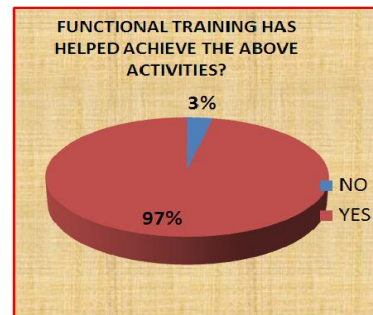
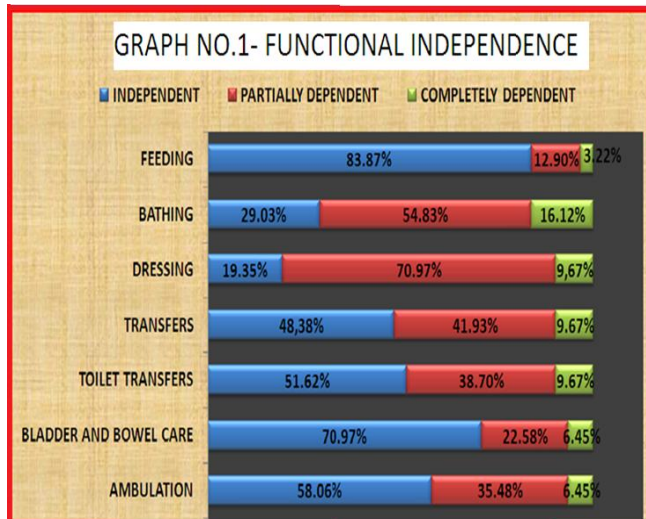
No of patients	31		
Sex (male/female)	22/9		
Age (years±mean)	63±14.38		
Length from onset of stroke	>12 months-22	6-12 months 6	2-5 months 3
Side affected (dominant/non dominant)	17/14		

- Following are the tables with the exercise positions given and transfers taught to the patients during therapy sessions.

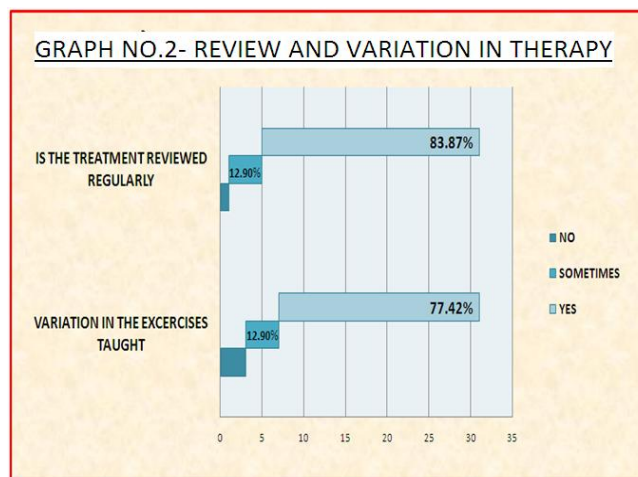
Positions	Yes (Unassisted) No. Of Patients	Yes (Assisted By Therapist) No. Of Patients	No No. Of Patients
Rolling	15	8	8
Quadruped	12	7	12
Kneeling	14	5	12
Sitting	28	3	0
Bridging	26	2	3
Standing	22	9	0

Transfer	Yes (Unassisted)	Yes (Assisted By Therapist)	Not Given
Supine to sit	12	11	1
Sit to stand	12	11	1
Walking	16	14	1

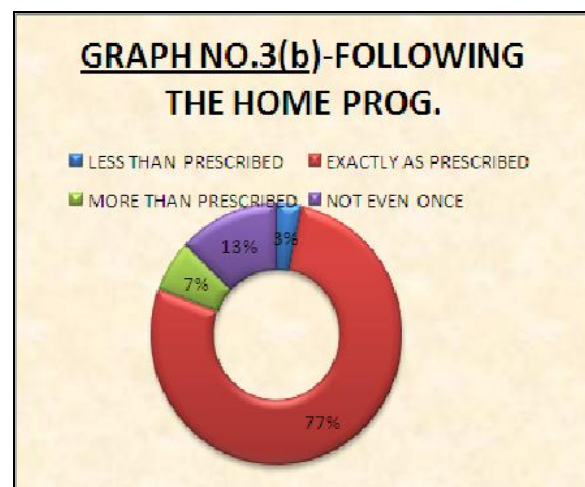
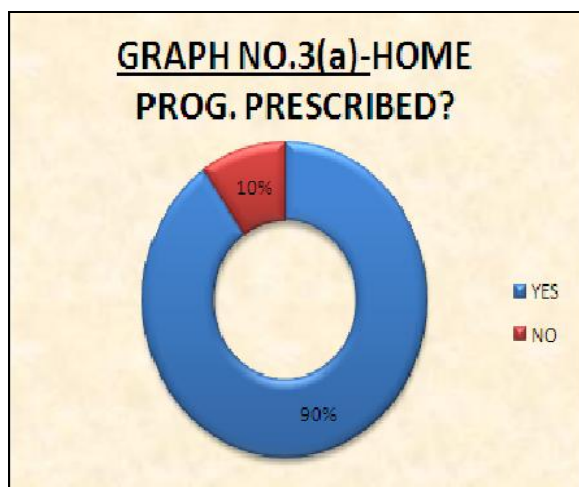
Graphs



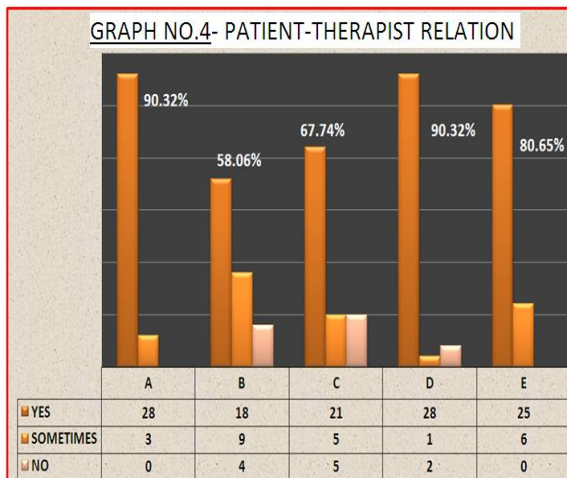
- Functional independence achieved in the stroke patients receiving physical therapy is shown in the above graph in percentage. 97% of patients attributed it to the functional training in the therapy sessions.



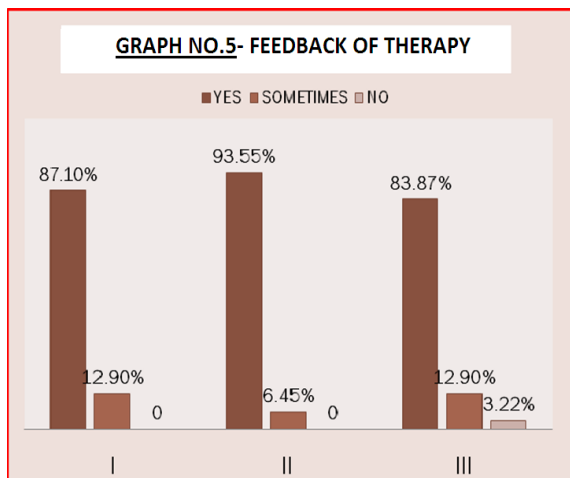
- 84.87% of the patients said that their treatment was regularly reviewed. 77.42% of the patients had a good variation in the therapy.



- 90% of patients were prescribed home program But 77% of them followed it as prescribed.



- A) Do You Find It Easy To Follow Instructions Given By Therapist?
 B) Do You Easily Perform Exercises After Understanding Them?
 C) Is It Comfortable For You To Communicate With Your Therapist?
 D) Does Your Therapist Use Motivational Words?
 E) Does Communicating With Your Therapist Make You Feel Motivated And Confident?



- I – Do You Believe That Regular Physiotherapy Will help you to recover?
 II – Do You Find It Beneficial For You?
 III – Do You See Improvement In Your Movements?

DISCUSSION

Physiotherapists provide the major part of stroke rehabilitation in cities like Mumbai. The role of physiotherapist starts right from the acute stage. Majority of the patients diagnosed with stroke get discharged from the hospital as soon as they are medically stable. Later they opt for physiotherapy either from the

outpatient department of hospitals or private clinics or home visits as there is residual disability hampering functional independence. In our sample 71% participants opted for physiotherapy as per the advice of the physician while in 29% therapy was suggested by relatives or friends. 22 were taking physical therapy for more than a year, 6 for six months -1 year while the 3 were taking for more than 2 months at least. The frequency of treatment sessions was thrice a week in majority of them. Mean age of sample was 63±14.38 years. There were 22 males, 9 females; 17 were dominant side and 14 were non dominant side affected hemiparesis patients. In terms of risk factors 81% of the patients had hypertension, 32% had diabetes and 7% were obese.13% of them had a sedentary lifestyle.

Since physiotherapy involves systematic evaluation of the impairments, goal setting, measures to improve motor control and finally translating into functional recovery. Our first objective was to study the patient's perspective of the physical therapy regime followed and functional independence achieved. Physiotherapist gives different types of exercises.

90% of the participants admitted that exercises were mainly given in supine, sitting and standing positions. Nearly 50% informed that exercises were not given in prone, kneeling and quadruped positions.

The probable reason for avoiding the certain positions like prone could be because of intolerance due to old age. Kneeling and quadruped positions are very important positions for treatment as they provide many benefits in terms of proprioceptive loading due to joint compression, variations in training of pelvic, trunk and limb control. Hence they need to be incorporated in the therapy.

97% of the patients stated that the functional/task related training provided to them has helped them achieve a good level of independence in the activities of daily living such as feeding, bathing, transfers etc with a marginal percentage of patients having a complete dependency in very few activities such as bathing, dressing, transfers etc. A systematic review and meta analysis has provided strong evidence for the task oriented training. [7,8] As per few patients, they were given functional training only on the lines of transfers and mobility. However functional training in terms of personal care, grooming was not given to them.

All the patients used various equipments during the therapy. Electrotherapy modalities are used for pain relief and functional neuromuscular stimulation while exercise therapy aids such as the therabands, theratubes, vestibular ball, medicine ball, hand function exerciser, tilt board etc. are used. Parallel bars and staircase help in gait training etc. Other equipments like treadmill and static bicycle are used to improve aerobic capacity. [7,8] Now days there are hi tech equipments using sophisticated technology like force platforms, robotic training, virtual reality, gait laboratory are available. However its use is limited to only few bigger hospitals.

77% of the patients had a good variation in the therapy regime. 39% of the patients would like the therapy to be varied often. They would prefer a different regime of exercises with a good variety taught to them. It is said that the movement must be performed in repetition but not repeated. They agreed that they participate in goal setting. However 58% of the patients liked their treatment to be as per the therapist. Reviewing of the therapy and changing the regime as per the patient's needs and progress is something that needs to be addressed as well. This helps mark the efficacy of the therapist. 84% of the patients said that their

treatment was regularly reviewed and changes as per their requirements were made. A single protocol cannot be followed for stroke rehabilitation. Every patient is different and so his needs, and goals. Thus the therapy must be tailor made for each patient and must be reviewed regularly as well to ensure that the journey of therapy is on the right path.

91% of the patients have home program prescribed for them. This is basically done in order to maintain the achieved tasks and to make the recovery stronger and better. This also provides purposeful activities in the whole day and the patient must be motivated and active throughout the week irrespective of the treatment being given by the therapist or not. However among the people who have been prescribed home program 77% would do the exercises exactly as prescribed 1% would do less than prescribed and 3% would do more than prescribed. 13% of the patients would not even do it once. Thus education about the importance of following a precise home program must be explained to the patient as well as the spouse /relative / caregiver for the same.

A well motivated, encouraged and comfortable patient will always perform better and will remain regular with his regime. Hence questions pertaining to the therapists' behavior and rapport with the patient were asked to the patient. This implies that majority of the patients follow the instructions given by the therapist easily, but only 58% were able to perform the exercises comfortably after the instructions. So other methods like demonstration or video display of the exercises can be adopted. Patients felt very well motivated and confident in presence of their therapist.

The therapist had educated them as well as family regarding the condition and rehabilitation. But only 67.74% felt comfortable in communicating their thoughts and doubts. Earlier studies had

explored communication between and therapist and stroke patients. [9,10]

In a country like ours', monetary factor and convenience also plays an essential role in determining the continuation of the treatment especially in stroke population. The patients ended up choosing the one that is the most convenient and affordable. 93.55% of patients felt that they were getting therapy at a convenient time. As far as the monetary factor is concerned almost 71% of the patients find the fees of the therapist affordable.

The patients were asked to give feedback regarding physiotherapy. 87% of the patients believed that physiotherapy will help them to recover and 93% of the patients found it beneficial for them. 83% of patients claimed that they saw improvement in their movements after taking physical therapy. They also believe that taking physical therapy patiently and regularly will improve their movements and thus fulfill their functional goals/demands.

To further the positive impact of physical therapy we asked the patient the possible reason why they would stop physical therapy in the future. 81% of the patients were strongly willing to continue the therapy regardless of any disturbances or unfavorable circumstances. Almost 10% of the patients will leave it if the therapy would not give results in future and 7% due to monetary issues. 3% of the patients will discontinue the therapy if they are unable to co-ordinate with the therapist. 90% of the patients concluded that the therapy is very good overall. 100% i.e. every patient said that they would recommend physical therapy treatment to their relatives/friends or acquaintances if they go through the same.

CONCLUSION

Most of the patients were following physical therapy regime thrice a week. They appreciated participation in goal

setting, variation of exercise, use of different equipments, regular review of therapy and inclusion of functional training. However they mentioned that they would like to have training more in terms of personal care and job related simulation. Some would like a more interesting, not monotonous exercise sessions.

Encouragement, concern and advice of the therapist had a positive effect on the patient's outlook. But communication skills in terms of explanation of exercise and comfort level between the therapist and patients need to be improved. Even if the patients claimed that the therapist encourages them to exercise, home program was not followed as per the advice.

To summarize, patients gave positive feedback of physical therapy. They admitted that physiotherapy has benefitted them and improved the movement control. They also believed that following regular physical therapy will help them to recover.

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