



Original Article

Role of Physical Therapy on Quality of Life and Level of Satisfaction among Patients with Stroke

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Abstract

Background: Stroke can cause disability in people that leads to increase in mortality rate and also affects the general adult population of the society. After having stroke, 80% of the patients become dependent on others for their daily living activities and need physical therapy to minimize their disability. **Objective:** To evaluate the role of physical therapy on quality of life and satisfaction level among patients with stroke. **Methods:** A cross-sectional study was conducted on 126 patients with stroke after receiving physical therapy treatment. Stroke patients with chronic condition (more than 3 months), both gender, aged between 40-60 years were included. Data was collected through modified questionnaire after taking consent from participants in six months. The SF-36 was used to measure quality of life of stroke patients after six weeks. Using SPSS version 25, frequency and percentages were calculated. **Results:** Patients receiving physical therapy got recovered from stroke, most of their physical and social needs were fulfilled and they were completely satisfied with their treatment. Their cognitive and intellectual skills were also improved and they were able to fulfil their daily life activities with little dependency. Out of 126 participants, 6(4.8%) strongly agreed that they were too tired to perform activities, 21 (16.7%) moderately agreed, 38(30.2%) neither agree nor disagree, 34(27.0%) moderately disagreed while 27(21.4%) strongly disagreed with it. Most of the patients (69.1%) reported that they were very much satisfied and their quality of life got improved with the physical therapy treatment. **Conclusion:** Rehabilitation through physical therapy treatment has profound effects on patients having stroke, it helps in reducing disability and improving functional activities. Stroke patients reported improved condition, satisfaction level and quality of life after physical therapy treatment. The quality of life of patients gets improved as 56.3% showed mild disability after treatment.

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Introduction

Stroke can occur when blood supply to the brain gets disturbed or interrupted. It may happen due to any clot formation or rupture of the blood vessel. Physicians and doctors can only minimize the effects of stroke but cannot completely recover or prevent it. Only a healthy lifestyle or complete prevention of the activities can minimize its effects, that got worsen with the passage of time if not treated properly or if ignored.¹ Stroke is a neurologic disease that remarkably changes the life of its victim.² In spite of the way in which that various assessments have exhibited that recovery from stroke can help a patient with regaining functional activities, the sufficiency of effective interventions has been tended to.³ There are many problems in the recovery of the stroke patient.

Rehabilitation is the basic requirement for the patients of stroke especially the older patients not only in the physical condition but also required a focused recovery in the social dimensions. It is also linked with the physical, social and psychological consequences of the patients.⁴ Stroke can cause the disability that leads to increase in mortality rate in society and also affects its healthy population. After the episode of stroke, 80% of the patients are dependent on others for their basic life activities like bathing, eating, brushing, walking, and even moving from one place to another.⁵ Most of them are moved to the stroke rehabilitation centers for their recovery. Patient satisfaction is also a primary goal of these care centers for the recovery of the patient.⁶ Fear of fall score is significantly higher in sub-acute stroke patients having history of fall.⁷ Sensory and motor deficits commonly occur in patients having stroke, responsible for producing balance, motor control, and gait abnormalities.⁸

In the subacute phase, alterations in body alignment occur, requiring the incorporation of treatment strategies focused on improving the postural control and symmetry of weight bearing.⁹ Functional limitations and disability are common in stroke that affect the activities of daily life thus have an impact on quality of life (QoL) and functionality of patients.¹⁰ It is cleared from the previous history that

the QoL of the patients affected by the stroke can never be restored. About 15% of the patients can recover from the disease. All the patients who are once affected by the stroke cannot be able to do work or cope with the daily life activities.¹¹ They cannot compete with normal people in daily life activities.

Most of the patients with brain stem injury or other brain related injuries can lead to minor recovery that they can only perform personal or self-care activities.¹² Proprioceptive neuromuscular facilitation and conventional physiotherapy is considered to have effective results for the improvement of balance in stroke patients.¹³ Studies support the advantageous effects of task-oriented rehabilitation in improving the function of upper limb in stroke patients.¹⁴ As the most prevalent neurological disease in elderly, the burden of disease is very high. Rehabilitation of such patients helps a lot to reduce disability and make them independent in their lives. Studies should be done to evaluate the significant role of physiotherapy interventions. The current study was designed to evaluate the quality of life and satisfaction level among patients with stroke after receiving physical therapy interventions.

Methods

A cross sectional study was conducted on 126 patients with stroke from physical therapy departments of different hospitals of Pakistan, after approval from higher management. Sample size was calculated using Epitool and participants were recruited through convenient sampling. Stroke patients with chronic condition (more than 3 months), both gender, aged between 40-60 years were included in study. Participants were excluded from study if they had any comorbidities, serious illness, acute stroke or recurrent cases. Data was collected through modified questionnaire after taking written consent from the participants in six months, from September 2021 to February 2022. Patients filled the questionnaire after receiving 12 sessions of treatment (6 weeks) and their response was recorded using structured questionnaire and

short-form health survey 36 item (SF-36).¹⁵ The SF-36 was used to measure QoL of stroke patients. Data was analyzed by using SPSS version 25. For baseline characteristics, frequency and percentages were calculated.

Results

Patients receiving physical therapy got recovered from stroke, most of their physical and social needs were fulfilled and they were completely satisfied with their treatment. Their cognitive and intellectual skills were also improved and they were able to fulfil their daily life activities with little dependency. Patients adopted a post-stroke lifestyle and unable to inhibit the effects from their mindset and from their life.

In this study, out of 126 participants, 14(11.1%) are strongly agree, 32 (25.4%) are moderately agree, 29(23.0%) are neither agree nor disagree, 29(23.0%) are moderately disagree 22(17.5%) are strongly disagree said that they cannot concentrate. Out of 126 participants, 6(4.8%) strongly agreed that they were too tired to perform activities, 21 (16.7%) moderately agreed, 38(30.2%) neither agree nor disagree, 34(27.0%) moderately disagreed while 27(21.4%) strongly disagreed with it (Table-D). Irritability of participants given in Figure-I. The QoL of patients is improved as 56.3% showed mild disability after treatment, shown in Table-II. Level of satisfaction among participants in Table-III showed that most of the patients (69.1%) were very much satisfied with the treatment.

Table-I: Showing functional limitation due to tiredness in participants (n=126)

	Frequency	Percentage
Strongly agree	6	4.8%
Moderate agree	21	16.7%
Neither agree nor disagree	38	30.2%
Moderate disagree	34	27.0%
Strongly disagree	27	21.4%
Total	126	100%

Figure-I: Showing Irritability in participants (n=126)

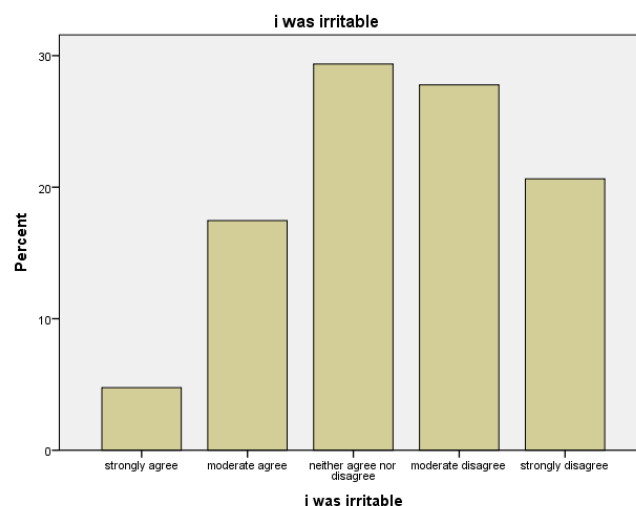


Table-II: Quality of Life through SF-36 (post-treatment)

	Frequency	Percentage
Mild disability	71	56.3%
Moderate disability	43	34.2%
Severe disability	12	9.5%
Total	126	100%

Table-III: Level of Satisfaction among participants

	Frequency	Percentage
Not satisfied	1	0.8%
Moderately satisfied	38	30.1%
Very much satisfied	87	69.1%
Total	126	100%

Discussion

Stroke includes in the diseases that require long term rehabilitation process like osteoarthritis, Multiple sclerosis, head injuries and many others. A complete center or rehabilitation team is required to recover its effects and to make a person move independently

in a society. Transient ischemic attack (TIA) is also associated with the stroke as it occurs when the cerebral blood supply is interrupted its symptoms occur and last within 24 hours but its scanning is necessary because either it effects the brain cells or visual ability. Many vascular diseases are associated with stroke like carotid stenosis, cardiovascular diseases, thrombosis, clot formation, vessel rupture and stenosis.

All of the syndromes can lead towards the mortality of the subjects. Elderly patients who are having stroke, their pre-stroke medical condition, intellectual skills and social activities compared to post-stroke effects and after rehabilitation, it is cleared that a minor degree of recovery has been seen in patients they have a large psychological effect and impact of stroke on their life. Results showed that majority of the patients were very much satisfied and their quality of life got improved. Stroke survivors have impaired QoL and the factors responsible for QoL in were not identified. This study was performed by Boudokhane S in 2021 to find the main determinants of QoL in Tunisian stroke survivors.

The Tunisian version of the SF-36 questionnaire was used to assess QoL at three, six and 12 months after the stroke. IN that study, 65 stroke survivors were included in which 86% of the subjects had ischemic infarction. Most of them had mild or moderate stroke. There were no significant differences in most of the SF-36 domains between six and 12 months' duration. Neurological disorder, increased age, disability and post-stroke depression were measured after one month of stroke, affected side, qualification and lifestyle were associated with worse QoL. Stroke severity, elderly, depression and disability are considered consistent determinants of QoL in Tunisian stroke patients.¹⁶ Zemed A in 2021 aimed to assess the level of health-related quality of life (HRQOL) and associated factors in Ethiopia's tertiary care hospitals. This cross-sectional study included 180 subjects with stroke through consecutive sampling RAND 36-Item Health Survey was used to measure the HRQOL. The HRQOL of the patients was found to be low. Social support and lower disability status were associated

with higher HRQOL, whereas disability and depression were associated with higher HRQOL. Disability/physical dependency and depression are the main factors that improve HRQOL.¹⁷ This study used SF-36 to assess QoL in stroke patients and quality of life got improved after physical therapy treatment after six weeks.

A study conducted by Park J in 2018 to check the influence of client-centered therapy on the level of satisfaction, daily life performance, and the QoL of patients with chronic stroke. That study involved this therapy with two stroke patients as participants. Variations in the level of everyday life performance and satisfaction were measured using the COPM, and changes in QoL were measured using the stroke specific quality of life scale before and after meditation. The treatment was carried out once a day, five times a week, for thirty minutes at a time for four weeks. Both participants showed significant changes and improvement in QoL, performance, and satisfaction level.¹⁸ In current study, 126 patients were receiving routine physical therapy treatment and survey was done to gather information and they also showed improved QoL. Population who do not have rehabilitation treatments have low level of energy and their social life is more effected by the stroke then the patients who have proper rehabilitation sessions.¹⁹ They all are aware of the effects of the physical therapy on their lives and they are happy with the healthy change in their life.²⁰

Conclusion

Rehabilitation through physical therapy treatment has profound effects on patients having stroke, it helps in reducing disability and improving functional activities. Majority of the participants who actively gave response to the therapists got recovered quickly than the participants who did not participate actively. Patients reported improved condition, satisfaction level and quality of life after physical therapy treatment. The quality of life of patients gets improved as 56.3% showed mild disability after treatment.

Declarations

Consent to participate: Written consent had been taken from patients. All methods were performed following the relevant guidelines and regulations.

Availability of data and materials: Data will be available on request. The corresponding author will submit all dataset files.

Conflict of interests: None

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Authors' contribution: All authors read and approved the final manuscript.

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