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Original Research

MOTIVATIONAL APPROACHES USED BY PHYSICAL THERAPIST FOR STROKE REHABILITATION DURING WALK

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Conflict of Interest
All the authors have no conflict of interest

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ABSTRACT

INTRODUCTION:
It is believed that incorporating motivational tactics into a rehabilitation program can increase patient adherence and improve results.

OBJECTIVE:
This study helps practitioners to use different motivational approaches for individuals in stroke rehabilitation.

METHODS:
This descriptive, cross-sectional study was conducted using a web survey.

RESULTS:
Participants with more clinical experience use more motivational approaches to motivate and enhance the rehabilitation. Some participants reported that they used the approaches based upon the condition of their patients.

CONCLUSION:
Rehabilitation specialists may be able to make the most use of the motivating strategies. Moreover this study can help the novice practitioners to use motivational approaches during rehabilitation program.

KEY TERMS:
Motivational approaches, Physical therapists, Rehabilitation, Walk.

1. INTRODUCTION

The World Health Organization characterizes a stroke as a sudden occurrence of noticeable disruption in brain functions, either localized or affecting the entire brain, lasting for at least 24 hours or leading to death. These disturbances are attributed to vascular causes specifically involving brain functions cerebral infarction intra-cerebral hemorrhage or subarachnoid hemorrhage, and occur without any apparent non-vascular bleeding in the brain (1).

After experiencing a stroke, walking component is mostly affected. While a substantial portion of stroke patient (around 64%-80%) can regain the ability to walk independently after rehabilitation (2), their walking speed typically remains below 0.8 m/s. This speed in insufficient for participating in community activities (3). The pace at which a person walks is a noticeable indicator of their functional walking capability. Perry and colleagues outlined six different levels of functional walking categorized by walking speed, with the most significant distinction found among those who walk at slower speed (<0.4 m/s) within their homes, individuals with limited community walking ability and those with unrestricted community walking speed. Therefore, for stroke survivor residing in the community, it is crucial on improving both their walking speed and overall ability to move around.

Motivation is the basics for the rehabilitation process (4) and it is defines as direction that prompts humans and other animals to initiates and uphold actions aimed at achieving a specific objective (Organization, 2007). High adherence to designed rehabilitation program is linked with higher motivation (5) Patient motivation is often employed as a determinant of rehabilitation result since it requires the patient's individual efforts to maintain these practices and

exercises. One of the anticipated impediments to physical activity and exercise training following a stroke is a lack of motivation, and high adherence to a rehabilitation program is regarded to be predictive of motivation (6). Consequently, incorporating motivational techniques into rehabilitation programs may significantly improve patient adherence and lead to improved results. That is the reason physical therapists use different motivational approaches to get better and faster results (7).

A study of 362 participants found that over 75% of respondents used 15 motivational strategies to motivate their patients, with more experienced professionals using more. The majority used strategies to make rehabilitation worthwhile for their patients, considering factors like health condition, environment, and personal factors. The comprehensive list of strategies may be useful for professionals with less clinical experience (8).

Another study explores the motivational strategies used by physical therapists in stroke rehabilitation programs. A sample of 15 therapists participated in online interviews, revealing nine themes. These strategies were based on factors such as mental health, physical difficulties, cognitive function, personality, activities, age, human environment, and type of service. For instance, practice tasks were offered to boost self-confidence. Regardless of the individual's condition, patient-centered communication was used to build rapport. The study concludes that physical therapists use different strategies to motivate stroke patients during physical therapy (9).

A study in a hospital found that stroke patients with high motivation for rehabilitation were more likely to view it as the most important means of recovery and actively participate in it. They also understood the specialist role of nursing staff. However, low motivation patients reported independence as a personal goal. The study suggests that these beliefs are influenced by the environment in which the patient is rehabilitated, and that professionals and careers should be aware of how their behavior can affect motivation (10).

This study helps to explore how physical therapists used motivational approaches to help stroke patients during their rehabilitation. Physiotherapists play an important role in helping patients recover from physical effects of a stroke, and they use various motivational approaches to help patients in rehabilitation program. This research helps to identify the most effective approaches and contribute to the development of more effective rehabilitation programs for the stroke patients.

2. MATERIAL AND METHODS

STUDY DESIGN:
Descriptive, cross-sectional study design.

STUDY DURATION:
The study was conducted over a six-month period, commencing in July 2022 and concluding in January 2023, after approval of the research topic.

DATA COLLECTION SETTING:
Online Data survey.

SAMPLING TECHNIQUE:
The study used a non-probability purposive sampling strategy combined with a census method. In this approach, participants were deliberately selected based on specific eligibility criteria relevant to the study objectives, and all available individuals who fit these criteria were included, rather than selecting a subset.

SAMPLE SIZE:
Sample was collected through census method (11). N=51

SAMPLE SELECTION CRITERIA:
INCLUSION CRITERIA:

- Physical therapist who accepted the invitation to participate in study.
- Physical therapist for at least 1 years of experience
- Participants who had concept of patient motivation in rehabilitation.

EXCLUSION CRITERIA:

- Physical therapist who have professional, personal or financial conflict of interest.
- Physical therapist who are unable to commit to study timeline or data collection session due to preoccupied commitments.

INSTRUMENT AND DATA COLLECTION PROCEDURE:

INSTRUMENT:
Data were collected through a self-administered, structured, and pretested questionnaire, validated and approved by the physiotherapy department at Lahore College of Physical Therapy, with a panel of 10 experts having an average experience of 5 years. The content validators rated each question on a four-point scale (1 = Relevance, 2 = Clarity, 3 = Simplicity, and 4 = Ambiguity). Questions with a content validity index of ≥0.80 were considered valid, while those

below 0.80 were modified based on expert advice .After modification, 10 questions were finalized out of the
initially formulated 19 questions for the study. The questionnaire's reliability was confirmed by Crohn bach's Alpha, with a value of 0.749 for the closed-ended items. The study's purpose was explained to participants, and informed consent was obtained before data collection. The confidentiality of each participant was ensured, and only English was used to develop the questionnaire. The finalized questionnaire 10 closed-ended questions assessing information on awareness and belief, clinical practice and patient interaction, observation, and patient inquiry. It was then converted into a Google Form for efficient distribution and collection of responses. This digital format was strategically circulated among Physical therapists. The study aimed to ensure a representative sample, enhancing external validity and generalizability. Collected data was meticulously transferred to the Statistical Package for the Social Sciences (SPSS) software for comprehensive statistical analysis. This involved applying relevant statistical tests and measures to derive meaningful insights, allowing for a thorough exploration of Physical therapists awareness regarding the role of physiotherapy in using motivational approaches during stroke rehabilitation in walk.

ETHICAL CONSIDERATIONS:

The study was approved by Committee of Lahore College of Physical Therapy, LMDC. Prior the study, informed consent was prevailed from participants. Confidentiality of the participants was ensured will no harm should be done to participants during research.

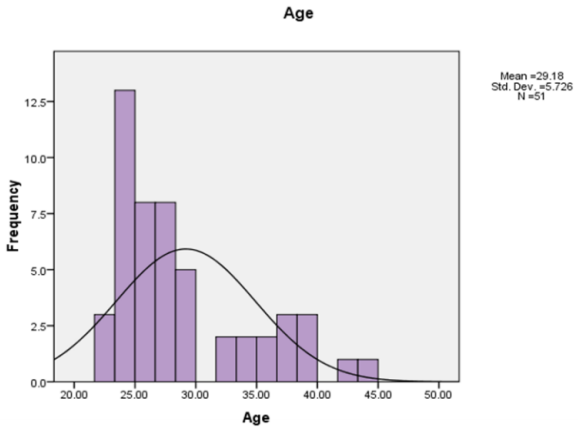
4. Results:

Age of participants

Out of 51 participants, age limit was between 23 and 45. The mean age was 29.17± 5.72.

Table 1: Descriptive Statistics of Age of participants

	Age of Participants			
	Mean	Standard deviation	Minimum	Maximum
Age	29.17	5.72	23	45

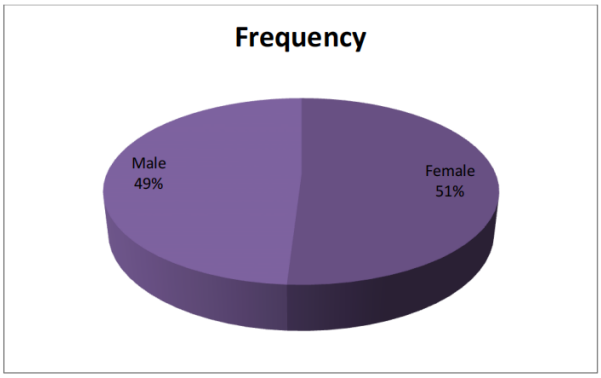


Gender

Out of 51 participants, male were 25 with percentage of 49 and female were 26 with 51 percent.

Table 2: Descriptive statistics of Gender

Gender		
	Frequency	Percentage
Male	25	49
Female	26	51

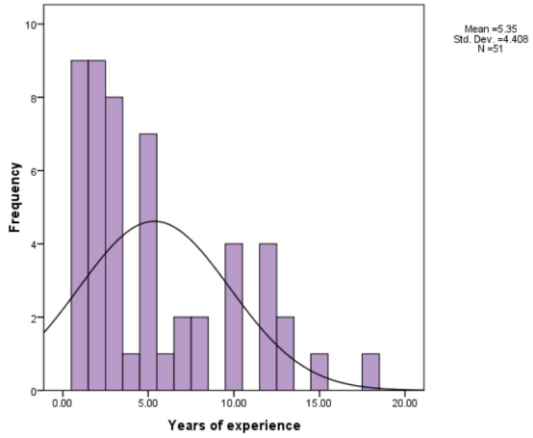


Years of experience

Out of 51 participants, years of experience was between 1 and 18 years. The mean duration of experience was 5.35 ±4.40.

Table 3: Descriptive statistics of Years of experience

Years of experience				
	Mean	Standard deviation	Minimum	Maximum
Year	5.35	4.40	1	18



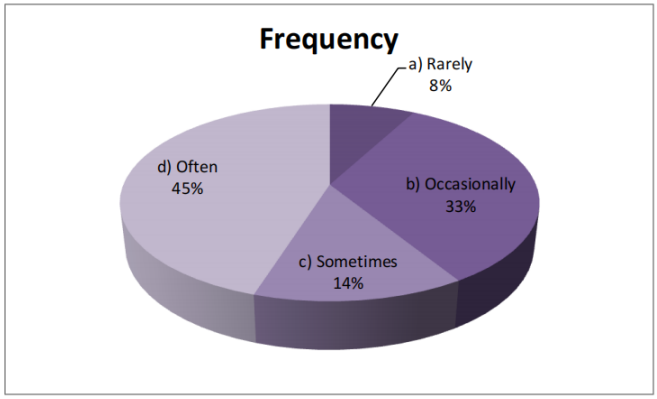
Walking goals

Among the 51 participants surveyed, 4 of them (7.8%) reported that they rarely use such goals, while

17 participants (33.3%) indicated that this happens occasionally. Additionally, 7 participants (13.7%) mentioned that they sometimes use these goals, while the majority, comprising 23 participants (45.1%), reported that they often use specific and attainable walking goals during their rehabilitation.

Table 4: Descriptive Statistics of walking goals

Walking goals				
	Frequency(percentage)			
Variables	Rarely	Occasionally	Sometimes	Often
	4(7.8)	17(33.3)	7(13.3)	23(45.1)

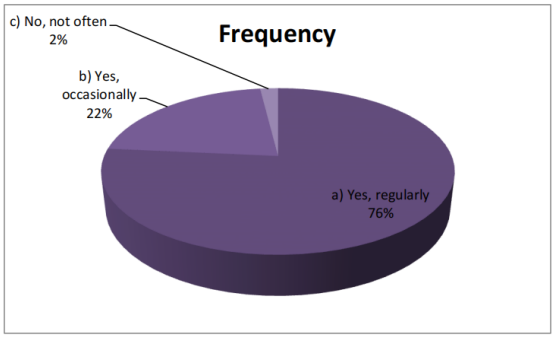


Active compliment

Among the 51 participants surveyed, 39 of them (76.5%) reported that they use such goals regularly, while 11 participants (21.6%) indicated that this happens occasionally. Additionally, 1 participants (2.0%) mentioned that they unused these goals often.

Table 5: Descriptive statistics of Active compliment

Active compliment				
	Frequency(percentage)			
Variables	Yes, regularly	Yes, occasionally	No, not often	No, not at all
	39(76.5)	11(21.6)	1(2.0)	0(0)

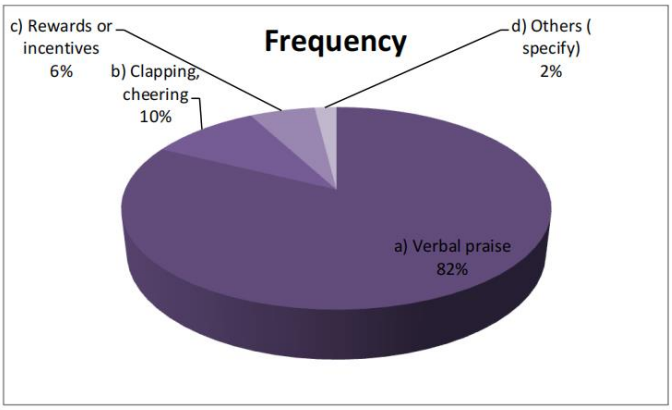


Encouragement

Among the 51 participants surveyed, 41 of them (80.4%) reported that they use such verbal praise, while 5 participants (9.8%) indicated that they use clapping. Additionally, 3 participants (5.9%) mentioned that they sometimes uses rewards or incentives, while 1 participant (2%) use others methods.

Table 6: Descriptive statistics of Encouragement

Encouragement				
	Frequency(percentage)			
Variables	Verbal praise	Clapping	Rewards or incentives	others
	41(80.4)	5(9.8)	3(5.9)	1(2)

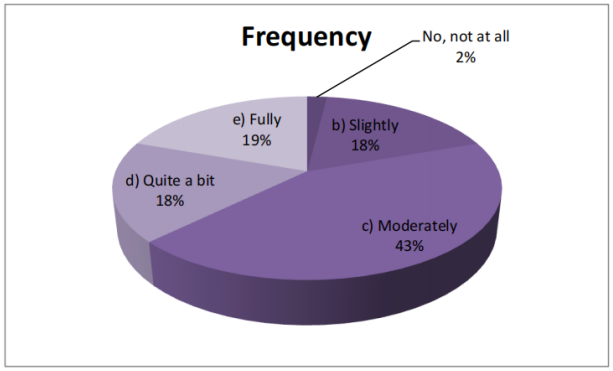


Patient involvement

Among the 51 participants surveyed, 1 of them (2.0%) reported that they does not
involve patients at all, while 9 participants (17.6%) indicated that they encourage slight involvement of patient. Additionally, 9 participants (17.6%) mentioned that they moderately use this goal, while the majority comprising 22 participants (43.1%), reported that they involve patient moderately and only 10 participants (19.6) allows full involvement.

Table 7: Descriptive statistics of Patient involvement

Patient involvement					
	Frequency(percentage)				
Variables	No, not at all	Slightly	Moderately	Quite a bit	Fully
	1(2.0)	9(17.6)	22(43.1)	9(17.6)	10(19.6)

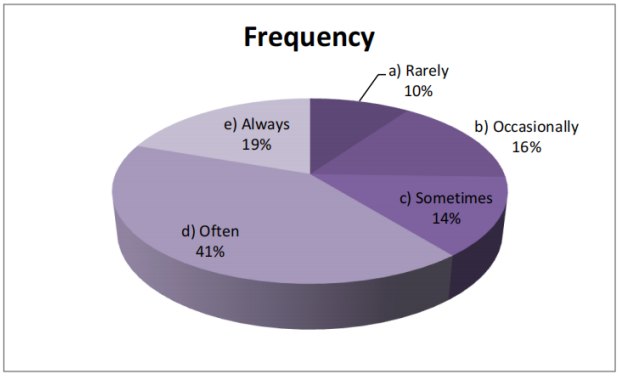


Workout program

Among the 51 participants surveyed, 5 of them (8%) reported that they rarely used such goal, while 8 participants (15.7%) indicated that this happens occasionally. Additionally, 7 participants (13.7%) mentioned that they sometimes used these goals, while the majority, comprising 21 participants (41.2%), reported that they often use workout program. Only 10 participants (19.6) always used workout program.

Table 8: Descriptive statistics of workout program

Workout program					
	Frequency(percentage)				
Variables	Rarely	Occasionally	Sometimes	Often	Always
	5(8)	8(15.7)	7(13.7)	21(41.2)	10(19.6)

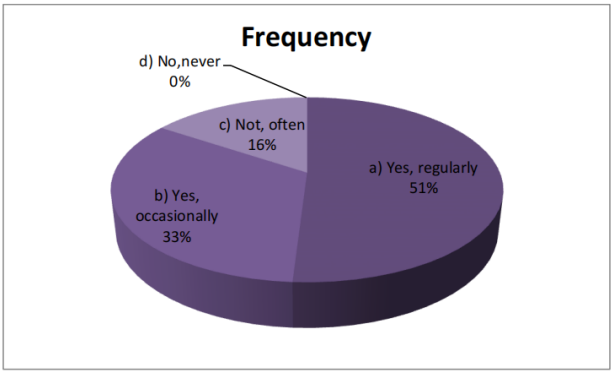


Visual Aids

Among the 51 participants surveyed, 26 of them (51%) reported that they used such goals regularly, while 17 participants (33.3%) indicated that this happens occasionally. Additionally, 8 participants (15.7%) mentioned that they don't use these goals often.

Table 9: Descriptive statistics of Visual aids

Visual aids				
	Frequency(percentage)			
Variables	Yes, regularly	Yes, occasionally	No, not often	No, never
	26(51)	17(33.3)	8(15.7)	0(0)

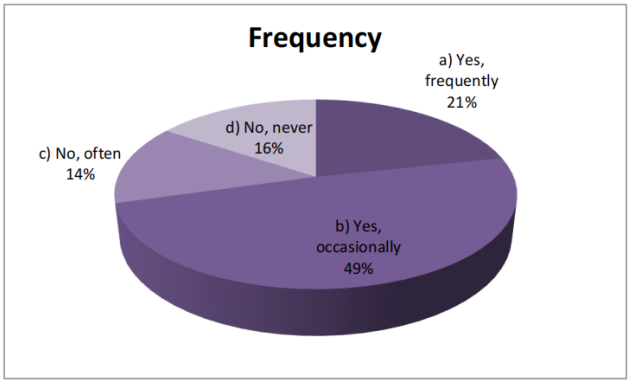


Walking therapy sessions

Among the 51 participants surveyed, 11 of them (21.6%) reported that they frequently used such goals, while 25 participants (49%) indicated that this happens occasionally. Additionally, 7 participants (13.7%) mentioned that they unused these goals often, while 8 participants (15.7) never used this approach.

Table 10: Descriptive statistics of walking therapy sessions

Walking therapy sessions				
	Frequency(percentage)			
Variables	Yes, frequently	Yes, occasionally	No, often	No, never
	11(21.6)	25(49)	7(13.7)	8(15.7)

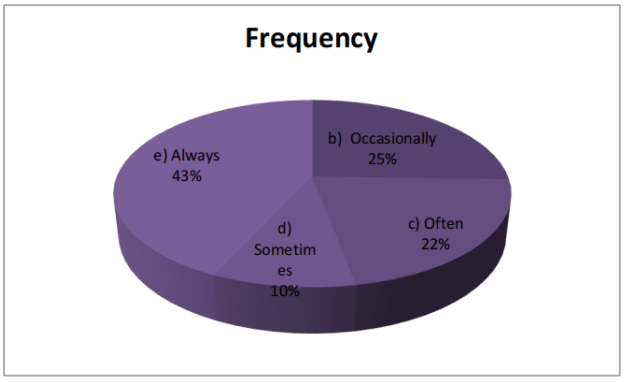


Active listening

Among the 51 participants surveyed, 5 of them (9.8%) reported that they sometimes used such goals, while 13 participants (25.5%) indicated that this happens occasionally. Additionally, 11 participants (21.6%) mentioned that they often use these goals, while the majority, comprising 22 participants (43.1%), reported that they always use active listening approach.

Table 11: Descriptive statistics of Active listening

Active listening				
	Frequency(percentage)			
Variables	Occasionally	Often	Sometimes	Always
	13(25.5)	11(21.6)	5(9.8)	22(43.1)

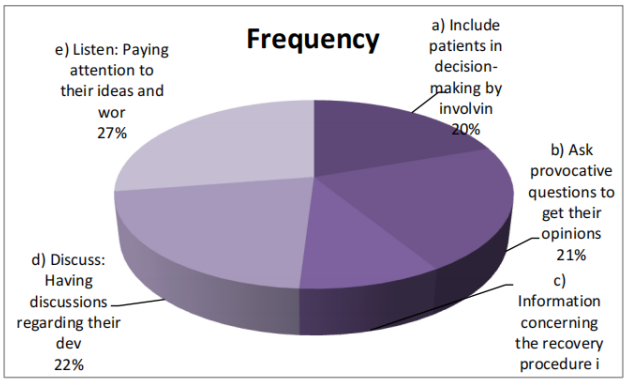


Open conversation

Among the 51 participants surveyed, 14 of them (27.5%) reported that they pay full attention to ideas and worries of the patients.

Table 12: Descriptive statistics of open conversation

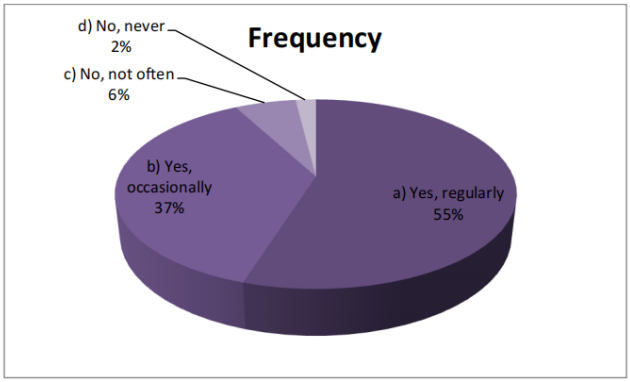
Open conversation				
Frequency(percentage)				
Include patients in decision-making by involving them	Ask provocative questions to get their opinions	Information concerning the recovery procedure is shared	Discuss: Having discussions regarding their development	Listen: Paying attention to their ideas and worries
10(19.6)	11(21.6)	5(9.8)	11(21.6)	14(27.5)



Family members

Table 13: Descriptive statistics of family members involvement

Family members involvement				
	Frequency(percentage)			
Variables	Yes, regularly	Yes, occasionally	No, not often	No, never
	28(54.9)	19(37.3)	3(5.9)	1(2.0)



5. DISCUSSION

The current study produced a thorough list of motivating methods utilized during stroke sessions. We identified that physical therapist used different motivational approaches during patient rehabilitation program for effective outc
omes. Our survey collected data on the aim of adopting each motivational approach as well as the information that professionals evaluate when selecting motivational strategies. To the best of our knowledge, this study was the paramount survey-based evaluation of motivational approaches to motivate patients throughout rehabilitation in walk. We designed the survey in accordance with existing criteria (8) and carried out Expert reviews and pilot testing (12) that were examples of pre-testing techniques to validate the content and response procedure.

This study involved only physical therapists while other study involves all the health professionals. In this study, whole questionnaire was formed by following the existing guidelines (13) and then validated by physical therapist. Under their supervision corrections and amendments were made. Then questionnaire was given to physical therapists in online survey generated on Google forms.

This study involves different approaches which were used to motivate patients (14) during their rehabilitation.. Walking goal was a basic approach which was used by almost half of the population involved in this study while same approach with the name of Goal settings was used by vast majority of the participants in previous article (8) and in the study done by (4) . Active compliments were used regularly for majority of the participants in this study but in comparison to the previous article this approach was termed as Praise which was used by almost all the health professionals. The term, Encouragement and Affirmation was used in the question and different techniques were also incorporated. Verbal praise was used by the majority of the therapists in comparison to the previous article in which same approach was used but with the term of Enjoyable communication which was used by almost two-third of the population . Patient involvement is considered to be effective according to this study and is consistent with the previous study as it increases the patient satisfaction, treatment effectiveness and quality of life (15) . Based on the survey results, it appears that the majority of participants often use workout programs. A significant number of participants sometimes use these programs as it is written in other studies that workout program can enhance the recovery and by increasing the difficulty level after improvement in condition can make patient get interested in the rehabilitation process (16).

Visual aids can also be used in rehabilitation process as it can increase the interest of the patients and they get involved with other patients (17). Video tapes, pictures or any objects can be used to motivate patients and this approach was used by almost half of the population involved in this study which was quite low. Walking therapy session are quite important because it improves the walking capacity of the individuals affected with stroke (18) but without active involvement of patient recovery is quite slow and motives of rehabilitation sessions is not fulfilled. In the study, participants used walking therapy approach occasionally.

Active listening was the core and most important skill and part of counseling (19). A systematic review suggests that motivation has great effect on the rehabilitation of stroke patients (20) and in this study participants used this technique in large numbers. Effective communication increase the satisfaction level and the motivation level in stroke patients (15). Open conversation with and among patients can create a soothing and comfortable environment. In this study physical therapists used different approaches to create an environment of conversation to engage them in the rehabilitation program . By keeping family members in touch and providing them all the details and educating them can also enhance the rehabilitation. As it also increase the confidence of the patient to do activities and exercises in front of the family members. Presence of family members make patient more active and they show more interest (21).

CONCLUSIONS:

We compiled a quantitative list of 10 motivational strategies for stroke recovery in Pakistan, which were widely employed by physical therapist experts. Additionally, we gathered information on the incentive techniques used and the factors considered in their selection. These findings may improve the effectiveness of our motivational strategy list in stroke recovery.

LIMITATIONS:

- Sample size of this study was small.
- Cross-sectional study design was used in this study.
- The study only involved physical therapists and did not include other health professionals.
- The survey was conducted online, which may have limited the participation of

physical therapists who are not comfortable with technology.

SUGGESTIONS:

- Longitudinal designs may be used in future study.
- More diverse population may be used.
- Future studies could investigate the effectiveness of different motivational strategies on patient outcomes and compare the results across different rehabilitation settings.

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