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# Factors affecting compliances with physiotherapy among stroke patients: Physiotherapist's perspective: A study from Peshawar Pakistan.

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## ABSTRACT

**Back ground/Aim:** Non-compliances to physiotherapy are common. Outside the Western nations, little is known to the factors responsible for non-compliances with physiotherapy. This study aimed to evaluate the factors affecting non-compliances with physiotherapy among stroke patients, in Peshawar, Pakistan.

**METHOD:** Seven in practice physiotherapists from Peshawar, Pakistan, were invited to focus group discussion to discuss their opinions about factors affecting stroke patient's non-compliances and the strategies to manage with these factors. The dialogues were transcribed and analyzed. Significant words and statements describing non-compliances were identified. The cluster of meanings developed and used to write a combined description presenting the real meaning of discussion.

**RESULTS:** The main factors identified were: misconception about physiotherapy, poor awareness and poor infrastructure for physiotherapy, poor communication among healthcare providers, economical issues, social and cultural factors and factors related to exercise education. The patient and family education shaped the basis of many of these strategies recognized by the physiotherapists to help the patients, manage non-compliances.

**CONCLUSION:** The physiotherapists in Peshawar identified some barriers to treatment compliances in case of stroke rehabilitation. They also developed some strategies which they believe as supportive in encouraging motivation that is unique to Pakistani social and cultural context. The other barriers to treatment compliances and strategies, identified as key to enhancing adherence in Western countries were not highlighted by the focus group of this study.

**KEY WORDS:** Barriers, Misconception about physiotherapy, Rehabilitation.

## INTRODUCTION:

The term compliance has been defined before as the extent to which a person adopts the lifestyle based on medical and health care recommendations. The World Health Organization (WHO) define compliance as "the extent to which a person's behavior corresponds with agreed recommendations from a health care provider". Other terms being suggested for the compliance are the adherence, maintenance and patient cooperation. Better treatment outcomes can only be accomplishing if patients closely follow their health care recommendations. Types of compliance which has been studied before included, clinical appointments specifically for chronic conditions, self-control regimens as in hypertension and diabetes, taking medications and adherence to exercise programs. In Western countries, non-compliances with treatment approaches are some trouble across all disciplines of health care including physiotherapy. For example, only two-third (2/3) of

patients were found adherent with short-term exercise regimes and this may be poorer for long-term therapy recommendations and for unsupervised home based exercise programs. In case of physiotherapy, the patient may need multiple sessions depending upon a condition for better recovery'. Physiotherapists therefore commonly face problems of non-compliance with treatment program from all over the world. Suggested by the literature, there may be some reasons for non-compliance with exercise treatments'. For example, low-level of physical activity, low self-efficacy, low social support, anxiety, increased pain levels initially with exercise treatments are certain barriers to adherence with physiotherapy. Ethnicity may influence attitude, behavior, and beliefs around the pathology and physical activity e.g, Chinese show more negative attitude about future results of low back pain compared with Australians. Asian population may be less likely to adhere with physiotherapy programs

which encourage increased level of exercises or physical activities .

The compliances with physiotherapy among stroke sufferers may be poorer. The stroke sufferer may lose independent state due to part(s) of brain damage, depends upon the extent of the damage. The barriers to compliances with physiotherapy in a case of stroke can be internal and external . As reported, 80% to 90% of stroke population suffers from limb(s) weakness which hinders them from moving independently. The other factors which can contribute to making some one dependent are disturbed coordination, loss of balance, severe depression and fatigue, these factors reported commonly in stroke patients. The external factors which act as a barrier to therapy compliance for them are a close availability of physiotherapy centers and wheelchairs usage .

The role of ethnicity and cultural issues in non-compliances are the important areas for investigation. Increasing the understanding of these factors can help physiotherapists to develop the strategies that can overcome these factors for patient's effective management. The aim of this study was to investigate the physiotherapist's perceptions about factors influencing patient's compliances in outpatient department in Peshawar, Pakistan

## **2.METHODOLOGY:**

### **2.1.STUDY DESIGN:**

It was a qualitative study, based on the grounded theory approach. Male and female physiotherapist having five years of experiences in stroke rehabilitation centers of Peshawar were invited for the focus group discussion. The preference was given to neuro-physiotherapists for the study selection but, that was optional criteria for inclusion. The physiotherapists with experience of inpatient stroke rehabilitation were excluded. The indoor follow-up may be easy for stroke patients compared to those within the community.

### **2.2. STUDY PARTICIPANTS:**

The physiotherapists were invited from different hospitals and clinical setups via email using information sheets. Information sheets consisted brief description of focus group discussion and its date, time and venue. The participants encouraged to ask anything about a study, prior to the discussion. All of the physiotherapists were ensured of confidentiality prior coming to the focus group discussion. The non-probability convenience sampling was used due to time constraints. Twenty physiotherapists responded positively to the study. The 8 participants were selected by inclusion and exclusion criteria. Factors influencing to stroke patient's adherence with physiotherapy rehabilitation within Peshawar setups were discussed. The views of physiotherapist were collected and recurring themes were elaborated.

### **2.3. STUDY PROCEDURE:**

Among eight invited physiotherapists, one did not arrive for discussion while all other participants sat around a table in way of full view of one another. The participants requested to share their opinions. The chair or the moderator of the group discussion (MN) was one of the authors of the study and was the non-medical person. She only facilitated the group discussion but did not give any thoughts to the discussion. The modified standard guidelines used for the focus group discussion which were same, as used by Marwaha et al, (Table 1).

#### **Interviewing guideline (Table 1)**

1. Have you ever come across the patients whom you find non-adherent to prescribed exercise plane in any way?
2. Have you ever supervised the treatment plane of patients in follow up, if yes, were they following each component correctly?
3. What are the reasons that act as barrier to patients compliances in your opinion?
4. Can you list the barriers in a rank from major barriers to the minor one?
5. What could be the best possible strategies in your opinion to cope up the above scenario?

The discussion was recorded on two tapes. The primary researcher, who was also physiotherapist did not participate in focus group discussion (refers to eligibility criteria of the study), she only assisted the moderator in study data recording.

The information was taken about physiotherapist perceptions of non-compliances with exercise treatment of stroke population and they discussed the best possible strategies to overcome these factors.. Data collection: Two tape recorders were used for recording of focus group discussion.

### **3.DATA ANALYSIS:**

The Mean age  $\pm$  Standard Deviation (SD) and the Mean length of experience  $\pm$  SD were computed for study participants. The study participants also evaluated in terms of educational background and kind of organization (Government, semi-government, private or Non-Government Organizations (NGO) where they experienced such non-adherent cases. The focus group discussion was interpreted by one of the study author (AN), who was not the part of focus group discussion. Data were analyzed in the four main stages. Stage 1: A thorough listening for the discussion to have a sense of overall meaning. Stage 2: Identification of significant words and sentences

explained the reasons for non-compliances. Stage 3: The meaning of significant words and sentences were compelled to major study themes. Stage 4: The major study themes were explained in the context of physiotherapist's perceptions of non-compliances.

#### 4. RESULTS:

##### 4.1. PARTICIPANT'S CHARACTERISTICS:

The Mean age of study participants was 34±4.5 years and their Mean length of experience was 6±1.5 years. Out of seven members, five were specialized in the neuro-physiotherapy field. There were two females and five male participants in focus group discussion. Two physiotherapists were from government organizations, one from semi-government while remaining all had experience of private setups.

##### 4.2. MAJOR STUDY THEMES:

The seven major study themes are emerged from the discussion and are given in Table 2.

Major themes (Table 2)	
1.	Misconception about physiotherapy
2.	Poor awareness
3.	Poor communications among health care providers
4.	Social barriers
5.	Cultural barriers and economical barriers
6.	Tendency to forget exercises
7.	Stroke based symptoms

##### 4.2.1. MISCONCEPTION ABOUT PHYSIOTHERAPY:

The participants identified following misconception about physiotherapy in our society.

- The general populations are less aware to physiotherapy in Peshawar, the patients often consider the physiotherapy as same as to massage therapy and they insist for massage plan rather than exercise plan in case of treatment by physiotherapy.
- The fitness exercises or the activities of daily life which require exertions are often considered as same as to exercises prescribed by the physiotherapists.
- Some of the people consider the physiotherapy as a sole method of treatment by modalities however heat therapy is most popular with them. The patients insist for heat modalities even if heating is contra-indicated to their condition, they get to dissatisfy if the physiotherapists use the alternate methods of patient care. The patients need to be fully educated by the therapist about the mechanism of their problems and the mechanism of cure by physiotherapy. A

physiotherapist can use alternate modality if heating contraindicates to patient's condition and can later add it after signs of contraindication.

##### 4.2.2. POOR AWARENESS:

The physiotherapists identified that our population is not aware to:

- Many of the health problems
- The aims and therapeutic approaches of physiotherapy
- Access to physiotherapy
- Authentic health professionals

Importantly in our population, the most famous are the "Saints" or "Baba's" who promise them for their cure, based on unauthentic resources, as the stroke patients are commonly reported to be visited by them. This all factors are due to low literacy rates in Pakistan, the only small sections in urban population are educated and they are also equipped with the sufficient information about their pathological conditions.

##### 4.2.3. POOR COMMUNICATION AMONG HEALTHCARE PROVIDERS.

General Practitioners (GPs) do not acknowledge physiotherapy in our society and they insist patients for their own therapeutic plans even if they need physiotherapy. Sometimes the GPs refer a patient to the physiotherapist with prescribed physiotherapy e. g, heat therapy; the addition of any exercise plan by the physiotherapist in that particular situation sometimes creates the problem because most of the patients only want to stick to GP recommendation. The medical curriculum needs to incorporate the subjects related to physiotherapy for better understanding its role in patient care.

##### 4.2.4. SOCIAL SUPPORT:

The physiotherapists explained the social support in the following context

- The female of our society are highly depended on male family members for support in many aspects of life including concerns of health. They may suffer in case if their supporters are not cooperative.
- There are attitudinal barriers as people from backward areas often consider the stroke and other diseases as punishment from God. This may boost up depression which is commonly reported with stroke.
- Recovery from stroke highly depends on family support especially in case of acute condition; the physiotherapist requires family and patient motivation for exercises. The slow recovery from stroke usually makes family tired and less adherent with exercises for a patient. According to physiotherapists these barriers now thought to be changing due to awareness for many health problems. The media and education are playing role in lifting up the women in our society but this will take time. The phenomena of circuit training

and group training which are newly introduced to stroke patients are getting popular due to patient's motivation and their high compliances with this kind of training.

#### **4.2.5.CULTURAL BARRIERS:**

The existed 'Purdah ' system in our society have set the mind of women to get treatment only by a female therapist, tagging some personal belief with religion make them hinder from participating in a proper rehabilitation program. Much of the population of Peshawar is under the poverty line; the long term multidisciplinary treatment of stroke additionally makes the financial burden on patients. The Government and non-Government institutions are required to address those cultural issues and economic issues.

#### **4.2.6.THE TENDENCY TO FORGET EXERCISES:**

Most of the patients mention forgetfulness as one of the reason for non adherence with physiotherapy. In a majority of our setups, the physiotherapists educate the patient for exercises on exercise sheets which consist of exercise image, its repetitions and other necessary information relevant to patient's condition. The low literacy rate and less interest in exercises usually create this kind of situation. T

The exercises should be supervised in that case for better recovery. The therapist can provide the patients with exercise videos in their native languages if the individual patient supervision is not possible to the therapist.

#### **4.2.7.STROKE SPECIFIC SYMPTOMS AS A BARRIER:**

According to physiotherapists, there are some stroke specific symptoms which can affect patient's adherence with exercises. Depression, mood disruption, cognitive problems, and aphasia are some among these symptoms. Stroke patients suffer from the energy crisis and they spend most of the day part inactive while mean time, the physiotherapists need their active participation in exercises. The external factors that can contribute to not adherence with exercises in stroke population are, need for a wheel chair (depending upon the patient's condition), hospital location and dependency on an environment. The developments of more and more stroke centers are now trying to cope up with these factors.

#### **5.DISCUSSION:**

The current study evaluated the perceptions of Pakistani physiotherapists about the factors for non-compliance with physiotherapy rehabilitation among stroke patients. The barriers identified were a misconception of physiotherapy, poor awareness, poor communications among health care providers, cultural and economic factors and social barriers.

Factors for non compliancethat found unique to our population were a misconception of physiotherapy, women dependency on men, stigmas for disabilities, and famous concept of "saints" and "Baba's" in health recovery, existed a system of "purdah" and poor economic status of a general population. This study also identified that some factors for non compliancesare due to stroke condition. For example, physical status after stroke, depression, negative emotions and less tolerance to exercises are some factors that make stroke patient's non adherent with exercises. Some other studies also identified a low physical status, poor exercise history, poor exercise organization and poor leadership as a major barrier to adherence with exercise treatment . A study conducted by Marwaha et al., to examine the perception of Indian physiotherapist about factors affecting patient's compliance with physiotherapy'. According to this study forgetfulness, treatment time and treatment cost were main barriers responsible for non adherence. Sluijs et al. , in Holland and Alexandre et al., reported that a barrier which influences heart patient's decision for cardiac rehabilitation is actually their concomitant medical illness. They found afraid of their weak hearts. All of these studies suggested that health care professionals need to understand these factors for effective management of patients and thus reducing the burden on the healthcare system. Medina et al. reported that physiotherapist in Spain perceives their patients well adherent to physiotherapy initially, at times of pain and gradually they decrease with compliances . According to Spain' physiotherapist, the patients consider physical and social barriers to compliances with physiotherapy specifically in chronic phases .Some other studies were conducted previously to find the prevalence of adherent patients with physiotherapy. The Kolt GS, McEvoy JF in 2002 investigated the prevalence of adherent patient with back pain physiotherapy over 4-week training sessions, they reported 87% of patients regular with their appointments and only 72% were found adherent to home based plans . This study in contrast to these studies investigated the factors for non compliances. According to some other studies, compliance rate varied from 10% -85% depending upon disease nature, affected the population, prescribed treatment regimen and it also depends on the word compliance itself .

A few numbers of studies reported the socio-economic status as a barrier to adherence with treatment, this might be due to the fact that majority of these studies conducted in the Western nation where health insurances take the responsibility of treatment cost of their citizen . However, a study from India, Holland and this current study do not exclude socioeconomic status as a barrier to adherence with treatment' Increasing the awareness for diseases, incorporating the subject

of physiotherapy in medical syllabus, empowering the woman through education, development of more health centers in cities and peripheries, reducing the cost of treatment at private set-ups and highlighting the wrong concept of "saint" in recovery through media were some suggestions of this study to cope up with all these factors of non adherence. The majority of these elements can be fixed if health care system pays attention to the development of physiotherapy council in Pakistan.

#### 6. CONCLUSION:

The factors, affecting stroke patients compliances with physiotherapy in Peshawar, Pakistan are poor awareness, considering physiotherapy as similar to massage therapy, misconception of routine activities as therapeutic exercises, poor communication among health care providers, and abundance of faith healers, patient's forgetfulness to exercises, poor economic status and cultural and societal barriers.

#### STUDY LIMITATIONS:

The data of this study only consisted verbal information while the non-verbal language and tone were not analyzed which may convey meaningful information. The study only justifies the perspective of few physiotherapists and only for stroke condition from Peshawar; the results, therefore, cannot be generalized to the whole Pakistan.

#### FUTURE RECOMMENDATIONS:

The future studies can investigate the treatment compliance with musculoskeletal rehabilitation. The patients' perspective of non compliances with physiotherapy should be investigated to have a clearer picture of the barriers perceived by the physiotherapists in this study.

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Rabia Basri; concept, data collection, data analysis, manuscript writing, manuscript review  
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Aatika Naz; data analysis, manuscript writing, manuscript review