



Physiotherapist's Perspective on the Factors Influencing the Progression of Stroke Rehabilitation

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Abstract

In this study all the participants felt that timing of referral of stroke patients for physiotherapy was sometimes appropriate. They were believed that factors related to physiotherapist had vital role in the progression of stroke patients. Among them physiotherapists motivational power and clinical competence were considered to have largest influence on the progression of stroke rehabilitation. Among patients related factors cognitive problem had largest influence on stroke rehabilitation. There were some less influencing factors that were education of patient and career, patient's home environment. Clinical environment, clinical resources were considered to have moderate influence on stroke rehabilitation. The participants were recommended that there were some other factors which can influence positively the progression of stroke rehabilitation.

Keywords: Stroke rehabilitation, physiotherapists motivational power, clinical environment.

Introduction

Bangladesh is a South Asian country and one of the most densely populated country in the world defined by Momin, AKM¹. More than 150 million people live in this independent country (CRP annual report)². About 85% of the populations live in villages and 60% of the total labor forces are employed in agriculture Zaman, SS³. In the world of globalization, all the countries of the world are trying to confirmation their ability to remain in the competitive world. For this reason there is no scope of neglecting any sector to be considered like economy, education, health, culture etc. Among them health sector is very important issue Begum, A⁴. According to World health organization (WHO) about 10% peoples are disabled in developing countries and as a developing country Bangladesh is not an exception. Stroke is one of the neurological conditions which are the burning topic in this millennium because it is not only a major killer but also a major cause of disability in the world Mohammad, QD⁵. Stroke is one of the most important causes of disablement among elderly people (Pitkanen K.)⁶. Until today, modern medicine has very little power over this disease, though the world of stroke medicine is changing and new and better therapeutic techniques are being developed day by day. Immediately after stroke it is difficult to predict the extend of eventual recovery, but as the traditional view of neurological rehabilitation it reduces impairments and minimize disability Carr, J and Shepherd, R⁷. The World Health Organization (WHO) estimates that in 2001 there were over 20.5 million strokes worldwide. Europe approximates 650,000 people deaths each year by stroke. At all ages, 40,000 more women than men have a stroke. About 47 percent of stroke deaths occur out of hospital. About 4.7 million stroke survivors (2.3 million men, 2.4 women) are alive today Debnath M⁸.

Methodology

Design of the study: The quantitative survey was selected to carry out research aims and objectives. The aim of the research was to explore the factors that influence the progression of the stroke rehabilitation in the context of Bangladesh. The survey is a practical method of evaluating the different. A survey is a research approach which involves collecting information from a large number of people using interviews (face to face or telephone), postal or other self-completion questionnaires method or dairies, in order to answer a set of hypothesis or in order that an overall picture of that group can be described in terms of any characteristics. This means that a survey has stronger validity if face-to-face is used. That's why this design was chosen. However, the survey must be attractive and pleasing to the participants. On the other hand, the survey design is usually cheaper and quicker than an experimental design and confounding variables can be controlled for during data analysis.

There are two research methods in survey. These are prospective survey design and retrospective survey design. The information are collected from a sample of the population of interest, they are also known as cross-sectional because the data are collected from the population of interest at one point of time. Most cross-sectional studies are retrospective, they involve questioning participants about past as well as current behavior, attitude, feelings and events and by this was large number of people can be surveyed relatively quickly allows the researcher to select participants according to clearly defined criteria, it can obviously be a very time consuming process to access an adequate number of suitable participants.

Sample (Subject) selection for the study: Physiotherapy is a developing and challenging profession in Bangladesh. A government post is not yet to be established in this field. There is one government institute and some private institutes are conducting physiotherapy courses. For that reason, there are not enough physiotherapists available for work in different parts of the country. Stroke is a common disease resulting disability in our country, and patients with stroke require physiotherapy rehabilitation, and for that reason, many physiotherapists have been working with them. The participants were selected who were qualified physiotherapists with at least one year's working experiences because they have experience to treat or rehabilitate number of stroke patients and able to give relevant information to complete the study. It was also established that the majority of the qualified physiotherapists have been working at Dhaka city. However, some of them also work out of Dhaka as a clinical physiotherapist. The researcher came to the conclusion that the graduate complete physiotherapists who have working experience at least one year have been selected for this study to represent this research purpose.

Ethical consideration: It should be ensured by the researcher that it would maintain the ethical consideration at all aspects of the study. Because it is the crucial part of the all form of research. At first to conduct this study, the research project was submitted to the Physiotherapy Department, Bangladesh Health Professions Institute and obtained approval. During the course of this study, interested subjects were given consent forms and the purpose of the research and the consent form were explained to them verbally in both Bengali and English. For this study, the researcher did not interfere with their patients and clinical practice. They were informed that their participation was fully voluntary and they had the right to withdraw or discontinue

from the research at any time without any hesitation or risk. They were also informed that confidentiality would be maintained. Information might be published in any presentations or writing, but their personal identity such as their name and address will not be mention in the study.

The participants might not be benefited directly from these results and there was no possible hazard of the study, but in future he/she or new generation of physiotherapists will be benefited from the study. They would not be embarrassed by the study. At any time the researcher will be available to answer any additional questions in regard to the study. The participants were informed that the data was collected by written questionnaire. The research was a part of the process and it is only connected with the course module. The supervisor also checked the consent form and questionnaire.

Data analysis: Data analysis is the process of systematically arranging and presenting information in order to search for ideas. The aim of the data analysis is to find out the meaning of the collected information. To explore the influencing factors of stroke rehabilitation, 40 participant's opinion were collected through a structured questionnaire. By this survey a large volume of descriptive and important information gathered. All these results gave a basic idea about the factors influence the progression of stroke rehabilitation positively or negatively.

Results and Discussion

The results were calculated in percentage, frequency and level of influence. Data was presented in a graphical form using a combination of pie chart, bar charts.

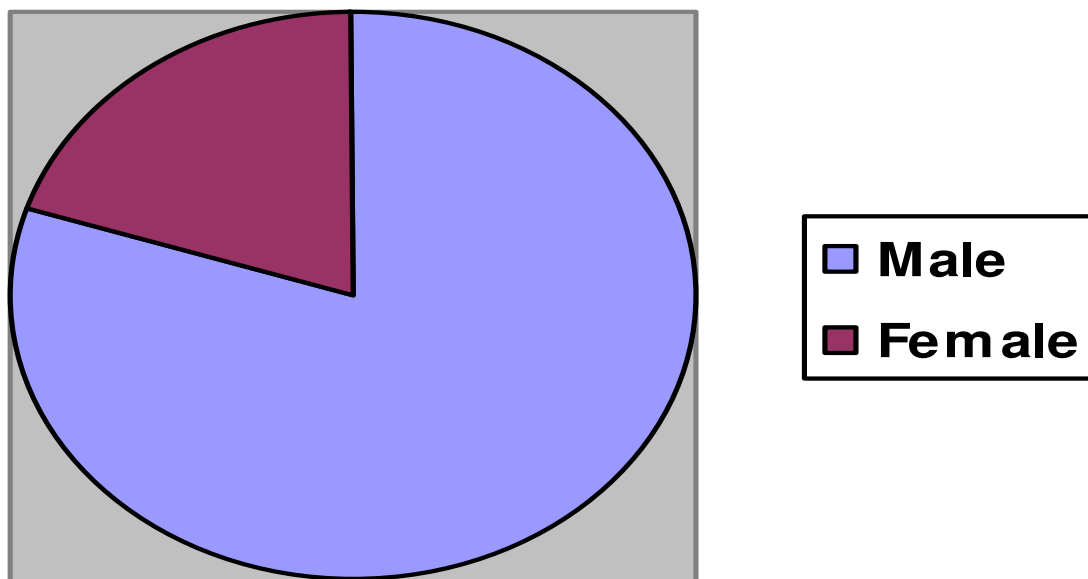


Figure-1
Percentage of the Participant's sex

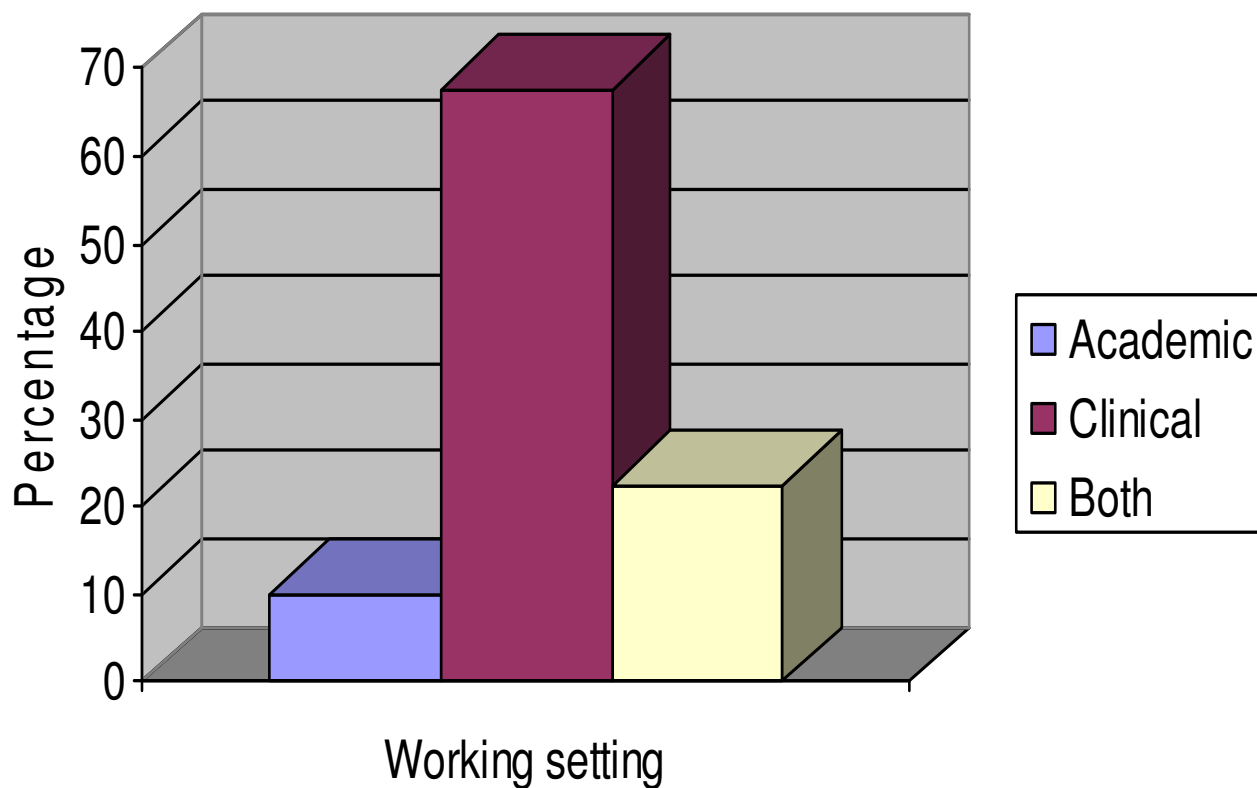


Figure-2
Working settings of the participants

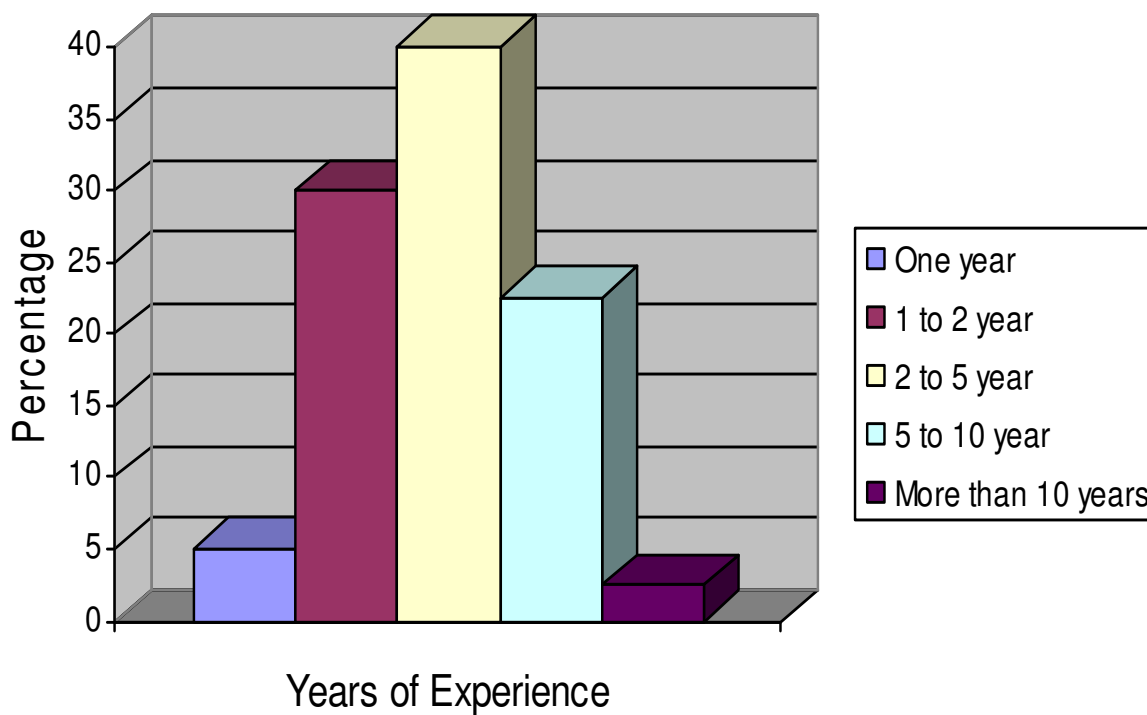
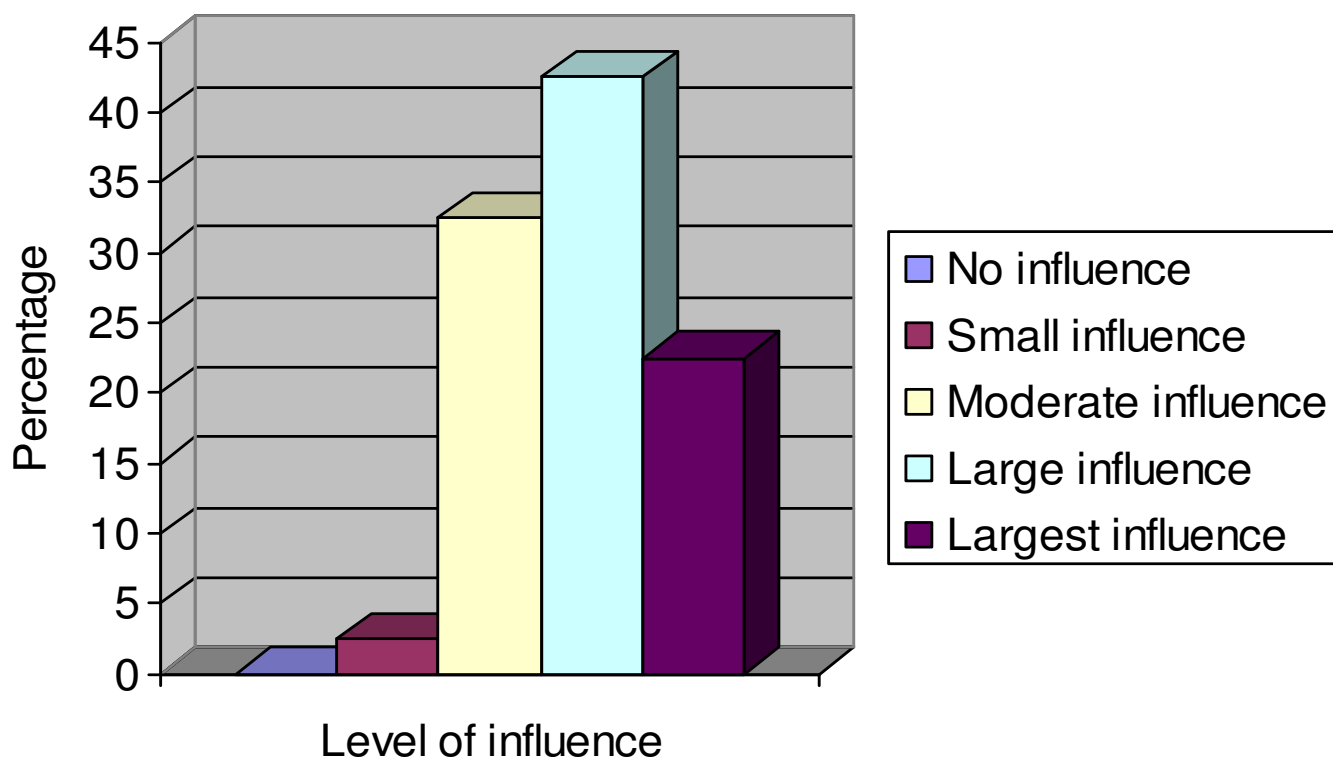
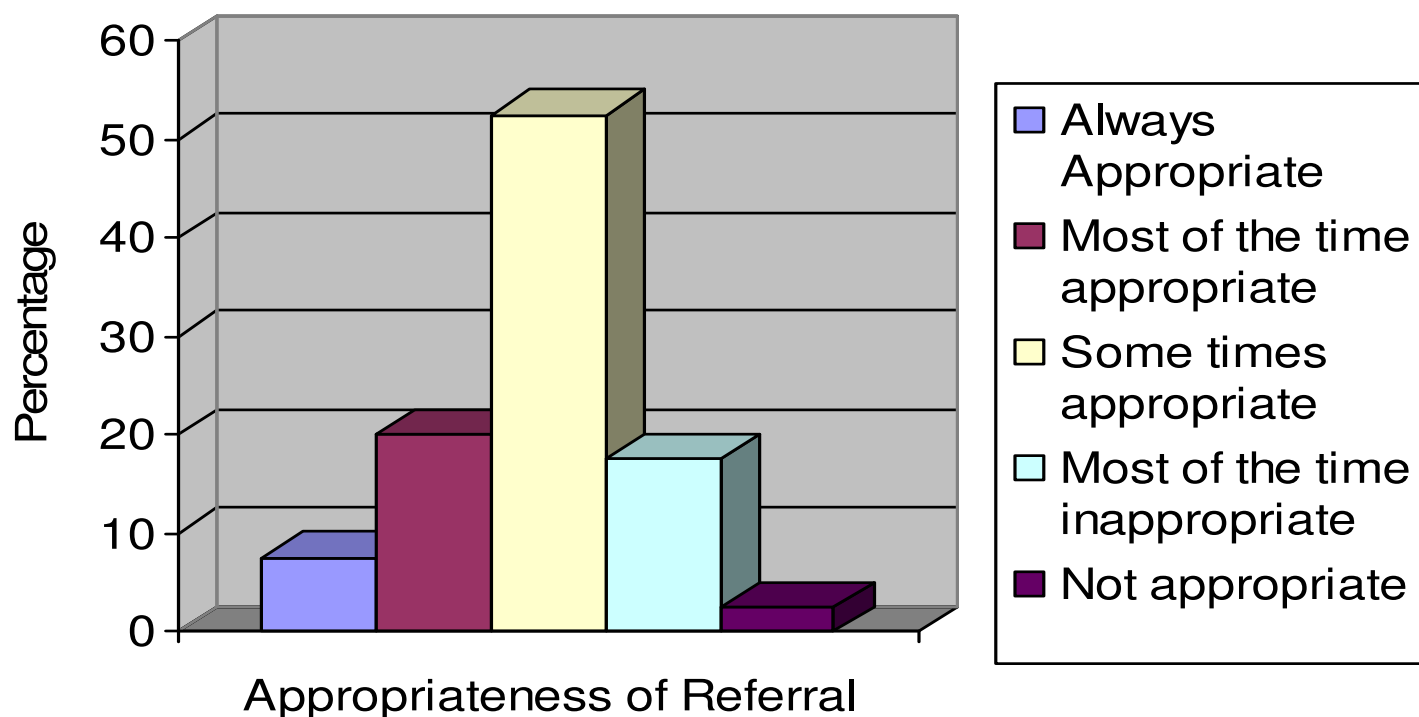


Figure-3
Working experience of participants as a Physiotherapist



Influence of timing of patient referral on stroke rehabilitation

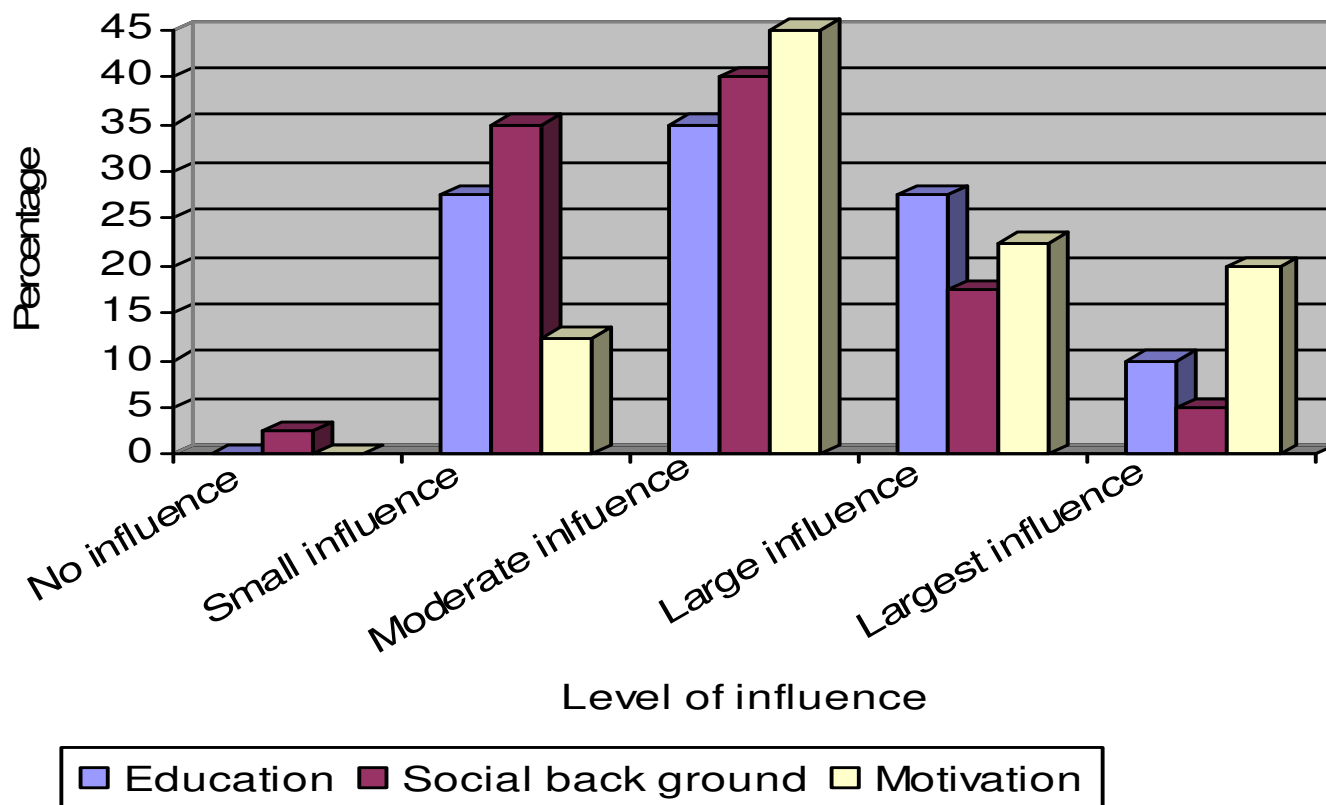


Figure-6
Career related factors

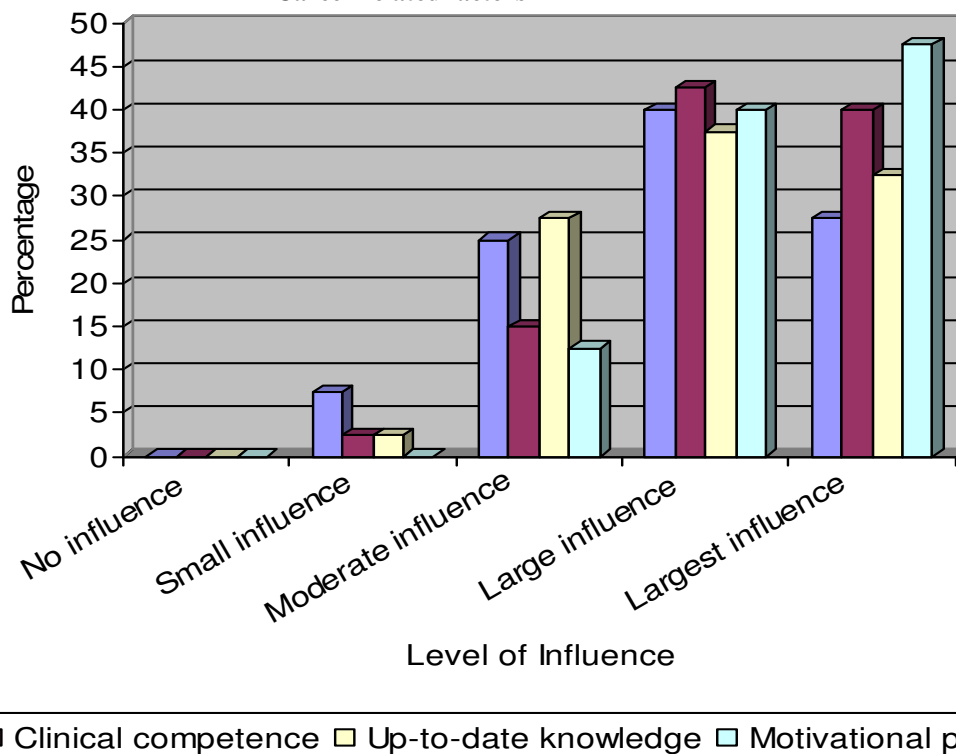


Figure-7
Factors related to Physiotherapist

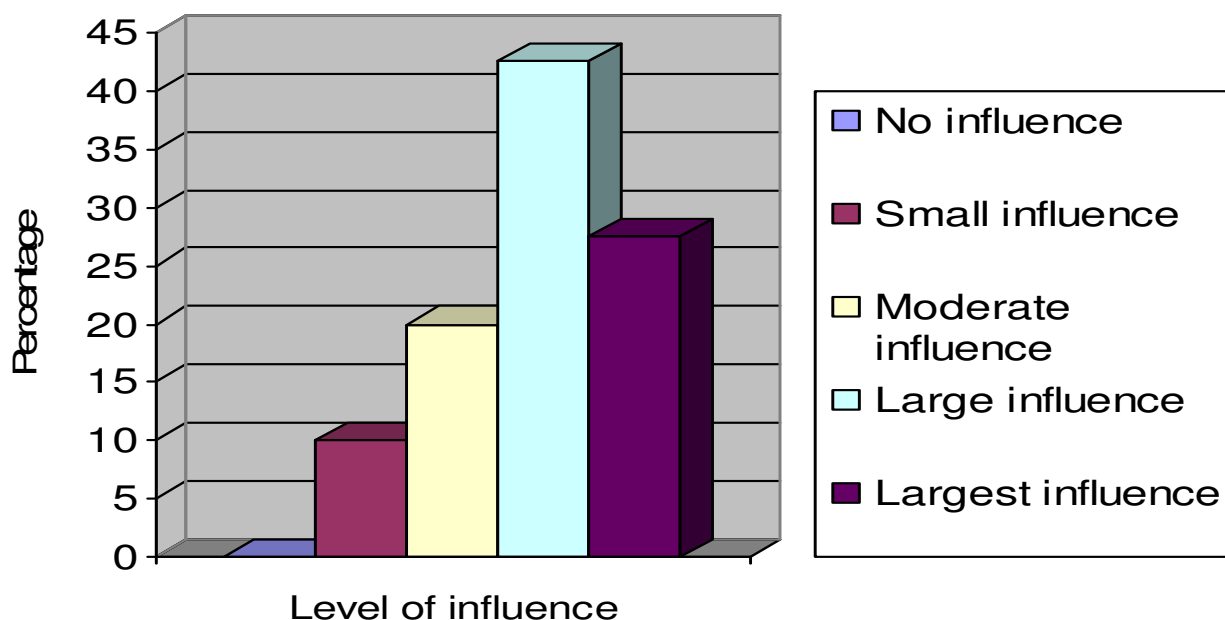


Figure-8
Influence of clinical resources on stroke rehabilitation

Among the total participants, 80% (n = 32) were male and 20% (n = 8) were female. It is shown in figure 1. Of the total participants, approximately two third (67.5%) were working in clinical settings and the remaining participants were either work in academic area (10%) or in both clinical and academic area (22.5%) which is shown in figure 2. Most participants had 2-5 years' experience (40%). A similar participant had either 1-2 years (30%) or 5-10 years (22.5%) experience. Very few had more than 10 years (2.5%) work experience as a graduate physiotherapist at figure 3. Approximately half of all participants (52%) reported that the timing of referral to Physiotherapy was sometimes appropriate. 17.5% of participants reported that the timing of referral was most of the time inappropriate. 20% was reported that timing of referral most of the time appropriate. Very few participants were reported that either always appropriate (7.5%) or not appropriate (2.5%) shown in figure 4. Most participants believed that the timing of referral had either moderate (32.5%) or large influence (42.5%) on stroke rehabilitation 22.5% participants believed that the timing of referral had largest influence on rehabilitation at figure 5. Among the patient related factors and their effect on the progression of stroke rehabilitation, cognitive factors were considered to have the largest influence on stroke rehabilitation, followed by psychological and socioeconomic factors. Among the career related factors, motivation and education of the career were most commonly considered to moderately influence on the stroke rehabilitation. The career's social-back ground was considered to have less influence on progression of the stroke rehabilitation shown in figure 6. Among the factors related to the Physiotherapist, most often motivational power and Clinical competence were considered to have the largest influence on stroke rehabilitation. Up-to-date knowledge was usually considered to have a large influence and experience was

considered to have a moderate influence on stroke rehabilitation. It is shown in figure 7. Most participants believed that clinical resources had either large (42.5%) or largest influence (27.5%) on stroke rehabilitation. Much fewer participants believed that clinical resources had only a small or moderate influence on stroke rehabilitation in figure 8.

When asked about how stroke rehabilitation could be optimized, only more than half of the participants (n = 23) gave suggestions. There were 9 suggestion come out from them. Among the 9 suggestions only 6 suggestions were most commonly given: Use of evidence based practice, Qualified and skillful Physiotherapist, Receiving physiotherapy as early as possible, Establishing appropriate referral system, Better rehabilitation facilities and Multi-disciplinary team approach and other 3 suggestions were Increasing awareness of stroke with seminar /work shop, Continuous professional development course/training and preventing mal practice. The results of this study showed that most participants had 2-5 years' experience and very few had more than 10 years' experience. Physiotherapy training in Bangladesh was first established in 1973 but this was discontinued about two decade Then physiotherapy training was started again in the 1993s. So we can say why qualified physiotherapists in Bangladesh have a limited number of years' experience.

Stroke is a common condition which causes severe disability. Immediately after medically stable it is necessary to refer stroke patients for physiotherapy to regain their maximum functional recovery. Over two thirds of all participants in this study agreed that the timing of referral has a large or moderate influence on the progression of stroke rehabilitation. In Bangladesh the referral system for stroke patients is not good. About half of all

participants reported that referral of stroke patients for physiotherapy was only sometimes appropriate. So it is proved that the referral system for stroke patients in Bangladesh is very poor. Most of the physicians in the country are not aware of physiotherapy and the role of physiotherapist in stroke rehabilitation.

Nearly half of the participants in this study felt that among the factors related to the patient, cognitive factors had the largest influence on the progression of stroke rehabilitation. Cognitive problems have the potential to severely hamper progression of stroke rehabilitation due to low concentration levels, lack of attention, and lack of insights of patients.

More than two thirds of participants felt that socioeconomic factors have a large or moderate influence on the progression of stroke rehabilitation. Socioeconomic factors can affect stroke rehabilitation because of issues associated with social stigma or economic status. In Bangladesh, there is not any stroke rehabilitation center which offers free physiotherapy treatment. Patients with low socioeconomic status may not have the financial ability to continue physiotherapy treatment and then it has a very negative influence on their rehabilitation. On the other hand, patients with high socioeconomic status have the financial ability to get extra physiotherapy service, if they desire, during their rehabilitation.

Just under half of the participants felt that a patient's home environment had a moderate influence on the progression of stroke rehabilitation and one quarter of participants believed this influence to be large. To ensure continuation of rehabilitation activities, it is necessary to make home modifications otherwise many rehabilitation goals may not be possible to achieve. Modifications to the home environment are also helpful to motivate a patient and help them adjust to their new life.

During rehabilitation sessions physiotherapists often give advice and education to patients and also their careers. Careers are often involved in helping patients with home exercises and home advice. If a physiotherapist gives information to a career who has a good level of education and can understand and preserve the information, this will hopefully be beneficial for the patient. However, when a career has difficulties of understanding the information due to low level of education, this information may be less beneficial. About two thirds of participants in this study thought that either the level of education or the level of motivation of the career would have a moderate or large influence on the progression of stroke rehabilitation. Career involvement in a rehabilitation program is very important and also in residential care. However, sometime careers become fatigued due to patient's cognitive or behavioral problems. So family support can be the most important for the stroke survivors that they are wanted. Careers are often also needed to help the patient in their activities of daily living (ADL).

Motivation has good effect on not only in treatment but also in managing in every situation. Usually physiotherapists are good motivators and they encourage patients to perform their activities and they offer psychological support that has a positive effect in rehabilitation. In this study nearly 90% of all participants believed that the motivational levels of the physiotherapist have either large or largest influence on the progression of stroke rehabilitation.

Clinical competence means that ability to find out what is wrong and to make an appropriate response. If physiotherapists have enough competence clinically, patients will receive better treatment and achieve better outcomes. Because therapists know exact diagnostic procedures, proper handling skills, how to manage different situations in the clinical setting. Similar to physiotherapist motivation, over 80% of participants felt that the level of competence of the physiotherapist had a large or largest influence on the progression of stroke rehabilitation.

Long-term experience in the area of neurology, specifically stroke rehabilitation, is helpful to ensure better treatment, rehabilitation and outcome. Because therapists with a lot of experience have very good knowledge about stroke and prognosis. The literature suggests that expert practice in physiotherapy enables better identification of the patient's problems and enables the use of more effective treatment interventions. However, experience is only beneficial if it includes good use of clinical reasoning. In this study just over two thirds of all participants believed the experience of the physiotherapist had a moderate or large influence on the progression of stroke rehabilitation.

A qualification in physiotherapy does not always mean that the physiotherapist is delivering good practice. Physiotherapists should have sound knowledge of current issues on physiotherapy. This means that they must have up to date knowledge about new techniques for better practice. The study showed that about two thirds of participants thought that up-to-date knowledge by the physiotherapist had a large or largest influence on stroke rehabilitation.

The clinical environment should be safe and comfortable for patients. In Bangladesh most Physiotherapy centers do not have enough space, appropriate equipment and the environment is often noisy. This means that providing a good standard of rehabilitation is difficult. In this study nearly 80% of participants felt that the clinical environment had a large or largest influence on the progression of stroke rehabilitation.

Clinical resources (such as appropriate timing, equipment, enough staffs) are very important for successful rehabilitation. Often these resources are limited. This study showed that about two thirds of participants believed that clinical resources have a large or largest influence on the progression of stroke rehabilitation. When asked about how stroke rehabilitation could be optimized, 9 themes were identified from participants'

responses. Of these, 6 were most frequently suggested by participants.

These included use of evidence based practice, qualified and skillful physiotherapist, receiving physiotherapy as early as possible, establishing appropriate referral system, better rehabilitation facilities and multi-disciplinary team approach. The three less frequently suggested responses were: increasing awareness program of stroke rehabilitation, continuous professional developmental course/training and preventing malpractice. Evidence based practice means that what we are found from examination and investigation that leads to sound diagnosis and the possibility of appropriate therapy. Qualified physiotherapists have enough knowledge to diagnose conditions and the appropriate skills to provide effective treatment.

Physiotherapy must begin after stroke as early as possible. Even simple tasks such as exercising paralyzed muscles and turning the person in bed should begin very soon after the stroke. Appropriate referral system is very necessary for stroke patients. As soon as the diagnosis of stroke is established, life threatening problems should be controlled and then the highest priorities of stroke rehabilitation are to prevent recurrence of stroke, manage morbidities and prevent complications. So Physiotherapy can play a vital role in these factors.

For better achievement of rehabilitation, there is a great need for facilities such as consultancy centers, multi gyms, mat exercise facilities, extra therapeutic and electrotherapy rooms, hydrotherapy pools, parallel bars as well as adequate space. Effective rehabilitation relies on a coordinated, multidisciplinary team approach that includes a neurophysician, a general physician, a physiotherapist, a psychologist, an occupational therapist, a speech therapist, a social worker and the patient's career. Regular team meetings, as well as meetings with the patients, his or her family and careers, are essential.

To optimize treatment and prevention of stroke, effective educational campaigns are necessary and these would be helpful to recognize that patients often fail to identify and misinterpret stroke symptom and this is independent of their educational status. Physiotherapy is new, unknown and gradually developed profession in Bangladesh. General publics as well as other health professionals have not enough knowledge about Physiotherapy and working area of Physiotherapist. Most of Physicians try to their patients at hand. On the other hand maximum village people believe in prejudice. If anybody is sick they go to the Kabiraj or jarfuk. Even now most of the people do not understand the necessity of physician and physiotherapy is far away. So awareness program about stroke for general people must be beneficial for stroke survivors.

Malpractice is a specific legal term related to lawsuits alleging various different circumstances leading to damage to a patient. Malpractice suits may allege various mistakes made by physicians or physiotherapists or other medical professionals,

including misdiagnosis, mistreatment, delayed diagnosis, failure to diagnose, surgical errors, medical errors, or various types of negligence. Not all errors in medical diagnosis and treatment are necessarily malpractice, because there are certain risks and margins for error that arise inherently in the practice of medicine. In Bangladesh, there are many physiotherapy assistant works in Neuro area under Physician or qualified Physiotherapist. But they have not the right to assess any patient individually and provide treatment. Because they have not enough competence and knowledge to handle the patient.

Conclusion

This study was performed to find out the factors those are influencing to the progression of stroke rehabilitation. In this study it was found that there are some factors those can affect the rehabilitation process of stroke patient positively or negatively. Among those there were most common factors were motivational power, clinical competence, up to date knowledge, clinical resources, clinical environment, timing of referral etc. Among these factors motivational power clinical competence or up to date knowledge of physiotherapist were considered as mostly influencing factors of stroke rehabilitation. So literature suggests that every physiotherapist should develop these qualities himself or herself. Besides experience of physiotherapist, clinical resources or clinical environment and cognitive problem of patient were also prioritized factors to the progression of stroke rehabilitation. On the other hand social back ground of patients & careers, education of careers and patients were considered as less influencing factors of stroke rehabilitation which would give less concentration during rehabilitation program.

About the successful rehabilitation, physiotherapists suggested that use of evidence based practice, qualified and skillful physiotherapist, receiving physiotherapy as early as possible after stroke, establishing appropriate referral system, better rehabilitation facilities or MDT team could be give most the most prioritized objectives on stroke. Besides it was also suggested that awareness of stroke, CPD program or malpractice might be affect indirectly on the progression of stroke rehabilitation. Finally it can be said that stroke rehabilitation play an important to make able the stroke survivors maximum activities as possible. Though there are some factors those have significant influence on the progression of stroke rehabilitation as suggested by physiotherapists. If these factors are critically considered, it will help to ensure the quality health services for the stroke survivors of Bangladesh, thus directly or indirectly the physiotherapist or even the physiotherapy profession will be benefited.

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