BARRIERS OF STROKE PATIENTS DURING RECEIVING TREATMENT AT CRP

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Session: 2012-2013

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Bangladesh,

February- 2017.

We the under signed certify that we have carefully read and recommended to The Faculty of Medicine, University of Dhaka, for the acceptance of this Dissertation entitled

BARRIERS OF STROKE PATIENTS DURING RECEIVING TREATMENT AT CRP

Submitted by **Ummay Kulsum Urmi,** for the partial fulfillment of the requirements forThe degree of Bachelor of Science in Physiotherapy (B. Sc. PT).

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Declaration

I declare that the work presented here is my own. All source used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any Publication, presentation or dissemination of the study. I would be bound to take written consent from the Department of Physiotherapy of Bangladesh Health Professions Institute (BHPI).

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Acknowledgement

First of all, I am grateful to the almighty Allah for the successful completion of this research. My deepest gratefulness goes to my respected research supervisor Farjana Sharmin, Lecturer of physiotherapy, BHPI and Senior physiotherapist, physiotherapy Department, CRP, Savar for her meticulous advice, encouragement and support from the very beginning to winding up of my study.

I would like to pay my highest gratitude to Mohammad Anwar Hossain, Asssociate Professor of Physiotherapy Department, BHPI & Head of the Department, CRP, Savar for their kind contribution to complete my research.

I am thankful to my honorable teacher Md. Obaidul Haque, Associate Professor and Head of the Department of Physiotherapy, BHPI for encourage me and valuable advice.

I would like to express my gratitude to my respected teacher Md. Shofiqul Islam and Mohammad Habibur Rahman, Assistant Professor of Physiotherapy Department, BHPI for providing me excellent guidelines.

I am also thankful to all of the staff of BHPI Library for their cordial help to find contribution to complete my research.

I would like to express gratitude to the 15 families who shared their great care giving experiences. I also want to express my appreciation for the help and support to all the concerned authorities who allowed me to carry out this study.

Acronyms

ADL Activities of daily living

AHA American Heart Association

AIS Acute Ischemic Stroke

BHPI Bangladesh Health Professions Institute

CRP Centre for the Rehabilitation of the Paralysed

DM Diabetic Mellitus

ICH Intra Cerebral Hemorrhage

QOL Quality of Life

SAH Sub Arachnoid hemorrhage

TIA Transient Ischemic Attack

UK **U**nited Kingdom

USA United States of America

WHO World Health Organization

BMRC Bangladesh Medical Research Council

IRB Institutional Review Board

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Abstract

Purpose: To Explore the barriers of stroke patient during receiving treatment in CRP. ***Objectives:*** To explore socio-demographic characteristics of patient, to find out the barriers of accommodation facilities, personal & economical barriers and environmental barriers. ***Methodology:*** A qualitative study design was used to conduct the study. Fifteen stroke patients were recruited in this study. The sample was selected by convenience sampling method. The data were collected using semi-structured questionnaire form and coded by seven themes; finally the coded data are analyzed and presented qualitative analysis. ***Results:*** Following themes have been emerged on the basis of data analysis. These include, Treatment of stroke patients at CRP is quality full, treatment cost at CRP is expensive, During treatment at CRP schedule barriers is a major problem, Patients have faced many barriers of accommodation facilities, Duration of treatment of stroke patient at CRP is not sufficient, Patients are cooperative with therapist during receiving treatment and Some recommendations of the patients to prevent those barrier.

Keywords: Barriers, CRP, Stroke.

CHAPTER-I INTRODUCTION

1.1 Background

Bangladesh is one of the least advanced and low financial international locations within the global. In Bangladesh, Stroke has been ranked as the 3rd main motive of loss of life after coronary heart disease and infectious illness which includes influenza and pneumonia. This is a main reason for disability worldwide (Islam et al., 2012).

The age balanced yearly passing rate from stroke in UK is around 200 for each 100,000 (12% of all expiries). Every year 16.3 Million individuals experience the ill effects of stroke around the world, among which 11.2 million occasions happen in creating nations like our own and Around 5.8 million Individuals kick the bucket of stroke every year, the two third happens in developing nations (Mondol et al., 2012). In our nation the predominance of stroke over the age of 40 is 370/100000. In our nation male and rural individuals experience the ill effects of stroke more. Stroke is an infection of mind where there is sudden beginning of for the most part central injury because of impediment or burst of a cerebral vein and its symptomatology should keep going for over 24 hours. If not and cured inside 24 hours– this is called TIA (Mohammad, 2013).

The occurrence of cerebro vascular illnesses increments with age and the quantity of stroke is anticipated to increment as the elderly populace develops, with a multiplying in stroke passing in the United States by 2030. Also, continuously the portion of aging population is expanding in Bangladesh thus welcoming numerous maladies, which are because of maturing process (Haque et al., 2012).

Stroke can occur at any age, such as in childhood. Stroke occurs at an equal rate in men and women, but women are extra probably to die. Although men are greater often affected than ladies due to a younger age of onset, this gender distinction becomes smaller with increasing age. Although about two thirds of the affected patients are above 65 years, a stroke can also appear at all ages, even in very young children, and can have many motives (Chowdhury et al., 2017).

Hazard factors for stroke incorporate irreversible or non-modifiable variables like age, sex, coronary illness and modifiable components like hypertension, coronary illness,

DM, hyperlipidemia, smoking, abundance Liquor, polycythemia and oral prophylactic pill. The dismalness and mortality from cerebrovascular illness has been reduced lately generally because of better acknowledgment and treatment of fundamental blood vessel and heart infection including hypertension (Hossain et al., 2011). In youthful age amass smoking, transient ischemic assault, hypertension, valvular coronary illness, oral preventative pill and in seniority gather smoking, transient ischemic assault or stroke, hypertension, Ischemic coronary illness, diabetes mellitus and dyslipidemia were discovered critical hazard factors for improvement of stroke. So change of hazard variables may decrease the rate of stroke (Miah et al., 2012).

Additionally, idleness is presently perceived as a modifiable hazard factor for repetitive stroke and for cardiovascular malady. Stroke is a main source of long haul inability while repetitive stroke and cardiovascular ailment are the main sources of mortality among stroke survivors. Just about 30% of strokes happening every year are intermittent strokes (Simpsons et al., 2011).There are various danger elements of stroke. Among them, some are non-modifiable, similar to age, sex, race, and numerous others. Also, a couple are modifiable like hypertension, diabetes mellitus, ischaemic heart disease(IHD), valvular coronary heart disorder, smoking, dyslipidaemia, asymptomatic carotid bruit/stenosis, aortic curve atheromatosi (Amin et al.,2014).

Impediment or break of a vein in the mind causes stroke. Impediment could be because of atherosclerosis or emboli. The burst of the vein is because of hypertension or because of inborn deformity in the vessel. There are 2 sorts of stroke-I) Ischemic, and II) Hemorrhagic. Hemorrhagic additionally 2 sorts intra cerebral drain (ICH) and subarachnoid discharge (SAH). 85% strokes are ischemic, 10% are intracranial hemorrhages (ICH) and 5% are subarachnoid hemorrhages (SAH) (Iqbal et al., 2010).Because of the enormous weight that stroke puts on our general public, there have been real endeavors to recognize modifiable hazard factors that could diminish the occurrence of ischemic stroke (IS) (Karim et al. 2016). The regular elements are: Hemiplegia, Dysarthria, trouble in gulping, cranial nerve paralysis, cerebral pain, retching, Shaking, Obscuring of vision, Neck solidness, Tangible misfortune, Trouble in strolling and so forth (Mohammad, 2013).

Chronic ischemic stroke (AIS) is one of the main sources of mortality and incapacity around the globe. Incapacity among stroke patients is predominantly due to delays in

treatment, which frequently causes conceivably preventable complexities (Shin et al., 2017).

Stroke influences for the most part individuals matured more than 65 years, and atherosclerosis prevails as the principle etiopathogenic factor in ischemic stroke (IS) (Yamamoto, 2012). A stroke is brain attack, or a CVA is a sudden loss of life of brain cause with the aid of a lack of supply in oxygen to the brain. There are 2 essential kinds of stroke- Ischaemic stroke or cerebral infarct (80% of strokes) consequences from a blockage or a reduction of blood glide in artery that substances brain. They are caused either by a clot (thrombus) which blocks the blood vessel or by the buildup of plaque often due to ldl cholesterol within the arteries which narrows vessel resulting in a loss of blood flow. Haemorrhagic stroke are due to the rupture of an artery inside the brain triggering an intracerebral haemorrhage (15% of strokes) or to the rupture of aneurysm or sub arachnoid haemorrhage (5% of strokes) (Braunwald et al., 2003).

The disorder for the most part happens in moderately aged and elderly. It is generally remarkable in youthful grown-ups yet the impact might crush for the influenced individual and their families. The frequency of stroke in youthful grown-ups is variable among various investigations and studies Like in more established grown-ups, stroke in more youthful grown-ups is ordinarily classified as essentially ischemic or hemorrhagic (Siddique et al., 2009).

Transient ischemic assaults are uncommon in youthful age. Hemorrhagic strokes are moderately more typical. The reason can be found in 55-93% youthful patients and are more heterogeneous and contrast significantly contrasted with the elderly and furthermore as in newborn children and youngsters. Ischemic etiologies incorporate cardio embolic, atherosclerotic infection, and non-atherosclerotic cerebral vasculopathies. Hemorrhagic strokes incorporate subarachnoid and intracerebral sorts. Up to 45% of strokes in youthful grown-ups are because of unconstrained intracerebral drain. Vascular distortions, aneurysms, hypertension, illegal medication utilize, coagulation anomaly, eclampsia are the primary driver. In instances of subarachnoid drain, cracked aneurysm, arteriovenous contortion, venous angiomas are mindful. Of specific note in youthful grown-ups are stroke causes, for example, haematologic disorders, substance abuse, trauma, dissections, oral contraceptive use, pregnancy and postpartum states, and migraine (Miah et al., 2008).

Stroke is a main source of mortality and dismalness in both created and also creating nations like our own. The clinical picture and the study of disease transmission is variable relying upon the site and degree of injuries. In created nations different undertakings are standing out for early conclusion and proper administration to diminish stroke related mortality and horribleness. Be that as it may, the situation in our nation is extraordinary. As a rule, we need to depend to a great extent on clinical determination (Siddique et al., 2009).

Stroke is the commonest neurological confusion of grown-up life and stays third driving reason for death, after the age of 40. Of the a huge number of stroke survivors every year, roughly 30 percent require help for exercises of day by day living, 20 percent require help with ambulation and 16 percent require institutional care. As a rule, its rate is 150 to 300 for each 100,000 populaces and commonness is 600/100,000 populace. Of all strokes, 85 percent are because of ischemic dead tissue and 15 percent are because of drain. The most elevated frequency of stroke seen is 7/1000 at Novosibirsk, Russia, and least is 2.4/1000 at Dijon, France. In Bangladesh the frequency of stroke is 700,000 every year. Stroke causing around 4 million passings for every year and is the most essential single reason for serious incapacity in individuals living in their own home (Amin et al., 2014).

In Bangladesh there is no sufficient information on occurrence and mortality from stroke and in addition youthful stroke. In any case, the gravity of the circumstance can undoubtedly be surveyed by the high frequency of healing center affirmation. It is the commonest neurological issues in connection to mortality and clinic affirmation and long haul handicap in most industrialized populace, which devastatingly affects family and country (Miah et al., 2012).

Stroke can influence any piece of the mind and can cause dysfunctions including lost physical capacities and subjective and perceptual issues. Natural boundaries experienced by stroke patients were for the most part led in created nations (Swann, 2008). Stroke patients encounters natural obstructions which are regularly understood as physical yet in addition incorporate bias, generalizations, firm authoritative methods and practices, difficult to reach data, structures and transport (Urimubenshi and Rhoda, 2011).

Expanding interest in physical action among individuals with stroke keeps on being a noteworthy test for social insurance experts. Individuals with stroke are particularly helpless against the impacts of an inactive way of life and would profit extraordinarily from expanding the measure of physical movement they routinely acquire. Tragically, choices for exercise and diversion are frequently restricted by various individual (e.g.- inspiration, self-adequacy) and natural or office obstructions (e.g.- difficult to reach projects, hardware and administrations offered in group entertainment offices) (Rimmer et al., 2008).

Various hindrances exist that can obstruct ideal hazard calculate administration stroke patients. These incorporate obstructions in stroke training/education, wellbeing locus of control, social help, and also hindrances identifying with medicinal information, drugs, and healthcare access (Lynch et al., 2008). According to the Healthy People 2010 understanding and Improving Health chapter "Disability and Secondary Conditions" noted that the fundamentally bring down rate of interest among individuals with incapacities might be identified with an assortment of natural and individual hindrances, including structural obstructions, authoritative arrangements and practices, segregation, and social states of mind. These obstructions adequately decrease individual decision choices, restrain support in sound and dynamic ways of life, and anticipate individuals with stroke and different incapacities from completely partaking in their groups. Distinctive classifications of natural or office obstructions identified with investment in physical action among individuals with physical incapacities; these difficulties incorporated the assembled condition, cost of administrations or projects, gear, strategies, data, and instruction and preparing of wellness office staff (Rimmer et al., 2008).

Three noteworthy topics of the natural hindrances experienced physical, social and attitudinal ecological obstruction. Physical condition issues, for example, out of reach portals, washrooms, and transportation frameworks, with key obstructions including entryway limits and absence of handrails were recognized as hindrances to group cooperation among survivors of stroke. Arranging stairs and limited entryways have likewise been distinguished as significant hindrances to part execution in the home for stroke survivors. Social natural hindrances experienced by stroke patients incorporate having minimal social help from companions attributable to stroke-related inability and

having a restricted informal community. Attitudinal ecological hindrances to stroke patients incorporate negative practices; for example, disgrace (Urimubenshi and Rhoda, 2011).

Stroke-actuated cerebrum harm cannot be switched; thus, the Restoration is thought to be the foundation of stroke administration, with physiotherapy being the most perceived and by and large acknowledged treatment. As a rule, the impact of stroke is very significant, influencing a person's ability to do their standard work and portability. Subsequently, the premier point of physiotherapy is to augment one's capability to recoup their ability to move about and keep on carrying on with their activities of daily living (ADL) (Ali et al., 2015).

1.2 Rationale

Stroke is a typical neurological condition, for the most part found in creating nation. Step by step there is expanding the quantity of stroke persistent, in various ranges. Bangladesh is a developing country and trying to develop health care system so it is important to know the study creates and overview about barriers of stroke patients during receiving treatment in CRP. Physiotherapy is a significant part of this multi-disciplinary team.

As the physiotherapy profession is newly introduced in Bangladesh, many people are not aware of its purpose. But it is an important part of health care to prevent diseases as well as to improve or maximize independence in people with disabilities.

As many people come CRP for receiving treatment, they face many barriers. If these barriers are not focused, awareness about peoples problem can not be raised. So, to improve the quality of treatment and to lessen the patients sufferings, it is important to focus on the patients barriers which they face.

Thus physiotherapy can play an absolute role in preventing stroke and aware the people about stroke which is essential to strengthen our profession.

In CRP schedule, accommodation, and social barriers can affect the person's treatment. Schedule barriers are the major barriers among all of the barriers. In my research I will try to show the present status of the barriers of stroke patients during receiving treatment in CRP according to patients statement.

This study will help to reduce the barriers of stroke patient during receiving treatment at CRP and minimize the gap to prevent those barriers.

1.3 Research question

What are the Barriers of stroke patient’s during receiving treatment at CRP?

1.4 Objectives

General objective

To find out the barriers of stroke patient's during receiving treatment at CRP.

Specific Objectives

- To explore socio-demographic characteristics of patients.
- To find out the quality of treatment that is provided to stroke patient.
- To find out the schedule, accommodation, social, attitudinal & physical barriers.
- To find the patients opinion about the barriers during treatment.

1.5 Operational definition

Stroke

According to the WHO- A rapidly developed clinical sign of focal disturbance of cerebral function of presumed vascular origin and of more than 24-hours duration.

TIA

Means Transient ischemic attack. If the recovery occurs within 24 then it's called TIA.

Disability

Any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being resulting from impairment, e.g. difficulty in walking after lower limb amputation.

Spasticity

Is a feature of altered skeletal muscle performance with a combination of paralysis, increased tendon reflex activity and hypertonic .It is also colloquially referred to as an unusual "tightness", stiffness, or "pull" of muscles.

Hemiplegia

Paralysis of one side of the body.

Hemorrhagic

Loss of blood due to tearing of blood vessel.

Hypertension

Increase of blood pressure above normal limit.

CHAPTER-II LITERATURE REVIEW

Stroke is a chief purpose of long-time period disability and has potentially good sized emotional and socioeconomic consequences for patients, their families, and health services. Stroke is the 0.33 leading cause of loss of life in Bangladesh. The arena health company ranks Bangladesh's mortality charge due to stroke as wide variety 84 within the international. The stated prevalence of stroke in Bangladesh is 0.3%, although no facts on stroke prevalence had been recorded (Islam et al., 2012).In step with the WHO examine cerebro-vascular sicknesses were recognized as one of the principal purpose of the misplaced DALYs (incapacity-adjusted lifestyles years) global. Stroke is an vital and widely known purpose of incapacity and physical impairment amongst adults all-over the arena (Ali et al., 2015). Serving a stroke can be a long term procedure that influences many factors of people lifestyles. In reality, stroke is a main cause of disability internationally (Lynch et al., 2008).

Transient ischemic attacks are rare in young age. Hemorrhagic strokes are relatively more common. The cause can be found in 55-93% young patients2-4 and are more heterogeneous and differ dramatically compared to the elderly and also as in infants and children. Ischemic etiologies include cardio embolic, atherosclerotic disease, and non-atherosclerotic cerebral vasculopathies. Hemorrhagic strokes include subarachnoid and intracerebral types. Up to 45% of strokes in young adults are due to spontaneous intracerebral hemorrhage (Miah et al.,2012).The hazard factors show in the stroke cases included hypertension (display in 58.62% of the stroke cases), cigarette smoking (53.79%), lipid issue (48•01%), heart illnesses (25.75%), DM (20.01%), and past history of stroke (10.61%) (10) (Islam et al., 2013)

The most typically familiar treatment to rehabilitate sufferers with stroke is physiotherapy. The present review is a try to provide an explanation for the effect of improved exercise remedy time (physical or occupational), in comparison to the regular duration of treatment plans in sufferers with stroke that help a patient situations (Ali et al., 2015).While rehabilitating humans after stroke physiotherapist frequently favor a selected method. This method is theoretical assemble primarily based a series of ideas

and hypotheses. There are 2 technique “motor re-gaining knowledge of and the bobath idea” (Pollock et al., 2008).

The role of bodily activity inside the prevention of stroke is of great interest because of the excessive mortality and tremendous effect of stroke-associated morbidity on the person and on healthcare sources. The usage of bodily hobby as a therapeutic approach to maximize functional healing inside the rehabilitation of stroke survivors has a developing evidence base. Exercise and physical hobby have a growing proof that the primary and secondary prevention of stroke and in stroke rehabilitation (Gallanagh et al., 2011).

The impacts of stroke on the stroke survivor are significant and cannot be seen sufficiently from a solitary approach or perspective. Or maybe, different methods for understanding the experience of people with stroke ought to be viewed as .Individuals with stroke keep on engaging in higher rates of inactive conduct and have fundamentally bring down rates of physical wellness and a more slender edge of wellbeing than overall public (Salter et al., 2008).

Restoration of stroke casualties is a critical therapeutic and social need. The sequelae of stroke present themselves as neurological, intellectual and behavioral issue. The points of recovery are-1) Change of engine, discourse, subjective and other hindered capacities, 2) Mental and social re adjustment of patients to reestablish useful self-governance, social action and relational connections, 3) Come back to the exercises of day by day living. Recovery can be expensive, the essential standards of restoration are 1) precisely choice the patient, 2) start mid, 3) be methodical, 4) develop in stages, and 5) Incorporate the sorts of treatment particular to the deficiency (Pang et al., 2006).

Recovery for hemiplegic stroke incorporates sorted out multidisciplinary strong administrations that start 48 hours after beginning in stable patients. Inpatient and outpatient restoration attempts to the benefit of patients and families in a general sense however the viability of every part of care misses the mark regarding proof based practice measures. Inside the previous 12 years, observational bases for restoration hones have created in parallel to the development of neuroscientific information about

fundamental systems for engine control, cognizance, learning and memory. The neurobiology of restoration may prompt enhanced strategies for ahead of schedule and late remedial mediations to diminish physical and subjective hindrances and utilitarian handicaps. The neurobiology of restoration prompted neural adjustments has created from tests in creature models and from neuro physiological and neuro imaging thinks about in patients after central mind injuries (Dobkin and Dorsch, 2013).

Home physiotherapy appeared to be more compelling and more asset effective than day doctor's facility participation. They proposed that home physiotherapy ought to be favored recovery strategy for aftercare of stroke patients (Knecht and Oster, 2011). The administration of stroke continues properly beyond the acute phase in hospital.' Long-term follow-up is required to establish whether good points made all through health facility cure are maintained after discharge. Prolonging the advantages of short-term good points in functional outcome thru the intervention of a stroke unit requires that all the hyperlinks in the chain of stroke rehabilitation are maintained, consisting of the proper orientation of patients' households earlier than discharge from hospital (Ali et al., 2015).

An encouraging start to recovery, for example, detached appendage movement, is especially essential to forestall thromboembolic and pneumonic difficulties. The preparation of patients to repay with the unaffected arm or legs has been a pillar of restoration. Physical, word related and language instructor principally fabricates abilities and change the earth to keep up patients at home with as meager care bolster as could be expected under the circumstances. There are a few distinctive ways to deal with physiotherapy treatment after stroke at show time, Bobath approach is utilized around the world (Pollock et al., 2008).

Neurological restoration means to lessen debilitations and incapacities so people with genuine stroke can come back to support in normal self-care and day by day exercises as autonomously as plausible (Dobkin and Dorsch, 2013). Experience and preparing actuated physiological and morphological pliancy after stroke; more grounded synaptic associations emerge between gatherings of neurons that speak to more talented development. Cortical neurons release at various rates relying upon the headings,

speeding up and power of development into space for coming to or venturing. With new requests and preparing, these neurons can speaks to various developments tactile criticisms; for example, proprioception crucially affects engine capacity at cortical and spinal levels as it reshapes sensorimotor joining. Focal controls developments communicate with the fringe engine framework and condition and utilize contribution from these associations to design and alter a development (Harrison and Palmar, 2015).

Experience and getting ready impelled physiological and morphological malleability after stroke, more grounded synaptic affiliations rise between social affairs of neurons that address more skilled advancement. Cortical neurons discharge at different rates depending upon the headings, accelerating and energy of advancement into space for coming to or wandering. With new demands and setting up, these neurons can addresses different improvement's material feedback, for instance, proprioception significantly influences motor limit at cortical and spinal levels as it reshapes sensorimotor joining. Central controls advancements speak with the periphery motor structure and condition and use commitment from this relationship to plan and modify an improvement (Gallanagh et al., 2011).

Problem solving, supporting social and psychological services, removal of architectural barriers to mobility, braces and other orthotics and devices such as wheelchairs and walkers continue to play an important part in helping patients adapt to disability (Dobkin and Dorsch, 2008).Rehabilitation program are effective in stroke treatment and that the duration of treatment cannot be established in advance (Paolucci et al., 2001). Ideally treatment for stroke should improve patient’s quality of life (QOL) by reducing the long term consequences of the event (Lynch et al., 2008).The worldwide stroke pestilence proceeds with lopsided weight present and expanding among low-wage nations. There is an earnest requirement for better systems to convey productive and powerful care, while diminishing variations between nations, in view of the societal weight postured by stroke (Salinas et al., 2016).

The WHO reported that in the future stroke can be a cause of economic burden in Bangladesh. The situation is compounded by the fact that 40·30% of Bangladeshi are already reported to be living in poverty (Islam et al., 2012).

Of every single neurological condition, stroke may prompt the most long haul handicap. Handicap has been characterized from numerous points of view. By and large, incapacity is an element of the body, brain or faculties that can influence a man day by day life. Any of all ages can have a handicap. Individuals of all races and ethnicities can have incapacities (Ali et al., 2015). U.S public health service says that disabilities by age group - < 15 years=7.8%, 25-44 years=13.4%, 45-54 years=22.6%, > 80 years= 73.6% (U.S. Public health). Physical activity participation among people with stroke and other disabling conditions is substantially lower than in the general population. Several reports have noted that a sedentary lifestyle can precipitate functional decline in persons with stroke. Reduced cardiorespiratory fitness associated with a lack of physical activity may be a secondary condition that limits the transfer of walking skills obtained during rehabilitation to the community. Similarly, inadequate amounts of exercise can accelerate a person functional decline and limit his or her ability to work, recreate, and engage in community events. Some barriers can affects many problems that can hamper a patients rehabilitation such barriers are- cost of fitness programs, transportation, lack of awareness and understanding of where or how to exercise, physical barriers, environmental barriers, attitudinal barriers etc. (Rimmer et al., 2008).

People with disabilities face many challenges including- Mobility, accessibility, social barriers communication. Stroke affects mainly people aged over 65 years (Yamamoto, 2012).

Environmental barriers experienced by stroke patients were mainly conducted in developed countries. The findings from the related studies can be divided into physical, social and attitudinal environmental barriers. In Rwanda prevalence and incidence of stroke is 1.7% and 0.22% respectively. Five participants (50%) were females and other five (50%) were males. The participants were aged between 24 and 79 years (mean age = 56.3years, SD = 16.9 years) (Urimubenshi and Rhoda, 2011). In England Harrison and palmer says that 11 participants was interviewed face to face in which 5 male and 6 female. The mean age of participants was 68 years old (Ranging from 59 to 85) (Harrison and Palmer, 2015). In Taiwan 76 members in which 39 are men and 37 ladies; mean age was 59.9 (Huang et al., 2009). In Bangladesh Miah et al find that 102 patients 17 was young adult and 85 was old age group. Ages of young adults were 39. 67 ± 6.37

years and old age group was 65.06 ± 11.24. Male in young was 41.17% and female was 58.82%, in old age male was 65.88% and female was 34.11% (Miah et al., 2012).

Urimubenshi and Rhoda's article says that half of the members (half) had more than elementary school training. In Rimmer et al., article 83 members their instructive status are-Not as much as secondary school (n=26), secondary school (n=35), school (n=32), school or higher (n=7). In Africa among the 100 members there instructive status are-not as much as secondary school degree (n=32), secondary school degree (n=44), advanced education (n=4), graduate degree (n=4) (Rimmer et al., 2000).

In Harrison and Palmer article barriers are – Location and transport, ability and concentration to comprehend complex information, fatigue, Communication impairment. Location and transport barriers one person says that- Where I live I'm quite remote from the major hospitals…if I were much more close to them I might be much more , another person says that- I am so far away I cannot, which is very frustrating. Yeah, and plus I can no longer drive because of my stroke. One person illustrated about the ability and concentration to comprehend complex information he said - I tend to speak a bit less because the really technical subjects are more tricky so I'm listening very hard to think what they're actually talking about…sometimes at those meetings I feel rather out of my depth. In communication impairment one person says that- You have a problem of, if somebody had a difficulty with speech and it's harder for them to put their point across (Harrison and Palmer, 2015).

Rehabilitation professionals commonly believe that motivation of patients has an important role in determining outcome, 1–3 despite the lack of a shared understanding of the term "motivation. Maclean says that 22 patients with stroke who take rehabilitation 14 with high motivation for rehabilitation and eight with low motivation. Some factors are necessary for motivation 1) Understanding rehabilitation, 2) Comparisons with other patients, 3) Information and support etc. (Maclean et al., 2000).

Environmental barriers can be classified into three major themes which are social, attitudinal and physical barriers. The subthemes related to social barriers as described by the participants were lack of social support and inaccessible physiotherapy services.

Lack of social support there was mixed feelings with regard to social support. When asked if the society was supporting them, the participants described family members and other people to be supportive, but some participants reported lack of support from the relatives since having stroke, and others felt that the support was decreasing as time progressed. For example, a participant said that she was not supported by the family members: "All my relatives have turned away from me…they do not care for me. I look after myself because I don't have anyone to take care of me". Another says- " now, I do not respect the physiotherapy appointments because my parents cannot continue to pay the transport fees three times a week…just after I got sick they were able to pay all the transport fees three times a week, but now they cannot…money is finished" (Urimubenshi and Rhoda, 2011).

When rehabilitating; people after stroke physiotherapist often favor a particular approach. This approach is theoretical construct based on a series of ideas and hypothesis. There are 2 approach "motor re-learning and the bobath concept" (McCluskey et al., 2013).

Over half of all stroke survivors have continuing problems with mobility. Although not all these problems arise from the stroke may doctors and patients think that physiotherapy may help (Siddique et al., 2009). The remarkable decline in stroke mortality in some countries during the last decades is predominately due to a decrease in incidence and only to a lesser extent to an increase in survival rates (Ernst, 1990).

In Germany, a step wise (phased) model for rehabilitation for stroke patients prevails, Emergency care in a stroke unit is called phase A, while early neurological rehabilitation constitutes phase B of treatment and rehabilitation. In phase C of post stroke rehabilitation, patients can actively participants in their therapy but still need medical treatment and nursing assistance. Phase D is the phase right after early mobilization. Phase E consist of occupational reintegration. Phase F of continuing measures to support maintain or improve function. Common complications of stroke in elderly patients are- Falls, Incontinence, Delirium, Depression, Dysphagia, Pulmonary embolism, Psychological problems, Drug side effects and interactions (Knecht et al., 2011).

Stroke is a leading reason of mortality and morbidity in each developed as properly as growing nations like ours. The medical image and epidemiology is variable depending on the site and extent of lesions. In developed international locations more than a few endeavors are in the way for early diagnosis and impressive administration to reduce stroke associated mortality and morbidity. But the scenario in our country is different. The management of stroke continues well beyond the acute phase in hospital. Long-term follow-up is required to establish whether gains made during hospital treatment are maintained after discharge (Garraway et al., 1980).

The application of evidence for stroke prevention varies considerably. Socioeconomic differences in stroke danger have been viewed in many countries, but it is now not clear whether or not these differences can be accounted for by using variations in risk factors. Ischemic coronary heart disease and cerebrovascular disorder are the 2 leading causes of mortality globally and account for well over 20% of all deaths. Ischemic coronary heart disorder and cerebrovascular disease also result in massive long-term morbidity and are leading reasons of common disease burden

(Straus et al., 2002).

Exercise and physical activity are useful tools in the rehabilitation and the functional recovery of patients who have suffered a stroke. In addition, physical activity potentially provides protective benefits in the prevention of stroke, which may extend beyond the positive effects on traditional cardiovascular risk factors. Based on the available evidence, the American Heart Association (AHA) recommends that stroke survivors should undertake: strength training to increase independence in activities of daily living, flexibility training to increase range of movement and prevent deformities, and training to enhance balance and coordination. The AHA advises that each of these exercise modalities should be carried out twice or three times per week with the view to improving functional outcome after stroke (Gallanagh et al., 2011).

CHAPTER-III METHODOLOGY

3.1 Study design

Qualitative research approach was applied to gain understanding and explore the barriers of stroke patient during receiving treatment in CRP. Semi-structured face to face interview was conducted among the stroke patients for getting a clear idea about the socio-demographic characteristics, accommodation facilities, personal and economical barriers, environmental barriers and their suggestions for improvement of treatment.

3.2 Study Site

The study was conducted at Neurology Unit, Centre for rehabilitation of the paralyzed (CRP) at Savar, Dhaka.

3.3 Study Population

Stroke patients during receiving treatment at Centre for rehabilitation of the paralyzed (CRP).

3.4 Sampling Methods

The samples were selected by convenience sampling method.

3.5 Inclusion Criteria

- Stroke patient who receive treatment in CRP,
- Stroke patients with age between 40 to 70 years,
- Male and female stroke patients both were the participants,
- Subject who are were willing to participate in the study,
- Stroke patient who are medically stable,
- Stroke patient who do not have cognitive problem.

3.6 Exclusion Criteria

- Those who were not interested,
- Age < 40 years and >70 years
- Those who are medically unstable.
- Those who have cognitive problem.

3.7 Sample Size

Fifteen (15) stroke patients receiving treatment in Neurology Unit of Centre for rehabilitation of the Paralyzed (CRP) were interviewed.

3.8 Data Collection Tools

A tape recorder was used during the interviews to record the conversation. Simultaneously pen and papers were also used to write down field notes.

3.9 Method of Data Collection

Data were collected by conducting face to face interviews providing a semi structured questionnaire form.

3.10 Procedure of Data Collection

Semi-structured interview questions were used in this study. The interview was recorded using a tape recorder by taking permission from the patients. Audiotape was used to record the all interviews to discover exact feeling, attitude and emotions of the participants during interviews. The interview was conducted in Bengali as though they can understand the questions easily. Face to face interview was conducted because this may provide higher response than other data collection methods. Every interview lasted for 30-40 minutes. Interview continued until saturation point was reached, that is no major new insights were being revealed and there was repetition of the same issues with different respondents. Data was collected in between 15th April 2017 to 1st may 2017. Each data was collected carefully and confidentially was maintained. Each participant provided particular time to collect data. Each questionnaire took approximately 30-40 minutes to complete.

3.11 Data Analysis

The data analysis mainly involved the transcript of the interviews, identifying themes and then incorporating those themes into the next stage of data collection. Same questions were asked to the participants by preparing a semi structure questionnaire. The questions were analyzed as the first step of data analysis. For a better analysis, the individual responses were read thoroughly for several times to identify the actual meaning and themes from the responses. Finally seven themes were listed and codes were developed from the list. According to the codes, the differences between each

other were detected. The codes were also defined clearly with their actual meaning. For that reason, overtime the participant's perceptions were coded carefully according to their actual meaning and followed in each question. The next step is the content analysis of the topic. Here the researcher carefully divided the topic into some categories. Finally theme will be known from each category.

3.12 Ethical Consideration

The Research proposal was submitted to the ethical committee that Institutional Review Board (IRB) and approval was obtained from the Board. Bangladesh Medical Research Council (BMRC) and World Health Organization (WHO) guideline also were followed to conduct the study. The protocol initially approved by ethical review committee of Bangladesh health professional institute (BHPI) Savar, Dhaka. Written informed consent was taken at the time of enrolling the respondents. However verbal consent was taken when required. In consent form, the title, aim of the study, data collection procedures, required time for data collection, confidentiality and anticipated use of the result of the study was written in plain and simple Bangla language and it was brief to each respondent before data collection. All respondents were informed that they are free to leave or to refuge to take part in this study at any time. The personal information of the respondents was kept totally confidential. The information given by the respondents were analyzed using code number so that nobody can identify them.

CHAPTER-IV RESULTS

4.1 Participants Details

Fifteen stroke patients both male and female were included in this study. Among, the participants, seven participants were female and eight were male. The mean age was 48.1with minimum age 40 years and maximum 70 years (Table-1).

Table-1 Participants details

Patient's No.	Age	Sex
No.1	52	Female
No.2	45	Female
No.3	40	Male
No.4	55	Female
No.5	60	Male
No.6	52	Male
No.7	40	Male
No.8	40	Female
No.9	42	Female
No.10	45	Female
No.11	43	Male
No.12	40	Male
No.13	57	Male
No.14	40	Male
No.15	70	Female

4.2 Socio-demographic Information

Age:

Among fifteen participants 40-50 years old participants were 09 and (>50) year's old participants were 06 and their mean age was 48.1(Table-1) with age range 40-70 (Figure-01).

Table-2 Participants mean age

	Total number	Minimum age	Maximum age	Mean
Age of the participants	15	40	70	48.1

Sex:

Among the 15 participants 8 were male and 7 were female.

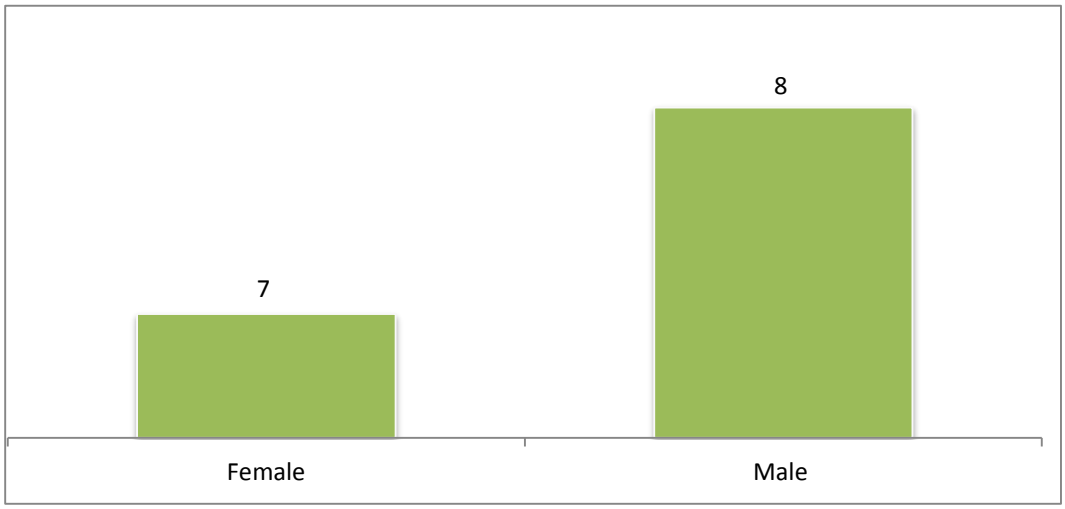

Figure-1: Sex distribution of the participants.

Educational Status:

Among the fifteen (15) participants, 02 were illiterate, 1 Participant had P.S.C, 1Participant had J.S.C, 02 Participants completed S.S.C, 04 participants had H.S.C and 05 participants had bachelor degree (Figure-03).

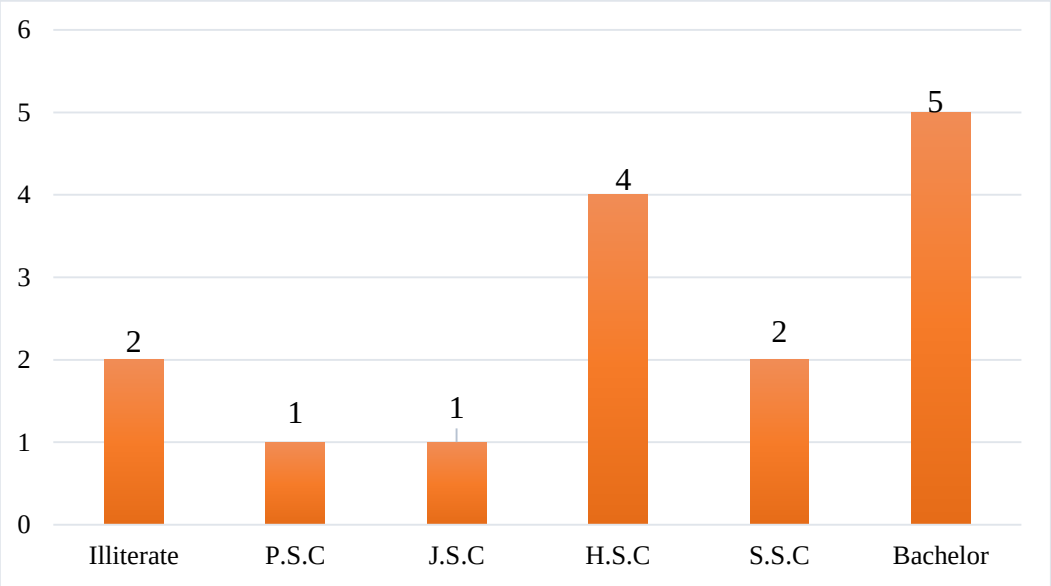

Figure-2: Educational distribution of the participants.

Occupational Status:

Among the 15 participants, 04 participants were housewife 06 participants were service holder and 05 participants were business man (Figure-3)

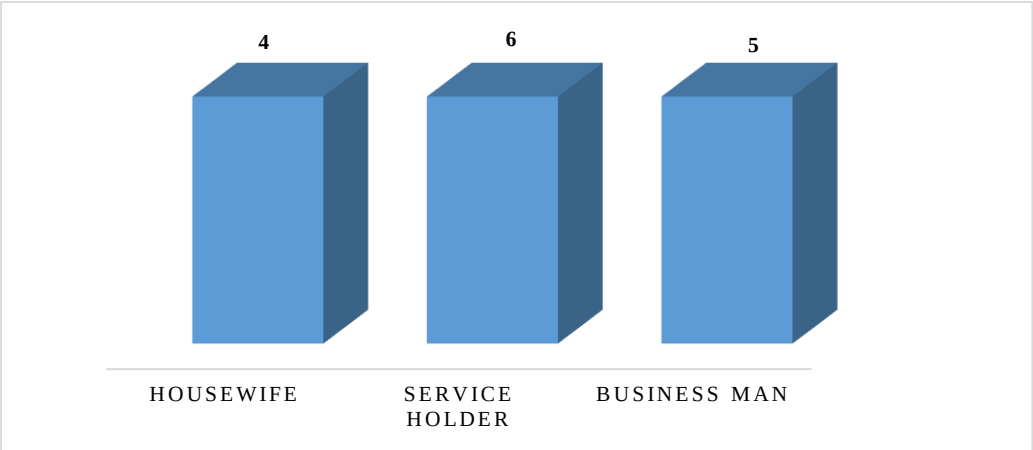

Figure-3: Occupation of the participants.

4.3 Following themes are emerged on the basis of data analysis

- Treatment of stroke patients at CRP is quality full.
- Treatment cost at CRP is expensive.
- During Treatment at CRP schedule barriers is a major problem.
- Patients have faced many barriers of accommodation facilities.
- Duration of treatment of stroke patient at CRP is not sufficient.
- Patients are cooperative with therapist during receiving treatment.
- Some recommendations of the patients to prevent those barriers.

4.3.1 Treatment of stroke patients at CRP is quality full

The researcher wanted to find out whether treatment of stroke patients at CRP is quality full or not. The participants responses are displayed below (Table-3).

Table-3 Satisfaction of stroke patients in CRP.

Patient No.	Quality full	Not quality full
No.1	✓	-
No.2	✓	-
No.3	✓	-
No.4	✓	-
No.5	✓	-
No.6	✓	-
No.7	✓	-
No.8	✓	-
No.9	-	✓
No.10	✓	-
No.11	✓	-
No.12	-	✓
No.13	✓	-
No.14	✓	-
No.15	✓	-

This table represent that among the 15 participants 13 participants are said that treatment in CRP is quality full and 2 said it is not quality full.

4.3.2 Treatment cost at CRP is expensive

Here the researcher wanted to know the patient's perception of the cost for their treatment it is expensive or not. The participant's responses are displayed below (Figure-5).

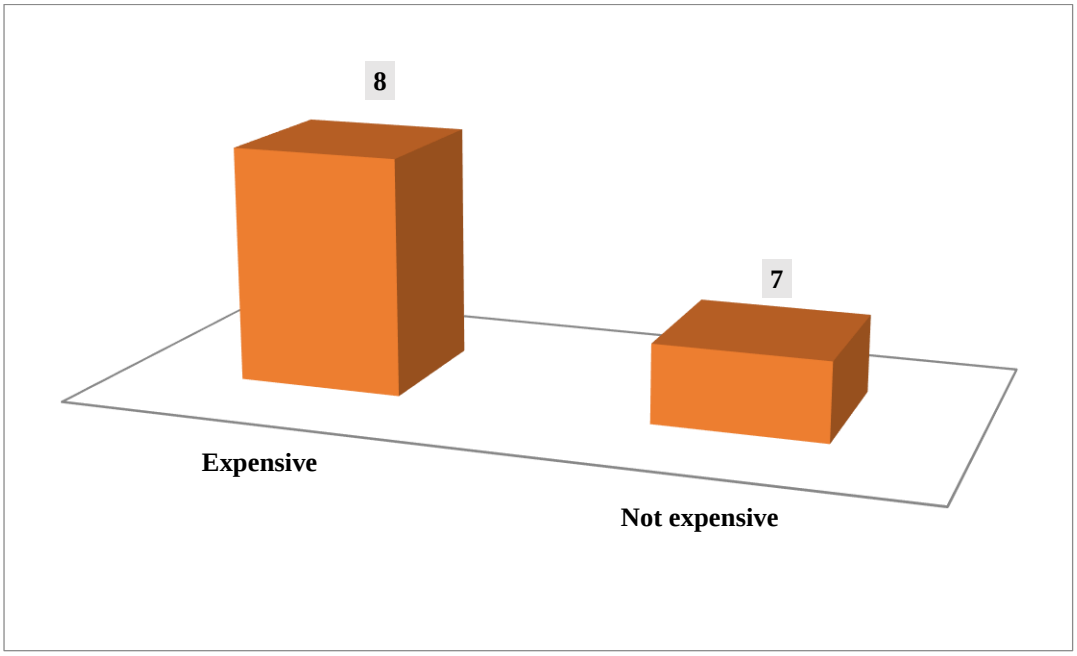

Figure-4: Opinion of Treatment cost at CRP

The table represents the participants view about expenditure of stroke patients treatment in CRP. Among 15 participants, 8 participants thought it's expensive and 7 participants thought it is not so expensive.

4.3.3 During Treatment at CRP schedule barriers is a major problem

This theme covers the issues whether the stroke patients face schedule barriers or not during receiving treatment at CRP (Figure-5).

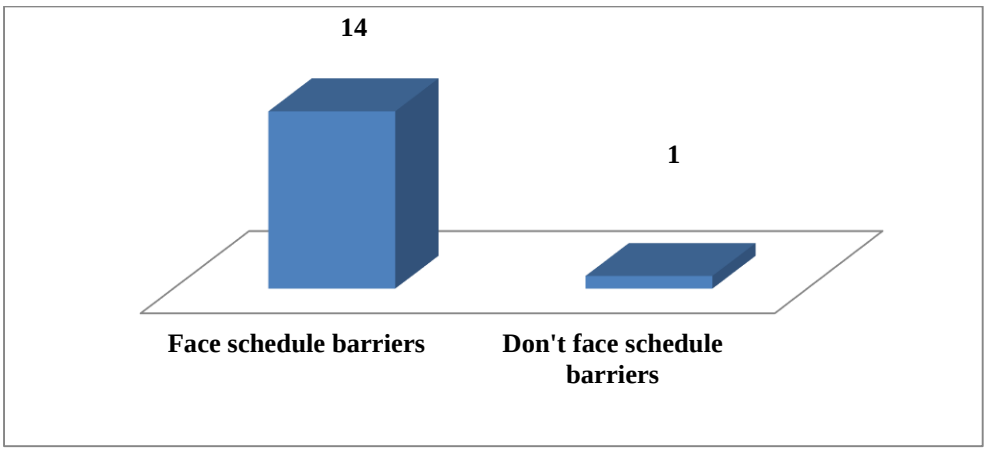

Figure-5: Schedule barriers of stroke patients at CRP.

Among the 15 participants 14 face schedule barriers and 01 do not face schedule barriers.

Among 15 participants one of them said that, “It is time consuming, to get schedule we have to stand in a long line. Serial providers behavior is rough, serial providers are also slow”.

This statement reflect that the sufferings of the patients and career during taking schedule are so much due to slowness of work and rough behavior of the serial providers.

4.3.4 Patients have faced many barriers of accommodation facilities

This theme covers the issues whether the stroke patients face barriers of accommodation facilities or not during receiving treatment in CRP (Figure-6).

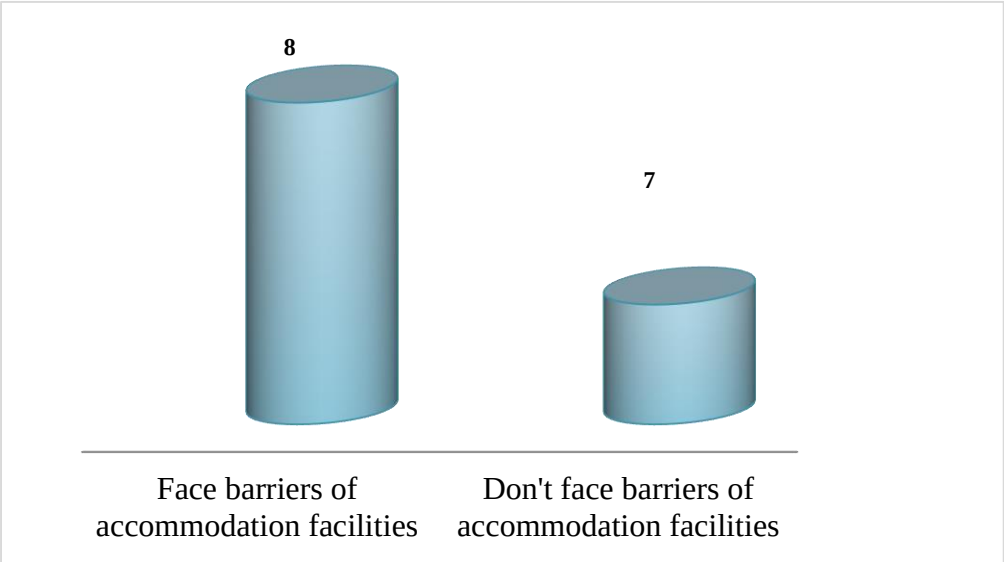

Figure-6: Barriers of accommodation facilities of stroke patient at CRP

Among the 15 participants 08 participants face accommodation facilities barriers and 07 participants don't face accommodation facilities barriers.

Among the 15 participants one of them said that, "Patient's more than seat, its long time to get accommodation facilities. I have tried several times but fail to get accommodation facilities".

Above statement reflect that the accommodation facilities are not available to all patients and its time consuming.

Another one participants stated, "I am interested but I could not. I don't get seat, if I get I can continue easily my treatment at CRP".

Above statement reflect that they try but don't get seat inside at CRP and that can hamper their treatment.

4.3.5 Duration of treatment of stroke patient at CRP is not sufficient

This theme covers the issues whether the duration of treatment of stroke patient at CRP is not sufficient or sufficient.

Among the 15 participants one of them said that, “Duration of treatment period is less, it will good if time period prolonged”.

Above statement reflect that the patient’s treatment period is less, if its increase it could be better for them.

Another one participants stated, “Although treatment is 45 minute but I get only 20-30 minute, Duration of treatment should increase”.

Above statement reflect that the treatment of a patient can be better if its increase and patients satisfaction is more.

One of the participants stated that, “CRP should consider its fixed time to increase”.

4.3.6 Patients are cooperative with therapist during receiving treatment

The researcher wanted to find out whether the patients are cooperative or not with therapist during receiving treatment (Table-4).

Table-4: Cooperation between therapist and patient during treatment.

Patient No.	Cooperative	Not cooperative
No.1	✓	-
No.2	✓	-
No.3	✓	-
No.4	✓	-
No.5	✓	-
No.6	✓	-
No.7	✓	-
No.8	✓	-
No.9	✓	-
No.10	✓	-
No.11	✓	-
No.12	✓	-
No.13	✓	-
No.14	✓	-
No.15	✓	-

This table represents all the 15 participants said that they were cooperative with therapist during receiving treatment in CRP.

4.3.7 Some recommendations of the patients to prevent those barriers

According to the participants, “I intended to manage 6 days in a week but I could not, it is difficult to come and out this hospital it will be very good if I manage a seat, it should be better if the cost is reduced”.

One of the 15 participants stated, “Neuro patients schedule should increase, Physiotherapist treatment should more quality full and intern physiotherapist should excluded in treatment program”.

According to another participants, “Behavior should good who are serve in a counter, seat should increase, it should be better if schedule is available”.

Another participants stated, “If CRP provide more accommodation facilities, if consider stand at a line, sometimes announcement is not understandable, treatment time should increase”.

Other participants said, “Duration of treatment period is less it will be good if time period prolonged. CRP should provide its service regular basis, Room facilities are bad small room and toilet is bad.

CHAPTER-V DISCUSSION

The aim of the study was to explore the barriers of stroke patients during receiving treatment in CRP. A qualitative study design was used to conduct the study. Fifteen stroke patients were recruited in this study. The samples were selected by convenience sampling method. The data were collected by using a semi-structured questionnaire form and coded by seven themes; finally the coded data are analyzed and presented qualitative analysis. Following themes have been emerged on the basis of data analysis. These include, treatment of stroke patients at CRP is quality full, treatment cost at CRP is expensive, during treatment at CRP schedule barriers is a major problem, patients have faced many barriers of accommodation facilities during receiving treatment in CRP, duration of treatment of stroke patient at CRP is not sufficient, patients are cooperative with therapist during receiving treatment in CRP.

Among the 15 participants 13 participants said treatment in CRP is quality full and 02 participants said it's not quality full. Among fifteen participants one of them reported that, "Some are good and some are bad, treatment by intern is not good at all". Another one participants stated that, "Treatment time is less than required as I think, it should be increased". (McCluskey et al., 2013) found that limited knowledge and skills represents barriers to implementing guideline recommendations in stroke rehabilitation.

Among the 15 participants 08 stated that treatment cost at CRP is costly, 07 participants stated that it's cheap. Among 15 participants one of them reported that, "It seems too expensive (if Physiotherapy and Occupational therapy are getting together)". Another one reported that, "As my family income is quite less and I do not get seat in CRP, it becomes a burden for me. If 250 taka will less then it will be helpful for me". Another one stated that, "it is expensive; my family is not able to bear my treatment cost, so I have taken money as loan for the sake of continuing my treatment cost". Another participant said that, "We have no problem to bear therapy cost because Somajkallan supported me financially. Now my treatment cost is 100 taka per session". The last statement reflects that, CRP provides financial support through Samajkollan which is the social welfare department of CRP to help the poor patients. These statements are supported by a study in which it is said that the cost of the treatment is high, with differences by disability level (Yan et al., 2016).

Among the 15 participants 14 face schedule barriers and 01 don't face schedule barriers. Among 15 participants one of them said that, "It's time consuming, to get schedule we have to stand in a long line. Serial providers behavior is rough, serial providers are also slow". Another respondent express that, "I think token provider insult us as (Patient) and token provider's manner is rough". One of the participants stated that, "Schedule is not available and for taking schedule we have to stand in a long line". This statement reflect that the sufferings of the patients and careers during taking schedule are so much due to slowness of work, rough behavior of the serial providers and for the sake of standing in a long line. The findings are supported by a study in which it's said that the first problem is to get a ticket to continue physiotherapy (Urimubenshi and Rhoda, 2011).

Among the 15 participants 08 participants stated that they face barriers of accommodation facilities and 07 participants don't face barriers of accommodation facilities. Among the 15 participants one of them said that, "As the amounts of patient's are more than seat, it takes a long time to get accommodation facilities. I have tried several times but fail to get a room to stay in". Another one stated that, "I have tried heart and soul to get a seat in CRP, but I don't have". Another one participant stated, "I am interested but I do not get it. If I get, I can continue easily my treatment at CRP". Above statement reflect that the accommodation facilities are not available to all patients and its time consuming found that lack of resources (number of inpatient bed, accommodation facilities) was the most commonly cited barriers (Gache et al., 2014).

Among the 15 participants 06 participants stated duration of treatment in CRP is not sufficient. Among the 15 participants one of them said that, "Duration of treatment period is less, it will good if I get more time as I think. Duration of treatment should increase". One of the participants stated that, "Fixed duration of treatment 45 minutes should be increased by authority". This statement is supported by a study in which it said that limited resources such as lack of equipment and time is most commonly reported barriers to implementing stroke rehabilitation (McCluskey et al., 2013).

During receiving treatment in CRP one of the participants stated, "As I live in a rural area, people of my village suggested me a lot of misconceptions about treatment. They think I should go to hekim-kobiraj to take treatment". The statement reflects that social

barriers can hamper from taking physiotherapy treatment, patients are helpless and they don't get accurate treatment. Another one stated that, "My gait pattern is faulty, every one called me as a lame women". Another participant stated that, "My children say that you should not go to take treatment by crossing the far distance, it is better to take medicine and consult with a doctor". These statements are supported by a study in which it is said that people negative attitude can hamper rehabilitation program (Urimubenshi and Rhoda, 2011).

Among the 15 participants all participants are cooperative with therapist during receiving treatment in CRP. One of the participants stated that, "I have done all things they advised as home exercise and try to co-operate with them they are very helpful."

Among the 15 participants their recommendations are to improve the facilities. According to the participants, "I intended to manage 6 days in a week but I couldn't, it's difficult to come and out this hospital it will be very good if I manage a seat, it should be better if the cost is reduced". One of the 15 participants stated, "Neuro patients schedule should increase, Physiotherapist treatment should more quality full and intern physiotherapist should excluded in treatment program". According to another participants, "Behavior should good who are serve in a counter, seat should increase, it should be better if schedule is available". Another participants stated, "If CRP provide more accommodation facilities, if consider stand at a line, sometimes announcement is not understandable, treatment time should increase". Another participant said, "Duration of treatment period is less; it will be good if time period prolonged. CRP should provide its service regular basis, Room facilities are bad, small room and toilet is bad.

Limitation:

To make a successful research it may be time consuming. As I get short period of time to complete the research, I have to take small sample size that is 15. If large number of sample size was taken, it would be more effective.

Only 15 samples do not represent the whole country condition of stroke patients.

The sample was collected only from CRP. If it was collected another many institutes, the result would be more reliable and appropriate and also give a clear perception about barriers of stroke patients in Bangladesh.

As Sample size was not large number, I could not show it in percentage.

As it was the first research of the researcher so there might be some mistakes that should be overlooked by the supervisor and the honorable teachers.

CHAPTER- VI CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study explored the barriers of stroke patients during receiving treatment in CRP. The study demonstrated some common problems they faced. Schedule barriers are the major barriers and patients and career may face many problems during receiving treatment at CRP. Stroke patients may increase day by day; and in CRP treatment cost they told it is costly but it is limited and can they take treatment easily. Accommodation facilities are poor and behavior of token providers is rough. Treatment can be good but other side hampers patient's condition. As they got some improvement by taking treatment in CRP, they are more hopeful to get improvement so that the patient can lead a better life.

6.2 Recommendation

As the study conduct through finding barriers of stroke patients during receiving treatment in CRP, some barriers are found as patients requirements such as schedule barriers, staff's attitude during taking token, accommodation barriers which patients sufferer much to look for a seat inside of CRP but they do not get. According to patient's statement, most of them marked treatment as quality full. Besides, some social barriers such as wrong perception about physiotherapy treatment about patient are relative which lead the patients in misconduct. Although patients are facing some barriers rather almost they are happy with their therapist's behavior and application procedure treatment. The stroke patients give their opinion about barriers they face.

References

Ali, R.M., Siddiqui, M.A. and Mail, Q.J., (2015). Role of increased exercise therapy time in stroke rehabilitation. Journal of Medicine, 16(2):105.

Amin, M.R., Mohammad, H., Ahmed, K.G.U. and Sarkar, D.N., (2014). CRP in Patients with Acute Ischemic Stroke in Bangladesh. Journal of Medicine, 15(1):41-47.

Braunwald, E., Hauser, S., Fauci, A., Longo, D., Kasper, D., Jameson, J., (2003). Harrison's Principles of Internal Medicine. International Journal of Medicine,7:2-4.

Chowdhury, R.N., Hasan, A.H., Rahman, Y. U., Khan, S. I., Hussain, A. R and Ahsan, S., (2014). Pattern of neurological disease Seen among patients admitted in tertiary care hospital. BMC Research Note, [e-journal],7(202). Available:<http: www.biomedcentral.com/1756-0500/7/202>[Accessed on 14 march, 2017].

Dobkin, B.H. and Dorsch, A., (2013). New evidence for therapies in stroke rehabilitation. Current Atherosclerosis Reports, 15(6):331.

Ernst, E., (1990). A review of stroke rehabilitation and physiotherapy. Stroke, 21(7):1081-1085.

Garraway, W.M., Akhtar, A.J., Hockey, L. and Prescott, R.J., (1980). Management of acute stroke in the elderly: follow-up of a controlled trial. Br Med J, 281(6244):827-829.

Gache, K., Leleu, H., Nitenberg, G., Woimant, F., Ferrua, M. and Minvielle, E., (2014). Main barriers to effective implementation of stroke care pathways in France: a qualitative study. BMC health services research, 14(1): 2-5.

Gallanagh, S., Quinn, T. J., Alexander, J. and Walters, M. R., (2011). Physical Activity in the Prevention and Treatment of Stroke. International Scholarly Research Network, 2011:1-3.

Haque, A.F., Islam, Q.T., Rahman, M.K., Tarik, M.H., Ahmed, S. and Das, A., (2012). Serum Lipid as a Risk Factor of Ischaemic Stroke in Bangladeshi People.Journal of Medicine, 13(1):22-26.

Harrison,M. and Palmar, R., (2015).Exploring patient & public involvement in stroke research. The University of Sheffield, Available: <http://sprins.whiterose.uk/94922/> [Accessed on 20 April, 2017].

Hossain, A.M., Ahmed, N.U., Rahman, M., Islam, M.R., Sadhya, G. and Fatema, K., (2011). Analysis of sociodemographic and clinical factors associated with hospitalized stroke patients of Bangladesh. Faridpur Medical College Journal, 6(1):19-23.

Huang, H.C., Chung, K.C., Lai, D.C. and Sung, S.F., (2009). The impact of timing and dose of rehabilitation delivery on functional recovery of stroke patients. Journal of the Chinese Medical Association, 72(5):257-264.

Iqbal, M.J., Siddiqui, M.M.R., Islam, Q.T., Hossain, A., Mustafa, E., Shipa, M.R.A., Rahman, M.Y.U. and Sina, H., (2010). Association between acute stroke and metabolic syndrome. Journal of Medicine, 11(2):124-127.

Islam, M.N., Moniruzzaman, M., Khalil, M.I., Basri, R., Alam, M.K., Loo, K.W. and Gan, S.H., (2013).Burden of stroke in Bangladesh. International Journal of Stroke, 8(3):211-213.

Karim, M.E., Mondal, S.K., Kabir, A.H., Das, P.P., Biswas, S. and Ahmed, N.S., (2016). Association of Hypertriglyceridemia with Ischemic Stroke, Study in a Tertiary Care Hospital in Bangladesh. Journal of Medicine, 17(1):21.

Knecht, S., Hesse, S. and Oster, P., (2011). Rehabilitation after stroke. Deutsches Ärzteblatt International, 108(36):600.

Lynch, E.B., Butt, Z., Heinemann, A., Victorson, D., Nowinski, C.J., Perez, L. and Cella, D., (2008). A qualitative study of quality of life after stroke: The importance of social relationships. Journal of Rehabilitation Medicine, 40(7):518-523.

Maclean, N., Pound, P., Wolfe, C. and Rudd, A., (2000). Qualitative analysis of stroke patients' motivation for rehabilitation. Bmj, 321(7268):1051-1054.

McCluskey, A., Vratsistas-Curto, A. and Schurr, K., (2013). Barriers and enablers to implementing multiple stroke guideline recommendations: a qualitative study. BMC health services research, 13(1):3-7.

MacDonald, G.A., Kayes, N.M. and Bright, F., (2013). Barriers and facilitators to engagement in rehabilitation for people with stroke: a review of the literature. New Zealand Journal of Physiotherapy, 41(3):112-121.

Miah, M.T., Hoque, A.A., Tarafder, B.K., Romel, S.M.A. and Hassan, M.K., (2008). Stroke in young age-study of 50 cases. Journal of Medicine, 9(1):10-15.

Miah, M.N.A., Azhar, M.A., Rahman, A., Halder, D., Akteruzzaman, M. and Kundu, N.C., (2012).Risk Factors of Stroke in Young and Old age Group-A Comparative Study. Journal of Medicine, 13(2):138-142.

Mohammad, Q.D., (2014). Management of stroke-Bangladesh perspective. Bangladesh Medical Journal, 42(1):34-35.

Mondal, B.A., Chowdhury, R.N., Rahman, K.M., Khan, S.U., Hasan, A.T.M.H., Hoque, M.A., Haque, B., Khan, M.Z.R., Habib, M. and Mohammad, Q.D., (2013). Major co-morbidities in stroke patients: a hospital based study in Bangladesh. Journal of Dhaka Medical College, 21(1):16-19.

Paolucci, S., Grasso, M.G., Antonucci, G., Bragoni, M., Troisi, E., Morelli, D., Coiro, P., De Angelis, D. and Rizzi, F., (2001). Mobility status after inpatient stroke rehabilitation: 1-year follow-up and prognostic factors. Archives of physical medicine and rehabilitation, 82(1):2-4.

Pang, M.Y., Eng, J.J., Dawson, A.S. and Gylfadóttir, S., (2006). The use of aerobic exercise training in improving aerobic capacity in individuals with stroke: a meta-analysis. Clinical Rehabilitation, 20(2):97-99.

Pollock, A., Baer, G.D., Langhorne, P. and Pomeroy, V.M., (2008). Physiotherapy treatment approaches for stroke. Stroke, 39(2):519-520.

Rimmer, J.H., Rubin, S.S. and Braddock, D., (2000). Barriers to exercise in African American women with physical disabilities. Archives of physical medicine and rehabilitation, 81(2):182-185.

Rimmer, J.H., Wang, E. and Smith, D., (2008). Barriers associated with exercise and community access for individuals with stroke. Journal of rehabilitation research and development, 45(2):315-318.

Salinas, J., Sprinkhuizen, S.M., Ackerson, T., Bernhardt, J., Davie, C., George, M.G., Gething, S., Kelly, A.G., Lindsay, P., Liu, L. and Martins, S.C., (2016). An international standard set of patient-centered outcome measures after stroke. Stroke, 47(1):180-183.

Shin, C.N., An, K. and Sim, J., (2017). Facilitators of and barriers to emergency medical service use by acute ischemic stroke patients: A retrospective survey. International Journal of Nursing Sciences, 4(1):52-54.

Siddique, M.A.N., Nur, Z., Mahbub, M.S., Alam, M.B. and Miah, M.T., (2009). Clinical presentation and epidemiology of stroke: a study of 100 cases. Journal of Medicine, 10(2):86-88.

Simpson, L.A., Eng, J.J. and Tawashy, A.E., (2011). Exercise perceptions among people with stroke: barriers and facilitators to participation. International journal of therapy and rehabilitation, 18(9):520-527.

Straus, S.E., Majumdar, S.R. and McAlister, F.A., (2002). New evidence for stroke prevention: scientific review. Jama, 288(11):1388-1390.

Swann, J., (2008). Stroke: environmental barriers. British Journal of Healthcare Assistants, 2(11):561-563.

Urimubenshi, G. and Rhoda, A., (2011). Environmental barriers experienced by stroke patients in Musanze district in Rwanda: a descriptive qualitative study. African health sciences, 11(3):401-404.

Yamamoto, F.I., (2012). Ischemic stroke in young adults: an overview of etiological aspects. Arquivos de neuro-psiquiatria, 70(6):463-465.

Yan, L.L., Li, C., Chen, J., Miranda, J.J., Luo, R., Bettger, J., Zhu, Y., Feigin, V., O'Donnell, M., Zhao, D. and Wu, Y., (2016).Prevention, management, and rehabilitation of stroke in low-and middle-income countries, 2: 23-26

Appendix

অনুমোদন পত্র

আমি উম্মে কুলসুম উর্মি 'বাংলাদেশ হেলথ প্রফেশন্স ইন্সটিটিউট'এর চতুর্থ বর্ষের একজন ছাত্রী। আমি একটি গবেষণা করছি যার শিরোনাম হল "ব্যারিয়ারস অফ স্ট্রোক পেশেন্ট ডিউরিং রিসিভিং ট্রিটমেন্ট এ্যাট সি.আর.পি." অথবা "সি.আর.পি. তে চিকিৎসা গ্রহনের সময় স্ট্রোক রোগীর প্রতিবন্ধকতাসমূহ" যেটা আমার অধ্যয়নের অন্তর্গত। এই জন্য আমি আপনার কাছে কিছু প্রশ্নের উত্তর জানতে চাচ্ছি,যেটাতে সর্বমোট ১০-১৫ মিনিট সময় লাগবে। এটাও নিশ্চিত করছি যে আপনি যেসব তথ্য প্রদান করবেন তার গোপণীয়তা বজায় থাকবে।

এখানে অংশ গ্রহন আপনার নিজের উপর নির্ভর করে। আপনি চাইলে যে কোন সময় কোন ফলাফল ছাড়া চলে যেতে পারেন। এছাড়া যদি আপনার এই গবেষণায় অংশ গ্রহনকারী হিসেবে কোন প্রশ্ন থাকে তাহলে আপনি আমাকে অথবা ফারজানা শারমিন , ইনচার্জ অফ নিউরোলজী ইউনিট, ফিজিওথিরাপী বিভাগ, সি.আর.পি., সাভার, ঢাকা এর সাথে যোগাযোগ করতে পারেন।

গবেষণাটি শুরু করার আগে আপনার কোন প্রশ্ন আছে ?

আমি কি আপনার অনুমতি পেয়ে এই সাক্ষাৎকারটি আরম্ভ করতে পারি ?

হ্যা .....

না .....

গবেষকের স্বাক্ষর ও তারিখঃ .....

স্বাক্ষীর স্বাক্ষর ও তারিখঃ .....

Consent Form

I am Ummay Kulsum Urmi, 4th year student of B.Sc. in Physiotherapy in Bangladesh Health Profession Institute. I am conducting a research and the title is **"Barriers of stroke patients during receiving treatment at CRP"** which is included in my course. For that I'm asking you to answer some questions, which will not take time more than 10-15 minutes. It also ensures that the information you provide will be kept confidential.

Participation here depends on your own will. If you want, you can skip your name from the list of participants at any time. In addition, if you have any questions as a participant in this study or if there is any problem, you can contact with me or Farzana Sharmin, Senior clinical physiotherapist of Neurology unit of Physiotherapy Department, CRP, Savar Dhaka.

Do you have any questions before starting the research?

Can I start this interview with your permission?

Yes.....

No.....

Participant's signature and date ……

Witness's signature and date……

প্রশ্নমালা

সামজিক অবস্থা

নাম ঃ বয়স ঃ লিঙ্গ ঃ

ঠিকানা ঃ মোবাইল নং ঃ

শিক্ষাগত যোগ্যতা ঃ

১। আপনি সি.আর.পি. তে সপ্তাহে কত দিন চিকিৎসা নিচ্ছেন ?

২। আপনি কি শহওে বা গ্রামে বাস করেন ?আপনার মাসিক আয় কত ?

৩। বাসা থেকে সি.আর.পি তে আসার জন্য আপনার যাতায়াত খরচ কত ?

৪। আপনি কি মনে করেন, সি.এর.পি. তে চিকিৎসা নেওয়ার সময় কোন ব্যবস্থা (সিডিউল) প্রতিবন্ধকতা আছে কিনা ? হ্যা/না।

যদি হ্যা হয় দয়া করে ঐ প্রতিবন্ধকত উল্লেখ করুন।

৫। আপনি কি মনে করেন সি.এর.পি.তে বাসস্থান সুবিধার কোন প্রতিবন্ধকতা আছে ? হ্যা/না

যদি হ্যা হয় দয়া করে ঐ প্রতিবন্ধকতা উল্লেখ করুন ।

৬। সি.এর.পি. তে চিকিৎসার খরচ সম্পর্কে আপনার মতামত কি ?এটা কি ব্যয়বহুল ?হ্যা/না

যদি হ্যা হয় দয়া করে বিষয়টি উল্লেখ করুন ।

৭। আপনি কি মনে করেন সি.এর.পি.তে চিকিৎসা সেবা গুণগত মানসম্মত ? হ্যা/না

যদি না হয় আপনার মতামত উল্লেখ করুন ।

৮। সি.এর.পি তে চিকিৎসা গ্রহনের সময় আপনার চিকিৎসা সেবার কোনঅবহেলার অভিজ্ঞতা আছে কি ?হ্যা/না

যদি হ্যা হয় তাহলে আপনার মতামত উল্লেখ করুন ।

৯। আপনি কি মনে করেন কোন ধরণের সামাজিক বাধা আপনাকে চিকিৎসা গ্রহনে বিরত রাখছে ?হ্যা/না

যদি হ্যা হয় দয়া করে ঐ বাধাগুলো উল্লেখ করুন ।

১০। আপনি কি মনে করেন আচরণ গত বাধার কারনে আপনি চিকিৎসা গ্রহনে বিরত থাকছেন ?হ্যা/না

যদি হ্যা হয় দয়া করে ঐ বাধাগুলো সম্পর্কে বলুন।

১১। আপনি কি মনে করেন শারীরিক প্রতিবন্ধকতা আপনাকে স্বাভাবিক কাজ থেকে বিরত রাখছে ? হ্যা/না

যদি হ্যা হয় দয়া করে ঐ বাধাগুলো সম্পর্কে বলুন ।

১২ । চিকিৎসাধীন অবস্থায় আপনি কি থেরাপিষ্টএর সাথে সহযোগীপূর্ন আচরণ করেন ?হ্যা/না

যদি নাহয় দয়া করে বিষয়টি বলুন ।

১৩ । আপনি যে বাধা গুলোর সম্মুখীন হচ্ছেন তা প্রতিরোধে আপনার পরামর্শ কি ?

Questionnaire

Demographic information:

Name: Age: Sex:

Address: Phone no:

Occupation:

Educational status:

1. How many days in a week are you taking treatment in CRP?

2. Do you live in urban or rural area? How about your financial status?

3. How much transport cost you need to come in CRP from home?

4. Do you think, any schedule barriers in CRP during receiving treatment? Yes/No.

If yes, would you please mention about the barriers?

5. Do you think any barriers of accommodation facilities in CRP? Yes/ No.

If yes, would you please mention about the barriers?

6. What is your opinion regarding the cost of treatment in CRP? Is it costly, what is your opinion?

7. Do you think, treatment in CRP is quality full? Yes/ No

If No, would you please mention your opinion?

8. Are you experienced any treatment lacking during receiving treatment in CRP? Yes/ No.

If yes, would you please mention your opinion?

9. Do you think, any social barrier can prevent you from taking treatment? Yes/ No

If yes, would you please mention about the barriers?

10. Do you think, attitudinal barriers can prevent you from taking treatment in CRP? Yes/ No

If yes, would you please mention about the barriers?

11. Do you think, physical barriers can prevent your normal work? Yes / No.

If yes, would you please mention about the barriers?

12. Are you cooperative with therapist during receiving treatment? Yes/No.

If No, would you please mention?

13. What are the suggestions you recommend to prevent those barriers?

May 3, 2017

The head

Department of physiotherapy

Centre for the Rehabilitation of the paralysed (CRP)

CRP, Chapain, Savar, Dhaka-1343.

Through: Head, Department of Physiotherapy, BHPI.

Subject: Seeking Permission of data collection to conduct my research project.

Dear Sir,

With due respect and humble submission to state that I am Ummay Kulsum Urmi student of 4th Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The ethical committee has approved my research project entitled on "Barriers of stroke patients during receiving treatment in CRP" under the supervision of Farjana Sharmin, In charge of Neurology unit of physiotherapy Department, CRP, Savar. I want to collect data for my research project from the stroke patients whom receive treatment in Neurology department of CRP. So, I need permission for data collection from the stroke patient during receiving treatment in CRP-Savar.

I therefore, Pray & hope that you would be kind enough to grant my application & give me permission for data collection and oblige thereby.

Sincerely

Ummay Kulsum Urmi

Ummay Kulsum Urmi

4th professional B.Sc. in physiotherapy

Roll-14, Session: 2012-2013

Bangladesh Health Professions Institute (BHPI)

(An academic Institute of CRP)

CRP, Chapain, Savar, Dhaka-1343.

Approved

08/05/17

Mohammad Anwar Hossain
Associate Professor &
Head of Physiotherapy Dept.
CRP, Chapain, Savar, Dhaka-1343

Recommended/Forwarded

07/05/17

Md. Obaidul Haque
Associate Professor & Head of the Department
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

Farjana Sharmin
Lecturer and In CPT
Neurology unit
04/05/17

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref.

Date: 15/04/2017

CRP-BHPI/IRB/04/17/121

To
Ummay Kulsum Urmi
B.Sc. in Physiotherapy
Session: 2012-2013, Student ID 112120015
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: "Barriers of stroke patients during receiving treatment at CRP".

Dear Ummay Kulsum Urmi,

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on 14/08/2017 to conduct the above mentioned thesis, with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Thesis Proposal
2	Questionnaire (English and Bengali version)
3	Information sheet & consent form.

Since the study involves a self-administered questionnaire that takes 20 to 30 minutes and have no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 09:00 AM on August 17, 2016 at BHPI.

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Millat Hossain

Muhammad Millat Hossain
Assistant Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন ঃ ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ফ্যাক্স ঃ ৭৭৪৫০৬৯
CRP-Chapain, Savar, Dhaka-1343, Tel : 7745464-5, 7741404, Fax : 7745069, E-mail : contact@crp-bangladesh.org, www.crp-bangladesh.org