

# **MOTHER'S PERCEPTION ABOUT PHYSIOTHERAPY HOME EXERCISE PROGRAM FOR CEREBRAL PALSY CHILDREN**

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We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled

**MOTHER'S PERCEPTION ABOUT PHYSIOTHERAPY HOME EXERCISE  
PROGRAM FOR CEREBRAL PALSY CHILDREN**

Submitted by **Sabekun Naher** for the partial fulfilment of the requirements for the 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 sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of information of the study. I would be bound to take written consent from my supervisor and Head of the Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI).

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## List of acronyms

<b>&amp;</b>	And
<b>ADLs</b>	Activities of daily living
<b>APA</b>	Australian Physiotherapy Association
<b>BHPI</b>	Bangladesh Health Professions Institute
<b>BMRC</b>	Bangladesh Medical Research Council
<b>CP</b>	Cerebral Palsy
<b>CRP</b>	Centre for the Rehabilitation of the Paralysed
<b>EMG</b>	Electromyography
<b>IRB</b>	Institutional Review Board
<b>NCS</b>	Nerve conduction studies
<b>NINDS</b>	National Institute of Neurological Disorders and Stroke
<b>NGOs</b>	Non Govern Organizations
<b>PWD</b>	Person with disabilities
<b>PT</b>	Physiotherapy
<b>UN</b>	United Nations
<b>US</b>	United States
<b>WCPT</b>	World Confederation of Physical Therapy
<b>WHO</b>	World Health Organization

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## Abstract

**Aim:** To find out the perception of physiotherapy home exercise program among the parents of children with CP at CRP pediatric unit.

**Objectives:** To identify mother's perception from physiotherapy home exercise program. To find out the mother's satisfaction and dissatisfaction of physiotherapy home exercise program. To explore the difficulties faced by mother during implement the physiotherapy home exercise program. To make recommendations about physiotherapy home exercise program.

**Study design:** The data is conducted through the Qualitative method. The researcher herself collected the data through semi open ended questionnaire, face to face interview.

**Sample selection:** In the study purposive sampling was used. The participant's numbers were 10.

**Setting:** This study was done in pediatric unit of Centre for the Rehabilitation of the Paralyzed (CRP).

**Data analysis:** Data analyzed by content analysis.

**Results and discussion:** From this study it was found that the most of the participant come regularly for their child follow-up treatment. Most of them did the home exercise program regularly at home and some of them try to did the physiotherapy exercise program regularly at home. They felt some problem during perform the exercise program at home but they continue the program at home regularly. After doing the exercise program at home the child's condition became well and mother's think that this program is effective for their child. Most of the mother's are satisfied by the present physiotherapy exercise program so they have no further suggestion about this exercise program.

**Conclusion:** This study was performed to explore the perception of mother's about the home exercise program for the children with cerebral palsy. Overall the mother's were satisfied the present exercise program.

The suggestion that came out from the participants will be important for the therapist and authority to improve the physiotherapy home exercise program.

**Keywords:** Cerebral Palsy, Perception, Physiotherapy, Home exercise program.

### 1.1. Background

Cerebral palsy (CP) is a condition which experienced the children with disability. It is one of the most common conditions which are to be noticed among the children in rural and urban area. The prevalence of cerebral palsy in Bangladesh is 4157 person among 141,340,476 people and the rate is 0.003% among the whole population. Our neighbour country India has cerebral palsy people about 31,325 among the total 1,065,070,607 population. Their CP rate is 0.004%.The incidence of CP is higher in males than in females; the Surveillance of CP in Europe reports a Male: Female ratio of 1.33:1. In the United States, approximately 10, 000 infants and babies are diagnosed with CP in each year, and 1200–1500 are diagnosed at pre-school age (Evoy, 2006). CP is a condition where the children face developmental delay. Physiotherapist provides treatment for children with disable to develop functional activities (Clancy & Clark, 2006). Physiotherapy provides therapy services for maximizing their functions which facilitate to develop normal pattern.

In cerebral palsy children, eight children died: two of 49 (4%) from an urban area and six of 43 (14%) from a rural area (Collingwood, 2007). Cerebral palsy is common disability condition in Bangladesh. Total number of children with cerebral palsy in Bangladesh is 2.8 million among 144, 109,214populations. Cerebral palsy is one of the most common causes of chronic childhood disability, with a frequency of 1.4-2.7/ 1000 of live births (Tabib, 2009). The ability to perform daily activities is crucial in order to achieve the goals of almost all activities in everyday life. Many activities require that we are able to handle objects that are fragile and/or can change shape in response to compression forces, like an egg or the stem of a flower. This means that we risk to damage or break the object if the grip forces applied to the surface of the object are too high. If we consider the opposite, applying too little force so as to be on the safe side not to squeeze too hard, we risk that the object slips and is dropped. Most of us learn how to handle objects and adjust our hand and finger movements to perform increasingly difficult tasks during childhood and adolescence.

So, functional activities are very essential for the children in developmental stages (Holmstrom, 2011). Various methodologies have been used for the evaluation of hand functions in children with CP. Some methods are oriented towards daily-life activities. For instance, parents might complete questionnaires, with lists of daily activities. Investigators might use experimental devices in Children with CP during therapy sessions, researcher has found that the children who are diagnosis as CP have major or minor problem.

Rehabilitation services are internationally recognised as one of the key components of health care (WHO, 2011). Presently, only 2% out of over one million people with disabilities in rehabilitation services (Ministry of Health, 2003). Physiotherapy is one of the rehabilitation services that parents/caregivers of children with CP seek to alleviate the effects of disability on their children. In order to empower parents/caregivers in the care of children with CP and enable them to participate in the establishment of mutual goals of treatment for their children, (Anderson & Vantor, 2005) highlighted that physiotherapists need not only to treat the children but also to appropriately educate parents/caregivers about the diagnosis, expected outcome and services available. Furthermore, the issue of health care quality and customer perception has drawn considerable attention from both academics and practitioners over the last past years. Thus the necessity to measure and monitor quality is critical in public health-care institutions (Anderson & Hinojosa, 2006). Patient perception constitutes a crucial aspect of quality of care. Accordingly, assessing patient perception is assuming an increasingly prominent role in the current health care system (Pruitt et al., 2007). The researchers assert that it is important to understand and accurately measure healthcare quality from a patient-based marketing prospective because the patient's feedback provides the healthcare provider with insight into alternative methods of organising, providing or improving the health care (Fitzpatrick & Hopkins, 2008). This observation has resulted in many researchers citing and using the assessment of patient perception as a trustworthy approach for monitoring and evaluating health service quality (Goldstein et al., 2006). This kind of feedback cannot be obtained from administrative data or by observing care directly. Few studies have been written up in literature on parent perception in physiotherapy.

However, (Unwin & Sheppard, 2008) in their study recommended that parent perception should be investigated as an outcome measure for paediatric physiotherapy services. Similarly, (Newacheck & Stein, 2005) recommended that the monitoring and evaluation strategies of services for children with chronic illnesses and disabilities should focus on outcomes.

Exercise programs in cerebral palsy (CP) are lifelong activities that are prescribed for home. Exercise in CP facilitates the children to learn how to use their remaining potential to compensate for the movements that could not have been performed. Regular and appropriate home exercise programs and participation of the caregiver are crucial for the rehabilitation of disabled children. Rehabilitation professionals agree that caregiver involvement is cost-effective for more comprehensive rehabilitation. Programs involving the caregivers have been shown to accelerate the success of the rehabilitation goals and to improve motor function of disabled children. For this reason, teaching exercises to family members and assessing follow-up for adherence are very important components of treatment. Furthermore, to maximize outcomes, rehabilitation professionals should assure the parents about the effectiveness of caregiver incorporation into rehabilitation (Basaran et al., 2014). Home treatment programs developed by and physiotherapists aim to actively involve parents in their child's treatment and to increase therapeutic input. Home treatment programs vary according to the specific child's disabilities, the professionals involved, and the extent of parental involvement. In the present study, we examined the families of children with cerebral palsy. We assumed that a study of one diagnostic group would reveal consistent issues being confronted by their families (Finnie et al., 2005).

## **1.2. Rationale**

Cerebral Palsy is one of the causes of physical disability in our country. The number of affecting people is increasing day by day due to lack of awareness. It affects a large number of individual that create devastating affect on a family a society as well as in whole country. It is important to build up awareness about of it. After accomplishing this study people will know what is the impact of the CP. So, they can aware and can take some preventive measure and also they can take care of children with cerebral palsy in a right way. This study is not conducted before so I am interested in this study to do. And also I want to know which type of cerebral palsy is common in Bangladesh. This study provides information on the perception of parent's experience. Improved quality of services could increase the use of the services. The information would be valuable to the researchers interested in paediatrics and perception with service provision. The parents of children with CP, who utilise physiotherapy services at the Centre for the Rehabilitation of the Paralysed (CRP), come from all walks of life, travel long distances, have varied socio-economic status and educational levels. Parents come to the CRP with various perceptions including receiving services to their satisfaction. It is therefore, important to find out whether these parents actually receive a service that meets their perception. To date, there is no knowledge about the level of satisfaction that the parents of children with CP attain as they seek physiotherapy services at the CRP. This study aims to investigate the perception of Physiotherapy home exercise program among the parents of children with CP. This study will be helpful in making physiotherapist to aware about the children with disability parent's perception about home exercise program. Physiotherapy plays a vital role in the management of disability in children. So it will also be helpful for physiotherapist in working in this area for delivering treatment service. As a result patients become more benefited. And my personal interest to work in this area and to know the perception of physiotherapy home exercise program among the parents of children with disability.

### **1.3. Research question**

What are the perceptions of physiotherapy home exercise program among the mother of children with CP?

#### **1.4. Aim of the study**

To find out the perception about physiotherapy home exercise program among the parents of children with CP.

#### **1.5. Objectives of the study**

- I. To identify mother's perception about physiotherapy home exercise program.
- II. To find out the mother's satisfaction and dissatisfaction of physiotherapy home exercise program.
- III. To explore the difficulties faced by mother during implement the physiotherapy home exercise program.
- IV. To make recommendations about physiotherapy home exercise program.

Cerebral Palsy (CP) as a "generic term for various types of non-progressive motor dysfunction present at birth, or beginning in early childhood" (Kibel & Wagstaff, 2007). However, clarified that although the lesion is non-progressive; these clinical manifestations often change with neurological maturation. These changes in turn change the functional abilities of the individual, their health and social needs (Backheit et al., 2015). This makes CP a lifelong condition with outstanding effects on the individual child and the carers, and as a result, also contributes to the increasing numbers of children with disabilities that the physiotherapists have to manage.

CP is the most common cause of motor disability in childhoods describes a group of permanent disorders of the development of movement and posture, causing activity limitation that occurred in the developing foetal or infant brain (Karen & Krigger, 2006). The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, perception, cognition, communication, and behaviour; by epilepsy, and by secondary musculoskeletal problems. CP is a condition that occurs early in life and is present throughout a person's lifetime. Actual brain damage of children with CP does not change but symptoms can become more severe over time. As a result, functional impairment or limitation may change as the child grows up. The ability to live independently with CP varies widely depending on the severity of each case (Mobarak et al., 2008). Some individuals with CP will require personal assistant for all activities of daily living. Others can lead semi-independent lives, needing support only for certain activities. Still others can live in complete independence. Children with CP may need assistance in everyday activities, overall health, well-being and physiotherapy performance and the need for personal assistance often depends on age and functional limitation (Thomas et al., 2012).



Clinical types of CP are most commonly classified according to neurological symptoms. Generally we can summarize the problems based on clinical types;

**Spastic cerebral palsy-** Spasticity is a major clinical feature of over 75% of cases with CP. The most important problems in children with spastic CP are spasticity in extremity muscles, hypo tonus in trunk muscles, insufficiency in protective and equilibrium reactions, stereotype movement patterns, slow and firm movements, combined reactions, joint deformities due to muscle strength inequality, posture and gait disorders.

Spastic CP is further classified by the region of the body affected. These include:  
Spastic hemiplegic (One side affected)

Spastic diplegia (The legs are affected with little to no upper-body spasticity)

Spastic quadriplegia (All four limbs affected).

People with spastic quadriplegia are the least likely to be able to walk. Some children with quadriplegia also have hemi paretic tremors, an uncontrollable shaking that affects the limbs on one side of the body and impairs normal movement (Tirosh & Rabino, 2007).

**Athetoid cerebral palsy-** Main problems include fluctuations in muscle tone, involuntary extremity and trunk movements, insufficiency of stabilization of the trunk and extremities, insufficiency of muscle co-contraction, and insufficiency of correction, equilibrium and protective reactions.

**Ataxic cerebral palsy-** It generally presents with hypo tonus, weak co-contraction, postural stabilization insufficiency, dissymmetry, and coordination disorders of movement. In children with hypotonic cerebral palsy, weak head control, weakness in trunk stabilization and control, insufficiency of correction, equilibrium and protective reactions, joint hyper mobility are seen as the main problems (Gunel, 2009).

**Mixed Cerebral Palsy-** Children with CP can have a combination of all the above. This is called Mixed Cerebral Palsy.

Cerebral palsy results from damage to certain parts of the developing brain. This damage can occur early in pregnancy when the brain is just starting to form, during the birth process as the child passes through the birth canal, or after birth in the first few years of life.

In many cases, the exact cause of the brain damage is never known. At one time, problems during birth, usually inadequate oxygen, were blamed for cerebral palsy. We now know that fewer than 10% of cases of cerebral palsy begin during birth. (Perinatal).

In fact, current thinking is that at least 70% to 80% of cases of cerebral palsy begin before birth (prenatal).

Some cases begin after birth (postnatal).

In all likelihood, many cases of cerebral palsy are a result of a combination of prenatal, perinatal, and postnatal factors (Chol & Hunglo, 2011).

Risk factors linked with cerebral palsy include the following:

Infection, seizure disorder, thyroid disorder, and/or other medical problems in the mother.

Birth defects, especially those affecting the brain, spinal cord, head, face, lungs.

Rh factor incompatibility, a difference in the blood between mother and fetus that can cause brain damage in the fetus.

Certain hereditary and genetic condition.

Complications during labor and delivery.

Premature birth

Low birth weight (especially if less than 2 pounds at birth)

Severe jaundice after birth

Multiple births (twins)

Lack of oxygen (hypoxia) reaching the brain before, during, or after birth

Brain damage early in life, due to infection (such as meningitis) head injury, lack of oxygen (Smits et al., 2010).

The signs of cerebral palsy are usually not noticeable in early infancy but become more obvious as the child's nervous system matures. Early signs include the following:

Delayed milestones such as controlling head, rolling over, reaching with one hand, sitting without support, crawling, or walking.

Persistence of "infantile" or "primitive reflexes," which normally disappear 3 to 6 months after birth.

Developing handedness before age 18 months: This indicates weakness or abnormal muscle tone on one side, which may be an early sign of CP.

Problems and disabilities related to CP range from very mild to very severe. Their severity is related to the severity of the brain damage. They may be very subtle, noticeable only to medical professionals, or may be obvious to the parents and other caregivers.

Abnormal muscle tone- Muscles may be very stiff (spastic) or unusually relaxed and "floppy." Limbs may be held in unusual or awkward positions. For example, spastic leg muscles may cause legs to cross in a scissor-like position.

Abnormal movements- Movements may be unusually jerky or abrupt, or slow. They may appear uncontrolled or without purpose.

Skeletal deformities- People who have cerebral palsy on only one side may have shortened limbs on the affected side. If not corrected by surgery or a device, this can lead to tilting of the pelvic bones and scoliosis (curvature of the spine).

Joint contractures- People with spastic cerebral palsy may develop severe stiffening of the joints because of unequal pressures on the joints exerted by muscles of differing tone or strength.

Mental retardation- Some, although not all, children with cerebral palsy are affected by mental retardation. Generally, the more severe the retardation, the more severe the disability overall.

Seizures- About one-third of people with cerebral palsy have seizures. Seizures may appear early in life or years after the brain damage that causes cerebral palsy. The physical signs of a seizure may be partly masked by the abnormal movements of a person with cerebral palsy.

Speech problems- Speech is partly controlled by movements of muscles of the tongue, mouth, and throat. Some individuals with cerebral palsy are unable to control these muscles and thus cannot speak normally.

Swallowing problems- Swallowing is a very complex function that requires precise interaction of many groups of muscles. People with cerebral palsy who are unable to control these muscles will have problems sucking, eating, drinking, and controlling their saliva. They may drool. An even greater risk is aspiration, the inhalation into the lungs of food or fluids from the mouth or nose. This can cause infection or even suffocation (Smith, 2005).

Hearing loss- Partial hearing loss is not unusual in people with cerebral palsy. The child may not respond to sounds or may have delayed speech.

Vision problems- Three-quarters of people with cerebral palsy has strabismus, which is the turning in or out of one eye. This is due to weakness of the muscles that control eye movement. These people are often nearsighted. If not corrected, strabismus can lead to more severe vision problems over time.

Dental problems- People with cerebral palsy tend to have more cavities than usual. This results from both defects in tooth enamel and difficulties brushing the teeth.

Bowel and/or bladder control problems- These are caused by lack of muscle control (Schrubbs & Yude, 2010).

Observation of slow motor development, abnormal muscle tone, and unusual posture are common initial clues to the diagnosis of cerebral palsy. The testing strategy is based on the clinical picture, pattern development of symptoms, family history, and other factors influencing the probability of specific diagnoses. Targeted laboratory tests and cerebral imaging using computed tomography (CT scan), magnetic resonance imaging (MRI) and ultrasound are useful physical diagnostic tools. Electroencephalography (EEG) is important in the diagnosis of seizure disorders. A high index of suspicion is needed in order to detect non-convulsive or minimally convulsive seizures. This is a potentially treatable cause of a CP. Electromyography (EMG) and nerve conduction studies (NCS) may be helpful in distinguishing CP (Hung et al., 2004). Associated disabilities such as hearing and vision impairment, seizures, problems with touch or pain, and cognitive dysfunction can help complete the clinical assessment and determine the diagnosis.

Prognosis for independent ambulation depends in large part on the type of motor impairment. Ambulation status, intelligence quotient, quality of speech, and hand function together are predictive of employment status. For example, cerebral palsy: intelligence quotient  $\geq 80$ , and understandable speech, who were ambulatory and independent of the need for “significant assistance”, 90% were employed in a “competitive job”. Mortality also is strongly associated with both the level of functional impairment as well as associated non-motor impairments. In one study of over 2014 individuals with cerebral palsy, the strongest predictor of mortality was intellectual disability. For example, among those with profound intellectual disability (i.e., IQ  $< 20$ ), only one half survived into adulthood; whereas among those with IQ  $> 35$ , 92% survived to adulthood. More generally, mortality risk increases incrementally with increasing number of impairments, including intellectual, limb function, hearing, and vision. In a recent population-based study, the shortest life expectancy was observed among those individuals who were unable to lift their head in prone, who had a life expectancy of 20 year (Sophie, 2006).

Physiotherapists play their role in early intervention by focusing on promoting function through remediation, compensation, adaptation and education techniques, while providing family support throughout the entire process (Stephens & Tauber, 2009). The goal physiotherapy is to enable individuals to achieve independence in areas of physiotherapy performance. Such independence can be achieved through self-independence or through an individual directing others such as in an assistant care situation. Physiotherapy uses purposeful activity and task analysis to prevent and minimize the impact of disability on functional independence and facilitates the development of those skills and behaviours essential to meeting the demands of everyday life (Verschuren et al.,2007). The focus physiotherapy is not on the neurologic disease itself, but rather on the impact a disorder has or potentially will have on a child’s ability to function in life roles. The primary goal is to facilitate physiotherapy performance and prevent dysfunction by providing the child with opportunities to develop, restore, and maintain those skills and behaviours necessary for independent living. The goal of physiotherapy for CP patients is to help them live as independently as possible. Physiotherapy for CP patients uses the individual’s personal strengths to help them overcome their disabilities.

Physiotherapists understand the nature of family occupations can help parents manage and adapt daily living tasks with their children. The therapist asks first about daily routines and tasks that seem the most difficult. As children become older, physiotherapists help them to become more independent in these self-care tasks (Reddihough & Ong, 2008). Though children with CP may face many difficulties in ADLs, many can live long, happy, quality lives. Therefore many children go on to enjoy near-normal adult's lives if their disabilities are properly managed. The earlier treatment begins the better improvement and development of new skills which is necessary for accomplishing everyday task (Taylor, 2008). Traditionally, treatment of CP has focused on influencing the primary impairments such as spasticity, or the secondary impairments such as joint contractures. There are many strategies for children with CP like conservative interventions, pharmacological interventions, surgical interventions, neurophysiologic interventions etc. Admittedly, their care may involve more visits to health care practitioners; require therapy, medications, and perhaps surgery at some point (Life Expectancy of Cerebral Palsy, 2012). Recently, treatment of CP is increasingly focusing on influencing activities, such as ambulation and self-care.

Treatments strategies involve task oriented intervention and environmental modification for facilitating independence (Rosenbaum et al., 2007). For this purpose in Bangladesh, there are many Non-Government Organization (NGO) and Government Organization (GO) working, where treatment for children with CP is available. CRP is a NGO, which has been working for the last 32 years to provide treatment, training, education, and rehabilitation for the disable people in Bangladesh. CRP began as the paralyzed patient and was founded on December 11, 1979 by dedicated British woman by the name of Valerie A Taylor. The vision of CRP is to ensure the inclusion of disabled people into mainstream society and the mission is to promote an environment where all disabled people can have equal access to health, rehabilitation, education, information, and employment. The Paediatric unit is a section of CRP which is well equipped to provide standard services for all children with disabilities particularly for the children with CP. The CRP Paediatric unit provides two services- an inpatient service and an outpatient service (CRP, 2010).

Physiotherapy is defined by the World Confederation of Physical Therapy (WCPT) as services to people and populations to develop maintain and restore maximum movement functional ability throughout the lifespan. Physiotherapists help people affected by injury, illness or disability through movement and exercise, manual therapy, education and advice. They maintain health for people of all ages, helping patients to manage pain and prevent disease. The profession helps to encourage development and facilitate recovery, enabling people to stay in work while helping them to remain independent for as long as possible. Physiotherapy is a science-based profession and takes a 'whole person' approach to health and wellbeing, which includes the patient's general lifestyle. At the core is the patient's involvement in their own care, through education, awareness, empowerment and participation in their treatment.

Physiotherapy helps with back pain or sudden injury, managing long-term medical condition such as asthma, and in preparing for childbirth or a sporting event (The Chartered Society of Physiotherapy, 2013). The Australian Physiotherapy Association (APA) has voluntary membership and acts as a professional self-regulatory body advising on issues such as ethical practise, mandatory continuing education and fee structures. Physiotherapy is a therapeutic health profession concerned with enhancing mobility and quality of life by using clinical reasoning to deliver the most suitable treatment for an injury or condition. Physiotherapists assess, diagnose and treat people with movement problems. They also deliver patient education help people avoid injuries and maintain a fit, healthy body. Physical therapy (PT) is an important part of managing cerebral palsy (CP). It usually starts soon after diagnosis. It may begin earlier, depending on the symptoms. Some people with CP continue physical therapy throughout their lives, especially those with severe physical disabilities.

The goals of physical therapy are to:

Improving functional mobility.

Strengthen and encourage the growth of muscles.

Improve the ability to move all parts of the body.

Prevent joints from becoming tight or permanently bent (contracted).

Physiotherapy techniques are aimed to assist child with:

Normalisation of their muscle tone

Maintaining range in muscles affected by hypertonic

Improved balance and coordination

Development of gross motor skills

Strengthening of muscles

Experience of normal movement through play and functional activities

Strengthening and stretching

Physical therapy also may include the use of:

Special positions, exercises, and cushions to help keep a child in a more natural position.

Braces, casts, and splints to help straighten and support the child's joints. These devices also may help manage uncontrolled limb movements

Wheelchairs, walker and other devices for increased mobility (Kerem & Livanelioglu, 2014).

Perception is a particular attitude towards something or a way of thinking about something or the ability to think about problems and decision in a reasonable way without exaggerating their importance. Perspective is the theory of cognition is the choice of context or a reference from which to sense, categorize, measure or codify experience, cohesively forming a coherent belief, typically for comparing with another. Mothers of the children with CP are the primary caregiver and play an important role in the development of the children. Individuals have their own way of understanding about their environment. A situation may be the same but the interpretation of that situation by two people may be vastly different. Perception can be defined as a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment (Poonjani, 2009). Mother's perception about home exercise program means their own way of understanding about home exercise program on the basis of their knowledge. From the mothers' perception, the investigator gained information about the mother's understanding, learning from the program, value of the program and mother's suggestion to recognize the program for better service. Mother plays an important role as educator and motivator to their children's learning process (Finnie, 2005).



It is also possible that mothers can teach their husbands the same procedure. On the other hand, they can also help their wives to make necessary adaptation for their children with cerebral palsy to perform functional activity independently. Therefore, it is very much important to know mothers' perception about home exercise program for their children with CP. A physiotherapist creates home exercise programs specifically for each individual child given their specific injuries and limitations. The home exercise program is a way for children's to take an active approach to healing in order to decrease the amount of time they have to see us, and to increase the recovery process. A home exercise program is a vital part of and healing process. As physiotherapists help to the best of their knowledge and abilities, if any questions on home exercise program mother can always ask. Physiotherapists have a solid answer why each and every exercise we gave child is important and are always more than willing to modify it to improve mother compliance. Physiotherapists hear all the excuses why they don't perform their home exercise program. But there are always ways can make time for it. If mother doesn't have time, do one or two of the exercises in the morning and one or two at night. The exercises we give likely will not take much time and usually do not require any special equipment. Likely we will be able to make a home exercise program that will work for child and their lifestyle (Weightman et al., 2011).

The parent is made to practice the activity repeatedly with the guidance and feedback from the physiotherapist until the parent is comfortable and confident enough to continue independently at home. Physiotherapists to encourage home-based child-parent interaction because it contributes to the child's development. The physiotherapist promotes child-parent interaction by designing interaction programmes to guide parents in understanding and responding to their child's behaviour, interests and needs (Helen, 2005).

### 3.1. Study design

This study used the qualitative research design. A research question starting with ‘what’ or ‘how’, or a topic such as the parent’s perception as in this study that needs to be explored in depth in order to explain the parents’ feelings, is most suitable for the qualitative exploratory research approach. In this study, the qualitative approach was used because of its advantages. It places emphasis on understanding the individual’s life experiences through examining closely people’s words and actions and it brings out the situation as experienced by the participants (Maykut & Morehouse, 2007). In addition, the qualitative research design also permits the description of problematic moments in the individual’s life (Denzin & Lincoln, 2005). The qualitative approach was thus used to describe the expectations, experiences, satisfaction attained, and the problems encountered by the parents of children with CP. The purpose of this study is to find out the perspective of mother’s about home exercise program. Qualitative approach focus on specific individuals, rather than group or types of individuals.

Qualitative research is suitable for exploring a new area & understanding individual attitudes & behaviours that why the researcher selected the qualitative research approach, which helps to gain understanding & explore the feelings, attitude, opinions, fears & behaviour of mothers with CP (Behrman, 2008). This research design utilized semi-structured and face to face interviews because this was suitable for collecting research description in this topic (Hammel & Crepenter, 2006). This methodology appropriate when there is only a small number of participant (Frankle & Wallen, 2008).

### 3.2. Study site

The study was conducted paediatric unit Centre for the Rehabilitation of the Paralysed (CRP), Savar, Dhaka, 1343.

### **3.3. Study population**

Outpatient mother of CP who came at paediatric unit of CRP.

### **3.4. Study size**

For this study the researcher took a small sample size. So, the researcher could analyze the data from the participant deeply & easily. Researcher took 10 participants as sample until data saturation point was reached. Small numbers of potential study participants are appropriate for a qualitative methodology.

### **3.5. Sampling technique**

Purposive sampling technique was used for this qualitative study. This sampling procedure allowed choosing a typical case for the study. By using this sampling procedure can make a judgment about sample & able to collect in depth data from participant according to research needs. Though the study objective is to investigate the range of dimension of care according to mother perception the researcher used purposive sampling procedure for appropriate data. For this reason data collected from those patients who are more appropriate & fulfil the study purpose according to inclusion and exclusion criteria. Purposive sampling strategies are designed to enhance the understanding of selected individual or group experience or for developing theories & concepts.

### **3.6. Inclusion criteria**

The participants were chosen from those who were attending the follow-up session after receiving treatment from indoor clinic of CRP paediatric unit.

Only mothers could be participant in this study because they had been directly thought about the home exercise program and how to continue at home.

The mother's whose child age 3-10 years because they were available at CRP paediatric unit.

Mother who were minimum able to read and write her name because they were able to understand and perform exercise program at home.

### **3.7. Exclusion criteria**

Children with other type of disability e.g. Down syndrome, muscular dystrophy because the aim of the study was to find out of perspective of the mothers of cerebral palsy.

Children with un-diagnosed cerebral palsy. If the child whose diagnosis is not confirmed were included in the study the perspective of the mother of other condition child mixed up and influenced the study.

Children of age group below 2 and above 10 years because they are not available in CRP paediatric unit.

Children without mother or constant career because if the career was not constant she did not able to give appropriate information.

Less interested subject or mother.

### **3.8. Data collection**

This study was followed all rules of data collection including method of data collection, materials used for data collection, duration and procedure of data collection. Data collection is the strong point of any research which maintains the research validity and reliability. Data was collected in between 4<sup>th</sup> October 2015 to 8<sup>th</sup> October 2013. Within 4 days data collection was completed because of patient's availability. Each data was collected carefully & confidentiality is maintained

### **3.9. Data collection tools**

To conduct the study data was collected through using different types of data collection tools. For a data collection open ended questionnaire were designed to conduct the interviews, during the interview instrument were paper, pen & pencil to write field notes. Which include close ended questionnaire & open ended questionnaire to obtain patient's identification, Socio-demographic information & finding out complicated information.

### **3.10. Method of data collection**

The researcher was collects data though face to face interviews with open ended question. That's why participants get more freedom to explain their opinions. Face to face interviews helped the researcher to determine participants understanding of the question by observed their facial expression. Questionnaires used both English and Bengali for easy understanding of the participants before starting the interview, some time spent to prepare a report with participants including a general conversion. The interview notes on the note book. The interview held on quite place on paediatric unit at CRP.

### **3.11. Data analysis**

The researcher used qualitative content analysis to analyze data of mother's perception about physiotherapy home exercise program. The aim of data analysis was to find out actual meaning of information, which was collected according to the participant's opinion. Bryman's work in his research that it also facilitates contextual meaning in text through the development of emergent themes derived from textual data. Data was analyzed by 3 stages: coding, categorizing and generating themes. (Priestet al., 2012). At the first of analysis the researcher listen to the recorded interviews several times. After that the interview was transcribed into Bengali by the researcher, the researcher reviewed the interviews with the transcript to ensure all the data was presented within the text. After formulating the transcription, it was given to 6 individuals who were competent in English to translate the data from Bengal to English. Researcher has completed 3 copies of data where one set was translated by the researcher two copies were translated by the volunteer group. After that, the researcher verified those 3 data sets and also read it several times to recognise what the participants want to say in the interviews. At the same, the researcher listened to the MP3 recorder to ensure the validity of data. Then the researcher categorized the data. In the 2nd step, after categorizing the researcher started content analysis. Then researcher tried to find out the codes from participants answer. Researcher organized data according to the categories. Under those categories, the researcher coded all the information from participant's interview. The coding was different from each participant and after finishing the coding; the researcher detected some important codes that reflected the themes of the study findings.

### **3.12. Ethical Consideration**

The ethical guideline of WHO, IRB & BMRC was strictly followed. The researcher took approval from supervisor and course coordinator, Department of Physiotherapy, BHPI an academic institute of Centre for the Rehabilitation of the Paralyzed (CRP) to do the study. Then permission was taken from the In-charge of paediatric unit for data collection from the mothers. The investigator took consent from to the participants who were interested to participate in the study and informed verbally about topic and purpose of study. The researcher ensures that the paediatric department will not hamper by this study. The participants did not deprive from any therapy session by this study. They have been treated as like other mothers in paediatric unit. The researcher has promised the participants that all information provided will be kept strictly confidentially and would not expose their identity. Researcher had ensured that never causing any harm or benefited to them but in future children with cerebral palsy may get benefited from the study.

Written consent was obtained from all participants before beginning of formal interview. All of them were verbally informed about the title, aim and objectives of the study. They were voluntarily participating in this study and they hand right to withdrawal their participation in any time of research conduction. They were informed that all of the information given by them would not be shared with others without research purpose. The recorded information and transcripts would be shared with supervisor only for research purpose. Participant's address or identity would not used in this study in any reason. Finally they filled up the written consent form as document of their permission and voluntary participation.

### **3.13. Rigor of the study**

During the interview session and analyzing the data researcher never tried to influence the process by her own value, perception and biases. The researcher accepted the answer of the questions whether they were of positive or negative impression. The transcripts were translated by another 6 peoples to avoid biasness and researcher checked it several times with his own translation and recording to reduce any mistake and compared it with the Bangla transcript. Researcher tried to keep all the participants related information and documents confidential. To reduce the sources of error and biasness of the study, this study was conducted in a systemic way by following the steps of research under supervision of an experienced supervisor.

The aim of the study was to explore the mother perspective about home exercise program for their children with cerebral palsy. Results and discussion are carried out at the same time and presented together.

The participant in this study offered some important insight on the perspectives about the physiotherapy home exercise program through their eyes. Participants responded according to their perception. There were ten participants from the pediatric unit of the Centre for the Rehabilitation of the Paralyzed.

#### **Socio demographic information at a glance**

Among ten participants most of the participants were 3-6 years and less number of participants was 7-10 years. The majority of participants were lived in urban area, other participants were lived in rural area and 1 participant was lived in semi-rural area. Most of the participants were literate and among them 1 participant was illiterate. Most of the participants were housewife and among them 1 participant was student. Most of the participants were income 5000-15000 tk and few number of participants were income 15000-20000 tk (Table-1).



<b>Socio-demographic Information</b>	<b>Number</b>
<b>Age</b>	
3-6	6
7-10	4
<b>Residential area</b>	
Rural	4
Semi-rural	1
Urban	5
<b>Educational status</b>	
Illiterate	1
Primary school certificate (PSC)	2
Junior school certificate (JSC)	3
Secondary school certificate (SSC)	2
Bachelor	2
<b>Occupation</b>	
Housewife	9
Student	1
<b>Monthly income</b>	
15000-20000 tk	4
10000-15000 tk	3
5000-10000 tk	3

**Table-1** Socio-demographic information of the participants

## **Themes of the study**

Theme 1. Most of the mothers come regularly at CRP for child follow-up session.

Theme 2. Mother's perception about physiotherapy home exercise program

Theme 3. Physiotherapy home exercise program at home

Theme 4. Mother's satisfaction physiotherapy home exercise program

Theme 5. Problem faced at home

Theme 6. Suggestion about home exercise program.

## **Coding**

Code 1. Mother come CRP regularly for child improvement.

Mother did not come CRP regularly because she had no enough time.

Code 2. Improve dynamic sitting balance.

Normalize muscle tone of her child

Can crawling, standing and walking.

Code 3. Mother did not miss therapy at home.

Cannot give therapy properly due to time.

Learned how to keep my child in standing position

Code 4. My child can grip any object.

Improve muscle power than before.

Code 5. My child cry during therapy session at home.

Get sleep therapy session due to taking anti-epileptic drug.

Lack of attention.

Poor educational background of the parents

Code 6. Instruction of the exercise program would be more specific.

There is no need to further change in the exercise program.

**According to 1<sup>st</sup> theme**

Most of the mothers come regularly at CRP for their child follow-up session. The other mother said that they did not come CRP regularly because she did not had enough time for came at CRP for their child's follow-up session.

One mother said: I come here regularly for my child follow-up session. I come at CRP frequently for my child better improvement. I come at CRP 2-3 times in a month.

Another mother said that: I come at CRP 2-3 times in a week but I need 3-4 times in a week. From the result section researcher found that most of the participant comes at CRP regularly for their child follow-up session. However some participant did not come regularly for their child follow-up session.

**According to 2<sup>nd</sup> theme**

While exploring the participant opinion about the physiotherapy home exercise program, all participants reported about the improvement of their child condition after continuing the physiotherapy home exercise program. They had mentioned about the improvement of neck control, sitting, standing and walking by holding something. They also expected that if they were continuing the physiotherapy home exercise program at home more improvement would occur in future.

One mother said: Physiotherapy home exercise program is very helpful for my child. Now my child condition is better than before. Now he can do crawling, can do standing and walking alone by holding something. Other mother said that, balance practice is better because no dynamic sitting balance of my child now improve the dynamic sitting balance my child.

Another mother said that it is good for my child. Before my child limbs were more spastic than now. Most of the parents said that it helps to normalize their child's muscle tone after having treatment in CRP. If I did the physiotherapy home exercise, my child condition will be improved.

Most of the mothers were satisfied after continuing the physiotherapy home exercise program due to improvement of their child condition and also satisfied with the present physiotherapy home exercise program, they think it is very helpful for their child with Cerebral Palsy. Here we see that by using the home exercise program their child conditions were improved day by day and also they could carry out the exercise program at home according to the advice. Home programmers are used extensively for children with cerebral palsy (Cusick, 2006).

The mothers realize the importance of home exercise program for their child. They think that it is very helpful for their child further improvement. These findings suggested that an exercise program improves physical fitness, quality of life in children with cerebral palsy (Verschuren et al., 2007).

### **According to theme 3**

Most of the mothers were did their child physiotherapy home exercise regularly at home. Sometimes the mother became ill so they did not do the home exercise. Some of them said that they sometimes did not do the physiotherapy home exercise timely but they never missed to do their child exercise.

One mother said: I did my child home exercise program regularly. I gave more time to did my child physiotherapy home exercise timely, I did not miss the exercises. Other mother said: I try to do the physiotherapy home exercise 3 times in a day but I could not do it 3 times because I have not enough time. When I get time then I did the physiotherapy home exercise. It is 1-2 times in a day but I never miss to do the physiotherapy home exercise in a day.

One mother said, in this home exercise program I think arm and leg exercise is best because it prevent the limitation of movement of the joint of my child. Most of the mother said, I learned how do I keep my child in standing position and I learned where should I give support during standing position. This home exercise program get better result. There is no mother who totally did not do her child home exercise at the home. Every mother try to did her child home exercise timely but sometimes some of them did not do it timely.

Every mother concern that it is necessary to do her child home exercise three times at day. Most parents will be able to carry out a short home exercise program (Shepherd, 2006).

#### **According to theme 4**

One mother said, I am satisfied to come here because I think every home exercise is good. Coming some muscle power return her before no muscle power upper and lower limb of my child.

Another mother said, I am satisfied because before coming here my child can not catch any object but she can catch of any object due to home exercise. Therapist advises me doing more and more catching practice in home and I do it and improved my child condition.

Other mother said, I am satisfied to come here because I have live far away from CRP so home program is effective and efficient for my child, I am very glad to get home exercise program. Another participant said that before getting therapy my child was one side of hemiplegic. After two weeks indoor program, therapist advised the patient AFO during the home. Now he goes to school by wearing AFO. My child continues her study. So I am happy to get the home program.

#### **According to theme 5**

When any family has a child with disabilities then they have to do a lot of extra work. It is difficult to do physiotherapy home exercise timely for them. They find it difficult to implement physiotherapy home exercise program at home according to the given direction due to different types of problem. While the participants were asked about the problem they faced during doing which faced during doing the exercise.

Most mothers said that their did not enough time; their child was crying during doing the home exercise; sometimes child did not want to do the exercise; sometimes need help of other family member to do the exercise. Mother needed to give more time to do the child home exercise program. It created problem in their house hold work as they lived in urban area. Some of them said that they felt back pain, hand pain or other physical problem.

One mother said: I fell some problem during implement the physiotherapy home exercise program at home. My child is crying when I do the exercise. But when he stops crying then I continue the exercise. Sometime he do not want to do the physiotherapy home exercise we live in urban area so I have a lots of house hold work, it is difficult for me to find out enough time to do his exercise timely. Other mother said: Sometimes child feel pain in his arms and leg. For taking anti- epileptic drug child get slept all over the time.

Most of the mother said, she cannot able to applying the home program appropriately at home. Because of most of the time she forgets the home program given by individual's therapist and participants. Also said that she and her husband are illiterate. So after finishing the two weeks indoor program every participant got a book named Akivuto prithibir potha although they are illiterate they cannot able to read the book through. For the reason they cannot provide appropriate therapy to her child.

Mother of cerebral palsy children faced different problems during implementation of the exercise program at home. But it was necessary for them to continue the therapy program at home. Mother is the only one person who has a direct contact with her child. The role of mother in exercise program is vital (Elaine, 2007). Family support is also very important for children with cerebral palsy. It is very difficult for a mother to continue the exercise program alone without any support of other family members.

#### **According to theme 6**

Most of the mothers said that they have no further suggestion while they were asked about any suggestion regarding physiotherapy home exercise program. The mothers said that the physiotherapy home exercise program implemented from CRP is perfect for their child. They think that there is no need to further change in the exercise program.

Only one participant said that if the instruction of the exercise program would be more specific than it could be far better Mothers have no suggestion about the home exercise program because they are satisfied with the present exercise program and they easily performed the exercise at home because they are well concentrated about the exercise.

They thought their child condition is improved after continuing the physiotherapy exercise program at home and they also expected that if they could continue the exercise at home according to the instruction then their child condition would be more improved. They are highly satisfied because therapist taught and demonstrated them how they should do the exercise at home. They perform the exercise perfectly and they had gradual improvement and as they are satisfied.

## **5.1. Limitation**

There is limited information available in the literature because no research is done in this area. That's why the literature static's are insufficient in this study.

The interview schedule and interviewing skills are not in-depth to get deeper information from the participant, assist the first attempt for the researcher.

Time is limited which had a great deal of impact on the study. If enough time is available knowledge on this could be extended.

The researcher did not do any pilot study to prepare questioner because of time limitation.

No other research has been done in this area.

Though the research is qualitative research so we can't generalize research findings.

Interview is conducted in Bengali and then it is translated into English, so there might be possibility to lose actual expression or meaning of the participants.



**Conclusion**

The research has done very carefully. The study showed the perception of mother about physiotherapy home exercise program. The study has found that most of the mother come at CRP regularly for their child's follow-up session and they also did the physiotherapy home exercise program regularly at home. However some mother did not do the home exercise regularly.

Mother faced various problems during doing the exercise at home. Sometimes the child did not want to do or sometimes they felt other physical problem. Most of the mothers are satisfied after continuing the physiotherapy home exercise program at home because they think that their child condition is improved after doing the exercise program and it would be more effective if they continue the exercise program at home.

Most of the mothers thought that their present physiotherapy home exercise is good. They could do the exercise program according to the instruction at home because they understood it very well so they thought that there have no needs any further change. One of them suggested that if the instructions are more specific it would be better.

From this study it is found that the overall mother thinks that the present physiotherapy home exercise is very helpful to improve their cerebral palsy child's condition. If more research will be done in this area including large population and if the originations who are working with the children with cerebral palsy take step to provide effective physiotherapy home exercise program then it will be really helpful to child because home exercise program is very important for a child with cerebral palsy.

## **Recommendation**

The aim of this study is to explore the mother's perception about physiotherapy home exercise program for their cerebral palsy children and the researcher find the information from the study which is fulfill the aim and objectives of the research project. The researcher recommended following things:

Further research recommended on this topic with more samples to generalize the result and make more valid and reliable.

A pilot study should be conducted before starting main interview for achieving their accurate answers and should take more samples for the pilot study to establish the accuracy of the questionnaire.

An available time and resource should be taken to do this study for great deal of it.

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## APPENDIX

### সম্মতিপত্র

(অংশগ্রহনকারীকেপড়ে শোনাতেহবে)

আসসালামুআলাইকুম,

আমারনামসাবিকুননাহার, আমি এই গবেষণাপ্রকল্পটিবাংলাদেশ হেলথ প্রফেশনসইনস্টিটিউট (বিএইচপিআই)-এ পরিচালনাকরছিআমার ৪র্থ বর্ষ বি এসসি ইন ফিজিওথেরাপী কোর্সের অধিভুক্ত। আমারগবেষণারশিরোনামহল- “সেরেব্রালপালসিবাচারময়েদের বাসায়করানোফিজিওথেরাপীচিকিৎসাসম্পর্কে ধারণা”। আমি এক্ষেত্রে আপনাকেকিছু ব্যক্তিগত এবং আনুষঙ্গিক প্রশ্নকরতেচাচ্ছি। এতে আনুমানিক২০মিনিটসময়নিবো।

আমিআপনাকেঅনুগতকরছি যে, এট আমারঅধ্যয়নের অংশ এবংযাঅন্য কোনউদ্দেশ্যে ব্যবহৃতহবেনা। গবেষকসরাসরি এই অধ্যয়নের সাথে অন্তর্ভুক্ত নয়। তাই এই গবেষণায়আপনারঅংশগ্রহণবর্তমান ও ভবিষ্যৎচিকিৎসায় কোনপ্রকারপ্রভাব ফেলবেনা। আপনি যে সব তথ্য প্রদানকরবেনতার গোপনীয়তাবজায় থাকবেএবংআপনারপ্রতিবেদনের ঘটনাপ্রবাহেএটানিশ্চিতকরাহবে যে এই তথ্যের উৎসঅপ্রকাশিত থাকবে।

এই অধ্যয়নেআপনার অংশ গ্রহণ শেষছা প্রণোদিতএবংআপনি যে কোনসময় এই অধ্যয়ন থেকে কোন নেতিবাচকফলাফলছাড়াইনিজেকেপ্রত্যাহারকরতেপারবেন। এছাড়াও কোননির্দিষ্ট প্রশ্নঅপছন্দ হলেউত্তরনা দেয়ারএবংসাক্ষাৎকারেরসময় কোনউত্তরনাদিতেচাওয়ারঅধিকার ও আপনারআছে।

এই অধ্যয়নেঅংশগ্রহনকারীহিসেবেযদি আপনার কোনপ্রশ্ন থাকেতাহলেআপনিআমাকেঅথবা/এবংসহকারিঅধ্যাপক, ফিরোজআহম্মেদ মমিন, ফিজিওথেরাপিবিভাগ, সিআরপি, সাভার, ঢাকা-১৩৪৩-তে যোগাযোগকরতেপারেন।

সাক্ষাৎকারশুরুকরারআগেআপনারকি কোনপ্রশ্নআছে?

আমিআপনারঅনুমতিনিয়ে এই সাক্ষাৎকারশুরুকরতেযাচ্ছি।

হ্যাঁ

না

১। অংশগ্রহনকারীর স্বাক্ষরএবংতারিখ.....

২। সাক্ষাৎগ্রহনকারীর স্বাক্ষরএবংতারিখ.....

৩। প্রত্যক্ষদর্শীর স্বাক্ষরএবংতারিখ.....

## VERBAL CONSENT STATEMENT

(Please read out to the participant)

Assalamualaikum,

My name is Sabekun Naher, 4<sup>th</sup> year student of Physiotherapy Department, I am conducting this study for partial fulfilment Bachelor degree. Titled of the study is “**Mother’s perception about physiotherapy home exercise program for cerebral palsy children**” from Bangladesh Health Professions Institute (BHPI), University of Dhaka. I want to find out mother’s perception about physiotherapy home exercise program for cerebral palsy children. This will take approximately 15 minutes.

I would like to inform you that this is a purely academic study and will not be used for any other purpose. I am not directly related with this area where you are taking treatment and you are not directly benefited as well as not harmed for participation. All information provided by you will be kept in confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don’t like or do not want to answer during interview.

If you have any query about the study, you may contact with myself, or my supervisor Firoz Ahmed Mamin, Assistant Professor, Physiotherapy Department, BHPI, CRP, Savar, Dhaka-1343.

Do you have any questions before I start?

So may I have your consent to proceed with the interview?

YES

NO

Signature of the Patient/Attendance & Date.....

Signature of the Interviewer & Date .....

Signature of the witness & Date.....

### প্রশ্নবলী

সনাক্তকারী নম্বর:	সাক্ষাৎকারেরতারিখ:
সময়সূত্র:	শেষ সময়:
অংশগ্রহনকারীরনাম:	
সাক্ষাৎকারীরনাম:	
সম্মতীগ্রহন: হ্যাঁ:	না:

গাঙ্কীরনাম

রোগীরবিবরণ:

রোগীরনাম:

লিঙ্গ:

ঠিকানা: ফোন নম্বর:

আর্থ সামাজিকবিবরণ:

১. বয়স :..... বছর

২. আবাসিকপ্রলাকা-

- ✓ গ্রাম
- ✓ মফস্বল
- ✓ শহর

৩. শিক্ষাগত যোগ্যতা-

- ✓ অশিক্ষিত
- ✓ শিক্ষিত
- ✓ প্রাইমারি স্কুলসার্টিফিকেট
- ✓ জুনিয়র স্কুলসার্টিফিকেট
- ✓ মাধ্যমিক স্কুলসার্টিফিকেট
- ✓ স্নাতক
- ✓ স্নাতকোত্তর
- ✓ অন্যান্য

৪. পেশা-

- ✓ গৃহিণী
- ✓ ছাত্র/ছাত্রী
- ✓ পোষাকশ্রমিক
- ✓ শিক্ষক
- ✓ সরকারীচাকুরীজীবী
- ✓ অন্যান্য

৫. মাসিকআয়-

- ✓ ১৫০০০-২০০০০
- ✓ ১০০০০-১৫০০০
- ✓ ৫০০০-১০০০০

১. আপনিকতদিনযাবৎসিআরপিতেঅনুসরণেরজন্য আসেন?

২. আপনিসিআরপিমা ও শিশুকল্যাণশাখারবাসারব্যায়ামকর্মসূচিসম্পর্কে কিমনেকরেন?
৩. কোনচিকিৎসাআপনারসন্তানেরজন্য উপকারীএবং কোনটানয়? দয়া করেব্যাক্যাকরুন-
৪. আপনিকিবাড়িতেব্যায়ামকর্মসূচীতেসম্ভষ্ট? দয়া করেব্যাক্যাকরুন-
৫. আপনি ঐ কর্মসূচীতেকিকিসমস্যার সম্মুখীনহয়েছেন ?দয়া করেব্যাক্যাকরুন-
৬. বাড়িতেব্যায়ামকর্মসূচীসম্পর্কে কিআপনার কোনোপরামর্শ আছে? দয়া করেব্যাক্যাকরুন-

## Questionnaire

Identification number:	Date of interview:
------------------------	--------------------



- ✓ Garment' worker
- ✓ Teacher
- ✓ Govt. Employee
- ✓ Others

5. Monthly income

- ✓ 20,000-15,000 TK
- ✓ 15,000-10,000 TK
- ✓ 10,000-5000 TK

1. How long you come at CRP regularly for follow up?
2. What do you think about home exercise program of the mother and child care unit of CRP?
3. Which treatment is beneficial for your child or which are not? Please explain?
4. Are you satisfied of this home exercise program? Please explain?
5. What problem did you face in that program? Please explain?
6. Do you have any suggestion about home exercise program? Please explain?

Permission letter

August 22, 2015

Head of the department of Physiotherapy  
Centre for the Rehabilitation of the Paralysed (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 Sabekun Naher, student of 4<sup>th</sup> Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The ethical committee has approved my research project entitled on **“Mother’s perception about physiotherapy home exercise program for Cerebral Palsy children”** under the supervision of Mohammad Alamgir Chowdhury, Assistant professor of Physiotherapy, Department of Physiotherapy, CRP. Conducting this research project is partial fulfillment of the requirement for the degree of B.Sc. in Physiotherapy. I want to collect data for my research project from the patients of CRP. So, I need permission for data collection from the Pediatrics unit of Physiotherapy department of CRP-Savar campus. I would like to assure that anything of my study will not be harmful for the participants.

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

Sincerely Yours

Sabekun Naher

4<sup>th</sup> Professional B.Sc. in Physiotherapy

Roll-19, Session: 2010-2011

Bangladesh Health Professions Institute (BHPI)

CRP, Chapain, Savar, Dhaka-1343.

*She will collect data from this unit. Please help her. On behalf of Mr. Chowdhury*

*She may be allowed for data collection*  
9/06/15

*Approved in  
contact with  
a consider  
process*

*Mohammad Hossain  
Head of Department  
CRP, Chapain, Savar, Dhaka-1343*

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

**Firoz Ahmed Marim**  
Assistant Professor  
Department of Physiotherapy  
BHPI, CRP, Savar, Dhaka

**HOSNEARA PERVAH**  
Incharge Physiotherapist  
CRP, Savar, Dhaka