

**Identifying the level of occupational participation of cerebral palsy
child in inpatient pediatric unit of CRP**

By

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Statement of Authorship

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis presented by me for any other degree or diploma or seminar.

No other person's work has been used without due acknowledgement in the main text of the thesis.

This thesis has not been submitted for the award of any other degree or diploma in other tertiary institution.

The ethical issues of the study has been strictly considered and protected. In case of dissemination of the findings of this project for future publication, it will be duly acknowledged as undergraduate thesis.

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Dedication

“To my beloved family members”

Acknowledgement

I start with the name of ALLAH the most merciful and kind. With taking his all holy name I declared that this study is a great mercy of Him to me. Then I would like to give special thanks to my parents and my elder sister who gave support and always inspire me throughout my work.

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Lists of shortenings

BHPI- Bangladesh Health Professions Institute

CP- Cerebral palsy

CRP- Center for the Rehabilitation of the Paralyzed

ICF- International Classification of Functioning, Disability and Health

OT- Occupational Therapy

SCOPE- Short Child Occupational profile

SPSS- Statistical Package for Social Science

WHO- World Health Organization

&- and

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Abstract

Background:

Cerebral palsy (CP) is quite familiar to medical communities as it impacts on normal engagement of activities. So it is important to know the problems that the child with CP faces and this can be known by a standardized assessment.

Objective:

The objectives of the study are to

- Identify the level of occupational participation.
- Identify the association among age, sex, types of CP and occupational participation.
- Identify the common strengths and challenges of the child cerebral palsy.

Study design:

The study is conducted through cross sectional design among the participants who were selected according to the inclusion criteria. The Short Child Occupational Profile (SCOPE) is used to assess the occupational participation of 181 cerebral palsy child in the inpatient pediatric unit of CRP. The structured questionnaire was fulfilled by assessing the child through observation and information was also obtained from the carer. The part named referring reason was collected from the CRP's inpatient assessment form.

Result:

Results showed a significant association between age and occupational participation ($p>0.05$), there was no association between the sex and occupational participation ($p<0.05$), and no association among the types of cerebral palsy and occupational participation ($p<0.05$). In this study showing enjoyment or happiness when playing or doing something were the most common strengths (80.1%) of all participants and 79.6% of participants faced challenges with solving problems.

Conclusion:

Study results support the previous study of engagement or participating in daily activities of the child with CP. As the child with cerebral palsy have severe limitations in their motor activity this may be a possible cause for not being able to participating in occupation or activity. Age is another area which affected participation.

Key words: CRP, Pediatric unit, Cerebral palsy, Occupation, Participation, Occupational participation, SCOPE

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1.1 Introduction

Bangladesh is one of the developing countries of the South Asian region. According to the provisional results of 2011 *Population and Housing Census*, the numbered population on 15th March, 2011 was near about 143 million. Disability is a universal element in the human condition to which no one is protected (Haider, Country Report: Bangladesh). People with disabilities are estimated by WHO to represent around 7-10% of any population and that disabled people are estimated by the World Bank to make up 15-20% of the poor in developing countries (*Disability in Bangladesh: a situational analysis*). There are many people who are disabled lives in Bangladesh and childhood disabilities are not uncommon. Unfortunately, specific disability types of data out of the total population are not available in Bangladesh (Ackerman, Thormann and Huq, 2005). In Australia 34000 people are living with CP and 17 million worldwide (*Cerebral palsy alliance*). It was estimated that 1,735,121 children in Bangladesh, out of a total population of 18 million children in the 6 to 11 age range, are disabled. In the types of disability in preprimary and primary ages (3- 10) in Bangladesh based on 2,559,222 disabled children, 41.5% were physically disabled and 121,458 7.0 children were Cerebral Palsy (Ackerman, Thormann and Huq, 2005). Ackerman also mentioned in his work the ICF; World Health Organization 2001, that disability results from the dynamic interaction between the person and his or her environment, rather than residing within the person, and that the ability to perform activities and participate in life situations is an essential component of health.

It was not until 1843 that William John Little, an English orthopedist, recognized that various deformities in children were associated with what we called “infant spastic paralysis”. He recognized correlation between abnormality of pregnancy, labor, delivery, and subsequent developmental deficits in his paper in 1961. Another orthopedist; Winthrop M. Phelps invented the term Cerebral Palsy before World War II (Hopkins 1993, pp. 430-431). The post War years brought renewed interest in children with disability including cerebral palsy and this lead to development of different cerebral palsy associations.

Study said that, Cerebral palsy which occurring in 2- 2.5 per live birth is the most common physical disability in childhood (Stanley, Blair and Alberman, 2000, pp. 22-39). It is a group of permanent disorder affecting the movement and posture. Those who have CP face activity limitations which are known as non-progressive disturbance. It is commonly seen in developing fetal or infant brain. While the severity and type of motor disorder vary, in most of the individual and their family have a large impact on these. The children with cerebral palsy have limited physical ability and also may have other associated problem like epilepsy and learning difficulties (Law, et al. 2011, p.2).

Assessment is a critical step in the occupational therapy process. A holistic, occupation-focused assessment provides a structured format for a practitioner to assess the overall abilities or difficulties that are having an impact upon a client's life participation (Bowyer et al. 2012, pp.19-22). It is commonly believed that children cannot reliably assess their own performance. Their ability to identify and express their personal meanings and values may also be limited. Differences between adult and pediatric practice may be that the methods proposed for client-centered assessment of adults are not readily applied with children (Coster 1998, p 338). The SCOPE is designed to be an occupation-focused, client-centered, and theory driven assessment. SCOPE can be readily integrated into practice with children and adolescents aged birth to 21 years (Bowyer et al. 2008). It is the assessment which can be successfully used as an initial evaluation, also as an outcome measure to assess a child's progress in therapy. Practitioners are allowed to systematically evaluate the factors that facilitate or restrict occupational participation by SCOPE because it offers a broad overview of a child's occupational participation. Study provides evidence that the SCOPE can be used and interpreted in a valid manner to analyze a pediatric client's occupational participation and to determine whether the environment supports or detracts from occupational participation (Bowyer et al. 2010). The SCOPE ratings along with MOHO theory help the practitioner identify the intervention option that is most practicable and that may result in the uppermost improvement in occupational participation. The SCOPE is initiated by allowing the theory of Model of Human Occupation (MOHO). It was stated that MOHO could guide practice in all areas of disability and also a variety of setting. The model itself is only a tool that organizes material from a broader science of human occupation. Human occupation is described as an open

system by the content and structure of the model. An open system relates with its environment and is constantly changing as a function. The interaction of system with its environment occurs as a process of input, output, throughput, and feedback (Keilhofner, 1980 pp. 777-788).

A proposed new definition of CP focuses on a broader perspective of activity restriction and disability (Bax et al. 2005). In many countries the children with CP take physical and occupational therapy service to facilitate the development and to enhance the functional movement, self-care, play, school activities and leisure (Law, et al. 2011, p.2). As the SCOPE can be used by rehabilitation and also educational practitioner, it will be useful to use this tool in their practice.

1.2 Background

CP is used as an umbrella term which is designed for a group of chronic, non-progressive disturbances of movement and posture and commonly occurs in the developing fetal or infant brain. The children with cerebral palsy (CP) experience a range of impairments and have an impact on the overall body function and participation in everyday life. The motor disorders of CP are often present with the impairments of sensation, perception, cognition, communication and behavior and also secondary musculoskeletal problems (Mcfadd and Hustad 2013, p.102). Liptak et al. suggests that studies of children with CP should employ disease-specific measures which have been designed to be thoughtful to the unique features of the population such as motor limitations and mobility challenges. The appearance of cerebral palsy can be global mental and physical dysfunction or isolated disturbances in gait, cognition, growth, or sensation (Karen & Krigger, 2006, p.91). Classification of CP is based on the type, location (Mutch et al. 1992) and level of motor impairment (Palisano et al. 1997).

Recent research reflects the surviving view that disability results from the dynamic interaction between the person and his or her environment, rather than exist within the person. On the other hand occupation means human activity. However, all activity is not occupation. Occupations are the dominant activity of humans that includes serious, productive hobbies and playful, creative and festive behavior. Occupation is a major human activity that ordinarily involves most human times (Hopkins 1993, pp. 430-431). Occupation defers from age and sex. As the study

participant is the child so it is important to know the child's occupation which is play. The ability to perform activities and participate in life situations is an essential component of health as defined in the *International Classification of Functioning, Disability and Health*, WHO 2011. The activity performance and participation of children with CP may also be affected by a variety of co-occurring neuro-impairment (Schenker, Coster and Parush, 2005, p.808). Reaching, grasping, carrying are essential parts of many daily functional tasks; such movements are difficult for many children with CP who have difficulties with sensory and motor impairments (Gordon and Duff, 1999). There are different types of tools that have been developed for assessing the different characteristics. The SCOPE is designed to be an occupation-focused, client-centered, and theory driven assessment that can be readily integrated into practice with children and adolescents aged birth to 21 years (Bowyer et al. 2008). The SCOPE is based on the concept from the Model of Human Occupation (MOHO). There is evidence that MOHO has become the most widely used occupation focused model in Occupational Therapy practice internationally (Kielhofner 2008, p.1). The vision of MOHO is to support practice that is occupation based, client centered, holistic and evidence based (Hagedorn 1992, p.59).

Study provides evidence that the SCOPE can be used and interpreted in a valid manner to analyze a pediatric client's occupational participation and to determine whether the environment supports or detracts from occupational participation (Bowyer et al. 2010). However, no study so far has been conducted in Bangladesh by using SCOPE to know the level of occupational participation. So the researcher is interested to do this research.

1.3 Significance

The study significance of the study is that it will provide information about the levels of occupational participation of CP children who are admitted into CRP. As the Occupational Therapist used different types of assessment for assessing different aspects of clients for providing a better service and SCOPE is designed to be an occupation focused, client centered and theory driven assessment that can be readily integrated into practice with children. So, the professionals can use this study for assessing and having an understanding of participation in occupation of their client. The study will help the therapist in planning for the intervention of individual CP

child. The professionals can also use this study for their identifying goals for a specific child on his/ her SCOPE result because its specific objective helps the therapist to identify the exact occupational performance level of a child & can plan according to their findings.

1.4 Aim

The aim of the study is to identify the level of occupational participation of children with cerebral palsy (CP) in inpatient pediatric unit of CRP.

1.6 Objective

The objectives of the study are –

- Identify the level of occupational participation.
- Identify the association among age, sex, types of CP with occupational participation.
- Identify the common strengths and challenges of cerebral palsy child.

2.1 CRP

According to the annual report 2012-2013, CRP is a non-profit organization which was found in 1979. The founder of CRP was Valerie Taylor. It was specially developed for serving the people with Spinal Cord Injury (CRP). Centre for the Rehabilitation of the Paralyzed (CRP) has developed into an internationally respected organization with the vision to ensure the inclusion of disabled people into mainstream society. CRP focuses on a holistic approach to rehabilitation, recognizing that all aspects of the rehabilitation process are vital for its success by following the mission of promoting an environment where all disabled people can have equal access to health, rehabilitation, education, employment, the physical environment and information. CRP is the only organization of its kind in Bangladesh, a country with a population of 140 million. The World Health Organization (WHO) estimates that 10% of the populations in Bangladesh are disabled. For serving the client here Physiotherapy, Occupational Therapy and Speech and Language Therapy programs are run. In Occupational Therapy, the services are run through various departments like Pediatric Unit (outpatient, in patient), Neuro-musculoskeletal unit, Spinal Cord Injury unit, Hand Therapy Unit (*About CRP*, 2013).

2.2 Pediatric Unit

CRP has run a Pediatric unit service since 1995. This unit has had both inpatient and outpatient units utilizing different service systems since 1999. In 1999, there was a room for 8 mothers with their children to be admitted for inpatient service for 14 days. At the same time the follow up of discharged inpatient and new outpatients were also treated in the outpatient service. After feeling the great need for pediatric service and high quality reputation of this unit service convinced the concern authority to expand inpatient service in 2001 by 10 beds and 2004 by 21 beds. Lastly the inpatient unit was enlarged to 40 beds in 2013. This residential program provides two weeks intensive services for children, most of whom are children with cerebral palsy. This program is designed to integrate children with disabilities into their own family and community. Common intervention techniques include

group and individual therapy, hand therapy, feeding class, hydrotherapy, balance and coordination group, classes on daily life skills, communication, parental awareness, back care training and outreach program (*Pediatric unit*, 2013). According to the Annual report 2011-2012 p. 14 the aim of the therapists is to maximize the child's ability to attain independence in everyday living and to improve quality of life. Therapists educate the mother about the child's condition and teach them how to take care of the child at home. In these two weeks the mother and child are involved in different group therapy, individual and combined treatment sessions and an educational program. Besides this outdoor system also become rich by more number of therapists. The discharge patients of inpatient unit will return to outpatients for follow up. This service is usually for children with conditions such as cerebral palsy, autism, Down syndrome, behavioral problems, intellectual impairment, muscular dystrophy, Erb's palsy, club feet, flat feet, and congenital deformity. Here they are treated by both physical and psychological aspect of the child and their family by qualified Occupational Therapist, Physiotherapist and Speech and language therapist (Annual report, 2012-2013).

2.3 Cerebral palsy

Cerebral palsy (CP) is a well-recognized neuro-developmental condition beginning in early childhood and persisting through the lifespan and was originally called "cerebral paresis", (Rosenbaum et al, 2006, p.8). CDC estimates that an average of 1 in 323 children in the U.S. has Cerebral palsy. Those with cerebral palsy are most likely born with the condition, although some acquire the condition at birth or shortly thereafter depending on the cause. Signs and symptoms of cerebral palsy may not always be apparent at birth. The child will likely experience a delay in development and growth milestones. Cerebral Palsy is one of the most common causes of chronic childhood disability with the frequency of 1.4-2.7/1000 of live births (Tabib, 2009).

CP has been known as a clinical entity for over a hundred years and is still to some extent loosely defined (Bax, 2001), this is surprising and worth considering. CP is a handy term for scientific description and Medical diagnosis and there are various definitions for Cerebral Palsy (Kavcic and Vodusec, 2005, p.582) Cerebral

palsy refers to a group of movement disorders caused by damage to the brain occurring before, during or shortly after birth; these conditions are not caused by problems of nerves and muscles (NINDS, 2011). According to Ketellar et al 2010 cerebral palsy is the result of a lesion or mal-development of the brain, non-progressive in character and existing from earliest childhood. The motor deficit discover expression in abnormal patterns of posture and movement, in association with an abnormal postural tone. Cerebral palsy is an umbrella term covering a group of non- progressive, but often changing, motor impairment syndromes secondary to lesions or anomalies of the brain arising in the early stages of its development (Mutch et al., 1992, pp. 547–551).

History of cerebral palsy

Cerebral palsy is not a new disorder. The origin and history of cerebral palsy includes a number of great minds, generous hearts and dedicated people striving to improve the lives of individuals with disabilities. In the mid-1800s, Dr. William John Little pioneered the study of cerebral palsy using his own childhood disability as an inspiration. The medical profession did not begin to study cerebral palsy as a distinct medical condition until 1861. The first paper of Dr. William John Little was published in that year describing the neurological problems of children with spastic diplegia which is sometimes called Little's disease. Dr. Sigmund Fried, the Austrilian neurologist better known for his work in psychiatry, published some of the earliest medical papers on cerebral palsy (Geralis, 1998. pp.30). Continuing advances in understanding of the causes and treatment of this heterogeneous disorder, when broadly understood and applied, will allow more children and adults with cerebral palsy to reach their full potential (Tseng et al. 2010).

Etiology

While CP was initially attributed to injuries resulting from birth asphyxia, recent studies have shown that in actuality it includes numerous factors. Injury to the developing brain may be prenatal, natal or postnatal (Bangash, A.S. Hanafi, M.Z. Idrees, R. and Zehra, N., 2011).

Today it is believed that prenatal risk factors play at least some role in most cases of cerebral palsy, but in the early years most cases were thought to be caused by

obstetrical complications at birth (Geralis, E 1998 pp.30-31). 70 to 80 percent of cerebral palsy cases are acquired prenatally and from largely unknown causes. Birth complications, including asphyxia, are currently estimated to account for about 6 percent of patients with congenital cerebral palsy. Neonatal risk factors for cerebral palsy include birth after fewer than 32 weeks gestation, birth weight of less than 5 lb, 8 oz (2,500gm), intrauterine growth retardation, intracranial hemorrhage and trauma. In about 10 to 20 percent of patients, cerebral palsy is acquired postnatally, mainly because of brain damage from bacterial meningitis, viral encephalitis, hyperbilirubinemia, motor vehicle collisions, falls, or child abuse. (Chen et al. 2013 pp. 3867- 3874).

Types of CP

A review of literature reveals confusion in the classification of cerebral palsy. According to Ohata et al. 2006 a complete diagnosis should include one or more titles from each of the main headings. The motor classification is given superiority. Next, there should be a statement as to structure of the disease (body parts involved). There also should be a statement as to the etiology of the disease; statement of the capabilities of the patient should include the related motor, sensory, intellectual, emotional, visual, speech, and hearing status in the supplemental classification. Finally, a statement of the functional classification of the patient completes the list. Thus, a comprehensive diagnosis will demand a careful consideration of every aspect of the patient and will afford a sound basis for prognosis, neuro-anatomical correlation, and treatment. Smith 2005 stated that several classifications of cerebral palsy have been developed according to the location of the lesion affecting the development, affected limb, quality of tone, quality of movement and personality characteristics.

According to the American Academy for cerebral palsy the following classification is presented.

I. Physiological (motor)

A. *Spastic*: Spasticity is the most common type of movement disorder. It is characterized by abnormal control of voluntary limb muscles and recognized by an enduring positive Babinski reflex (indicating an organic lesion of the pyramidal tract)

in the presence of a clasp knife effect (sudden disappearance of abnormal resistance to passive stretch), hyper reflexia and/or clonus. Truncal tone may be reduced (Blair & Stanley, 1997 p. 185).

B. *Athetoid*: Athetoid is also known as dyskinetic type of cerebral palsy. Muscle tone is mixed or fluctuating sometimes too high and sometimes too low, the affected parts of the body perform involuntary, purposeless movements which interfere with other skills requiring coordinated movements, difficulty with fixation and also require asymmetry to stabilize.

C. *Rigidity*: Rigidity is refers to a type of cerebral palsy in which increased muscle tone and appears stiff or rigid. The muscle tension in the body cannot be relieved through stretching and can sometimes lead to an inability to move joints. In worst-case scenarios and/or untreated individuals, loss of function and deformity may occur. Stiffness is the result of inactivity (Givon 2009, pp. 87-93).

D. *Dystonia*: Dystonia is hyperkinetic movement disorder characterized by involuntary and sustained contractions of opposing muscles causing twisting movement and abnormal posture (Catherine, Delnooz and Warrenburg 2012, pp. 221-240).

E. *Ataxic*: Low muscle tone and poor coordination of movements that are unsteady and shaky. Difficulty through voluntary movements, balance and control of trunk, head and limbs are the most common.

F. *Tremor*: Tremor is a movement condition characterized by involuntary rhythmic muscle contractions that cause the affected area to oscillate (move to and fro). Tremors result from damage to the nerves connected to muscles. They can affect just one part of the body, frequently the hands, or they can affect the entire body.

G. *Mixed*

II. Structural

A. *Monoplegia*: Involves one limb; condition is rare; should be checked closely to determine if you are not dealing with a paraplegia or hemiplegia.

B. *Paraplegia*: Involves the legs only and are practically always of the spastic or rigidity type.

C. *Hemiplegia*: The lateralized half of the body is affected and it is usually spastic, although pure hemiplegia is occasionally seen, as are pure rigidity hemiplegia. There is often sensory involvement in the areas of proprioception to point discrimination and form perception. Aphasias appear more frequently in right than in left hemiplegia and are much more common in the acquired than in the congenital cerebral palsy.

D. *Triplegia*: Involves 3 extremities, usually both legs and one arm, usually spastic. This may represent hemiplegia plus paraplegia, or incomplete quadriplegia.

E. *Quadriplegia (Tetraplegia)*: Involvement of all 4 extremities. Patients with the greatest involvement of the legs are usually spastic, and patients with greatest involvement of the arms are usually the dyskinetics, including athetoids.

F. *Diplegia*: This term is seldom used. Paralysis affecting like parts on either side of the body is considered as bilateral paralysis or diplegia.

III. Functional Capacity (degree of severity)

Class I. Patients with cerebral palsy with no practical limitation of activity

Class II. Patients with cerebral palsy with slight to moderate limitation of activity

Class III. Patients with cerebral palsy with moderate to great limitation of activity

Class IV. Patients with cerebral palsy unable to perform activity (Winter et al. 2002 p. 1224).

2.4 Occupation

Occupations are simply defined as the activities that contain our lifestyle. It is the activity or task that engages a person's resources of time and energy (Coster, 1998, p.338). Human occupation refers to doing work, play, or ADLs within a temporal, physical, socio cultural context. Coster acknowledge Crepeau 2003's work in his study which states that occupations are units of action with identifiable start and end points; a person performing an occupation is doing something that he or she began and can stop doing, such as dining. Occupations are likely to be meaningful within the context of a person's life which is contributed to identity. For example play is the main occupation for a child which is repeatable, intentional and consciously performed.

Theories of occupation have changed since the early 1900s. The ideals were prominent in the early part of the twentieth century, particularly the concept that

daily routines and occupations improve a person's health. For children affect their development and their basic need for engagement in purposeful tasks and activities Smith 2005. Clark and colleagues defined occupations as amounts of daily activities that can be named in the dictionary of the culture (Clark et al, 1991, p.301). Occupation is also defined as the ordinary and familiar things that people do every day (Christiansen et al. 1995, p. 1015). The definition adopted by the Canadian Association of Occupational Therapy (CAOT) states that "occupation refers to a group of activities and tasks of everyday life, named, organized, and given value and meaning by individuals and a culture (Hammell 2004, p.297).

2.5 Participation

The World Health Organization (WHO) defines participation as involvement in life situations (WHO, 2001). Law 2002, described participation as the common English definition with others; and the act or state of receiving or having a part of something. In the International Classification of Functioning, Disability and Health (ICF), participation is categorized into following domains:

- Learning and applying knowledge
- General task and demands
- Communication
- Mobility
- Self care
- Domestic life
- Interpersonal interactions and relationship

The domains are used in major life areas such as work or school, community, social and civil life (WHO, 2010). MOHO defines participation which the researcher also used in the study "*as engagement in school, play, and daily activities that are part of one's social and cultural context and necessary for well-being.*" Children's performance and participation appears as the result of dynamic interaction among a child's volition, habituation and performance capacities as well as the environment. Children's participation and performance emerges as a consequence of this interaction. As children engage in daily activities they acquire, reinforce, and change their own capacities, beliefs and natures. Law also stated that Occupational Therapy focuses on enabling individuals and groups to participate in everyday occupation

that are meaningful to them, provide fulfillment, and engage them in everyday life with others. And its focus is on enhancing participation.

2.6 Occupational participation

Occupational participation, in term is the action elicited, guided, or structured by the preexisting occupational form, although occupational form may be said to predict or explain occupational participation, the nature of occupation is not deterministic (Nelson, D 1988 pp. 633-641). Furthermore, within occupational therapy it has been emphasized that participation in meaningful occupations stimulates health and well-being (Gray, 2001; Wilcock, 1995; Wilcock et al. 1998; WHO, 2001). Likely, if active involvement in occupations has been shown to positively affect health and well-being, an imbalance of activities and roles may cause problems with health and quality of life (Pentland, Harvey, & Walker, 1998).

Occupation is a basic human need on the other hand participation in occupation necessary to life as food and drink. Occupation also is an important determinant of health which can be strongly influenced by a person's occupational participation. Participation in a meaningful occupation and conversely the absence of meaningful occupation can have horrible health consequence in all ages (Wilcock 1998 pp. 248-256). Occupational participation serves as of organizing time, space and materials. Patterns, habits, and roles evolve through the organization of occupation. Occupation changes over the life span representing occupational development. Like play is the key area of occupational focus in children. Play is often described as a primary occupation of childhood (Knox, 1997) and an effective and appropriate play can increase the participation level of cerebral palsy child. Because play is a spontaneous and intrinsically motivating activity as well as most successful event in childhood occupation (Parham, 1997, pp.202-203).

2.7 SCOPE

The Short Child Occupational Profile is a 25 item scale with 6 sections. From these the first 5 sections deal with child's personal factors impacting on participating in performance and the last section containing environment describes the impact of environment in participation. The concept of SCOPE is originated from Model of Human Occupation (MOHO) (Bowyer et al 2005). SCOPE was developed after 4

years of different research. Occupational therapists of urban hospital feel the need for an assessment which they can incorporate with MOHO when working with in/out patient or in intensive care. From this need SCOPE was developed. Scope was designed by focusing occupation and client centered and the theories which come from the assessment can be easily integrated into practice with client from birth to 21 years. It gives a broad overview of a child's occupational participation and allows one to systematically evaluate the factors which restrict the participation. SCOPE helps to search the most feasible intervention option with MOHO. Research has proved that it is a valid assessment. The practitioner found it easy to rate, helps to communicate with caregiver and supports client centered occupation focused practice. The strength of SCOPE is it can find occupational strength and challenges. Though it is specially develop for Occupational Therapist, the other practitioners who have knowledge about SCOPE can apply it by using a different method of scoring system (Bowyer et al. 2012).

3.1 Study Design

The study was conducted through cross sectional study design. The researcher used this type of study design because the current study carried out at one time point or over a short period. Data was collected on individual characteristics, including demographic questioner, strengths, and challenges alongside information about the environment. In this way this study provides a snapshot of the characteristics associated with it. The focus of the study was to identify the association between age, sex, types of cerebral palsy with occupational participation. It was conducted at one time point where estimate the relationship between age, sex and also with the types of the condition. The common strength and challenges are also identified by this study which is helpful for the professionals working with the children with CP and also broaden this thesis. This study will give a snapshot of the association of age and sex with the occupational participation. The researcher collected the data from the participants from the last week of September 2013 to December 2013.

3.2 Study setting

For collecting data related to the study of identifying the level of occupational participation of cerebral palsy the study setting was the Pediatric inpatient unit of Centre for the Rehabilitation of the paralyzed (CRP), Savar, Dhaka. The researcher has chosen the inpatient pediatric unit of CRP because in inpatient unit all of the children are cerebral palsy (Appendix 5 B). It is a residential program that provides two weeks of intensive service for 40 children with their caregivers. Researcher selects this setting because in CRP pediatric unit the participants were available in inpatient. According to the report of at a glance 2012 it is the organization where patient come from almost all districts of Bangladesh (Appendix 5 A).

3.3 Study Population

The children of cerebral palsy and their carer are the population of the study who come for treatment in inpatient pediatric unit, CRP.

3.4 Study period

Total 10 months from May 2013 to February 2014. During this time frame 21.09.2013 to 28.12.2013 was the data collection time for this cross sectional study.

3.5 Data collection tools

Consent form in Bangla (appendix 2 B), paper, pen & pencil and a standard questionnaire is used. The name of the scale is “The Short Child Occupational Profile (SCOPE)” (see the appendix 3 A and B).

3.6 Participant size

The participant size for this study is 181 although the primary data were collected from 182 participants. 1 participant was excluded for not fulfilling the inclusion criteria for diagnosing as myopathy.

3.7 Inclusion criteria

The inclusion criteria for this study are given below

- The cerebral palsy child who were admitted into CRP pediatric inpatient unit.
- Male or female child of all ages who were admitted at CRP pediatric inpatient unit.

3.8 Exclusion criteria

- ◆ The children with cerebral palsy who has other associated problem (e.g. behavioral problem, mental retardation etc.) will be excluded.

3.9 Participant selection procedure

The participant of the study was the child with CP and their carer. Researcher selects the participant from the inpatient unit of CRP pediatric unit by purposive comprehensive sampling. The researcher selects the subject to meet a specific purpose in a specific time who were admitted and meet the criteria.

3.10 Data collection procedure

The data was collected through primary and secondary data by the researcher. The primary data was collected from the participants directly observing or by asking questions. For this study the researcher collected all the data by herself by following the instructions given on the manual of SCOPE. The data collection tool was prepared for this research by following the guideline of translation of “WHO”. At first the tools was forward translated in Bangla by 5 different people then these five translations were summarized into one translation. The final one then back to back translated to see if there was any change of meaning of the data collection tool. The final corrected tool was then checked and rechecked by a linguist who knows Bangla and English very well. After completing all these processes the SCOPE was ready for collecting data to complete this research.

Before collecting data the study aims and study purpose were explained to participants. The carers who were educated read the information sheet and consent form (See appendix 2 A). All the carers were given the opportunity to ask questions and when they showed interested to participate in the study they signed in the consent form willingly. After getting the permission from the mother they were requested to give their signature then the researcher collected data by the structured questionnaire, pen, pencil & paper. The data for the study of identifying the level of occupational participation of cerebral palsy was collected through observing the child and also asking structured question to the carer of the child. The researcher collected the observation part of the data by observing the child when he/she was doing any activity like play, taking therapy in a group, or when gossiping with caregiver. If any question which is in the questioner could not understand to score then that activity was asked to the carer for scoring appropriately as there is an arrangement in SCOPE for doing this. A total of 181 people consented to the research, giving a response rate of 100%. The participants answered almost every item. It took an average of 15 minutes to take one data from the participants. Most of the data was collected from the patient’s room and a small number of data was collected from the therapy room. A small number of respondents could not answer the demographic variables like age, date of birth. The variables were then collected as secondary data from the medical records. Here an important part of the scale was the types of the condition that was also collected from the medical record.

3.11 Data analysis

Researcher used statistical analysis to show the level of occupational participation of cerebral palsy child. The results were analyzed by using Statistical Package of Social Science (SPSS) 17. The association between age, sex and also the association among the types of CP with the occupational participation were identified by using chi square test. The common strengths and challenges of the participants were identified by SPSS by using frequency test.

3.12 Ethical consideration

The researcher maintained some ethical considerations like:

- After getting the permission for doing this study from the academic institute the researcher started to do it (Appendix 1A).
- The researcher obtained permission for data collection from the pediatric unit of CRP, Savar (Appendix 1 B).
- The participants were informed before to invite participation in the study.
- A written Bangla consent form was used to take the permission from each of the participants of the study (Appendix 2 A).
- The researcher ensured that all participants were informed about their rights and reserves and about the aims and objectives of the study.
- Researcher ensured that the organization (CRP) was not hampered by the study.
- The participants had the rights to leave the study when they she wanted.
- All kinds of confidentiality were highly maintained. The researcher had ensured not to leak out any type of confidentialities.
- The researcher was eligible for the study after knowing the academic and clinical rules of doing the study about what should be done and what should not.
- All rights of the participant were reserved and researcher was accountable to the participant to answer any type of study related questions.
- Researcher maintained confidentiality about service information of the organization.

4.1 Socio-demographic characteristics

In this study 181 participants participated where males are 103 (56.9%) and females are 78 (43.1%). The participant age range was 8 months to 9 years and the mean age is 3.06. The other socio-demographic characteristics are given on Table 4.1.

Table 4.1 Socio-demographic status

Variable	Frequency	Percentage
Sex		
Male	103	56.9%
Female	78	43.1%
Age		
Up to 2 years	56	30.9%
2-5 years	102	56.4%
Above 5 years	23	12.7%
Mean \pm SD	3.069 \pm 1.870	
Types of CP		
Spastic	134	74.0%
Athetoid	39	21.5%
Ataxic	6	3.3%
Hypotonic	2	1.1%

4.2 Level of occupational participation

The results for occupational participation were obtained by following three stages which were divided into six other sub facts and those facts was also divided in other 25 items. In the first stage the 25 items given in SCOPE were analyze manually by the coding given to every points for coming into six sub facts like volition, habituation, communication and interaction skills, process skills, motor skills and environment. After completing the summarizing of these six items the main points named occupational participation was found. For finding out the score of occupational participation researcher score the scale according to the instruction given in the

manual. In four phases of score which was collected through maintaining the score that are 4=facilitates participation in occupation, 3=allows participation in occupation, 2=inhibits participation in occupation and 1=restricts participation in occupation. The scale indicate that the participants who scorer highest is better in participation rather than who are scoring lower. In 181 participants a higher numbered of participants 86 (47.5%) got score in the range of 44-62. The other level is given on Table 4.2.

Table 4.2 Level of occupational participation

Participation level in score	Frequency	Percentage
25-43	34	18.8%
44-62	86	47.5%
63-81	51	28.2%
82-100	10	5.5%
Mean \pm SD		2.20 \pm .808
Total	181	100

4.3 Association between age and occupational participation

The result shows a significant association between age and occupational participation because here χ^2 value is 29.758 and P value is 0.00 which is higher than 0.05 ($p > 0.05$). The analysis for showing the association between age and the participation was done through the descriptive statistics to cross tabs which shown the association of the all 181 participants. The results given in Table 4.3 shows the association with age group where 56 participants was up to 2 years 15 participant out of 56 got score 25-43 that means limitation in participation in occupation. The other results are showing in Table 4.3. For finding out the association between age and occupational participation Pearson chi-square (χ^2) value is tested through statistical analysis.

Table 4.3 association between age and occupational participation

Variable	Occupational participation score				P value
Age group	25-43	44-62	63-81	82-100	Total (n, %)
Up to 2 years	15 (44.1%)	35 (40.7%)	6 (11.8%)	0 (.0%)	56 (30.9%)
2-5 years	17 (50%)	46 (53.5%)	33 (64.7%)	6 (60%)	102 (56.4%)
Above 5 years	2 (5.9%)	5 (47.5%)	12 (23.5%)	4 (40%)	23 (12.7%)
Total	34	86	51	10	181

Pearson χ^2 value is 29.758

.00

4.4 Association between sex and occupational participation

Table 4.4 shows the association between participant's sex and occupational participation. The total participants were 181 where 103 were male and 78 were female. The association was outlined by using cross tab. Here χ^2 value is 3.244 and the p value is .355 which is lower than .05 that indicates there is no association with sex and occupational participation ($p < .05$).

Table 4.4 association between sex and occupational participation

Variable	Occupational participation score				P value
Sex	25-43	44-62	63-81	82-100	Total (n, %)
Male (n,%)	15 (44.1%)	51 (59.3)	30 (58.8%)	7 (70%)	103 (56.9)
Female (n, %)	19 (55.9%)	35 (40.7%)	21 (41.2%)	3 (30%)	78 (43.1%)
Total	34 (18.8%)	86 (47.5%)	51 (28.2%)	10 (5.5%)	181 (100%)

Pearson χ^2 value is 3.244

4.5 Association among types of CP and occupational participation

The Association among types of CP and occupational participation is specified in Table 4.5. The types of cerebral palsy were classified into spastic, athetoid, ataxic and hypotonic (see the appendix 4). Most of the participants were spastic. The other types of CP with their score are shown on Table 4.5. The result establishes from Pearson chi-square test which χ^2 value is 7.298 and p value is .466 that is lower than .05 and indicating no association among the types of cerebral palsy and occupational participation.

Table 4.5 Association among types of CP and occupational participation

Variable	Occupational participation score				P value	
Types of CP	25-43	44-62	63-81	82-100	Total (n,%)	
Spastic (n,%)	27 (79.4%)	61 (70.9%)	38 (74.5%)	8 (80%)	134 (74%)	
Athetoid (n,%)	7 (20.6%)	21 (24.4%)	10 (19.6%)	1(10%)	39 (21.5%)	
Ataxic (n,%)	0 (.0%)	2 (2.3%)	3 (5.9%)	1 (10%)	6 (3.3%)	.466
Hypotonic (n,%)	0 (.0%)	2 (2.3%)	0 (.0%)	0 (.0%)	2 (1.1%)	
Total	34	86	51	10	181	

Pearson chi-square value 7.298

4.6 Common strengths and challenges

The data responses for finding out the strengths and challenges were analyzed using statistical analysis. Overall frequencies were calculated for all the items. A total of 181 people consented to the research, giving a response rate of 100%. The participants answered almost every item.

Table 4.6 common strengths and challenges

Activity	Challenges n (%)	Strength n (%)
Touching, looking at, playing with, or trying new things	44 (24.3)	137 (75.5)
Showing enjoyment or happiness when playing or doing something	36(19.9)	145 (80.1)
Knowing what he/she likes; choosing a favorite toy	51(28.2)	130 (71.8)
Continuing an activity even when it becomes difficult	94(51.9)	87(48.1)
Taking care of his/herself (for example, getting dressed, washing his/her body, eating)	138(76.2)	43(23.8)
Stopping one activity and beginning another when asked	124 (68.5)	57 (31.5)
Understanding and following routines (for example, getting ready in the morning, dinnertime routines, beginning the school day, bedtime routines)	128 (70.7)	53 (29.3)
Doing things that are part of being a family member, friend, or student (for example doing chores at home, playing with a friend, or doing homework)	132 (72.9)	49 (27.1)
Using facial expressions and gestures to indicate wants, needs, and moods	73 (40.3)	108 (59.7)
Using his/her voice or words to indicate wants and needs	94 (51.9)	87 (48.1)
Talking with friends, family, and others to share thoughts or ideas (for example, telling parents about the school day, telling a friend a story)	127 (70.2)	54 (29.8)
Interacting with others in an appropriate way (for example, listening, cooperating, taking turns)	69 (38.1)	112 (61.9)
Choosing and using objects appropriately (for example, choosing a pencil to write, using a spoon/fork to eat, putting gloves on hands)	123 (68)	58 (32)
Noticing and responding to things around	96 (53)	85 (47)

him/her (for example, answering a vibrating cell phone, stopping at a stop sign, leaving the building when hearing a fire alarm)		
Making and following through with a plan (for example, identifying and playing a game with friends, deciding how to finish homework, deciding what to wear and getting dressed)	135 (74.6)	46 (25.4)
Solving problems (for example, turning puzzle pieces in a different direction to solve a puzzle, realizing that shoes are on the wrong feet and switching them)	144 (79.6)	37 (20.4)
Using his/her body to move and do things (for example, sitting upright at the table, getting from one side of the room to the other)	102 (56.4)	79 (43.6)
Using hands to do things (for example, cutting with scissors, reaching for an object)	128 (70.7)	53 (29.3)
Having the strength to hold, lift, and move objects	125 (69.1)	56 (30.9)
Having the right energy level throughout the day (for example, not being too active or too tired)	130 (71.8)	51 (28.2)
The space inside and outside my child's home (for example, the bedroom, the family room, the front yard)	118 (65.2)	63 (34.8)
The space inside and outside my child's school and/or other places in the neighborhood (for example, the classroom, the playground, the street, the church/synagogue)	133 (73.5)	48 (26.5)
Toys, adaptive equipment, school materials, and other aids (for example, transportation, communication devices, wheelchair)	118 (65.2)	63 (34.8)
Different people, such as family, friends, and teachers	59 (32.6)	122 (67.4)
Rules and requirements for doing things at home (for example, doing assigned chores, keeping things neat)	85 (47)	96 (43)
Rules and requirements for doing things at school and/or in the neighborhood (for example, following homework directions, sitting quietly at a movie theater)	88 (48.6)	93 (51.4)
Our family schedule	84 (46.4)	97 (53.6)

The SPSS analysis gives the frequency which indicates that 79.6% of the cerebral palsy children faced challenges in solving problems (for example, turning puzzle pieces in a different direction to solve a puzzle, realizing that shoes are on the wrong feet and switching them). Showing enjoyment or happiness when playing or doing something is the most common strength which was found in 145 participants that indicates 80.1%.

Discussion

The study examined the level of occupational participation of children with Cerebral Palsy by using the Short Child Occupational Profile (SCOPE version 2.2). SCOPE is a valid way for assessing the child's occupational participation irrespective of symptom, age, diagnosis etc. The present study represents the occupational participation and its association with age, sex and also the types of cerebral palsy.

5.1 Level of occupational participation

The present study identifies the level of occupational participation by using SCOPE. This study demonstrate the level in a score similar to the other studies which used different scale like Pediatric Evaluation of Disability Inventory (PEDI), Quality of Life (QOL), Gross Motor Function Measure (GMFM) etc. Participation of a child in any activity depends on motor development. Motor development is a process of change in behavior as a result of the interaction of heredity with the environment.

In this process, it is considered that the environment causes a stimulatory effect that interacts with human biology (Madeira, Carvalho and Assis 2013). Occupational participation in not only children but also all aged people is different and if they are assessing they will got a different score. It is commonly said that the children who are typically developed and have no problem in motor or cognitive activities will get a higher score. On the contrary the children who are affected by any kind of disease specially affecting movement related activity will score lower. From this believe this study was done and demonstrating the score of participation having by the different kind of cerebral palsy child of Bangladesh from a rehabilitation hospital.

5.2 Association between age and Occupational participation

Current study findings demonstrate that there is a strong association with age and occupational participation ($p>0.05$) which is similar to the previous study of Chiarello et al 2014 which indicate participation in family and recreational activities and self-care does vary by age. The study took the variables from the entire SCOPE and addressed the occupational participation along with the environment. The study showed that there were 6 domains for occupational participation that are volition,

habituation, communication and interaction skills, process skills, motor skills and environment. The study displays outcome in four category where the highest score is F (Facilitates participation in occupation), then the second score is A (Allows participation in occupation), third is I (Inhibits participation in occupation), and the last one is R (Restricts participation in occupation). According to data obtained to the present study of cerebral palsy child got score that indicate different level of participation like facilitation, inhibits, allows or restricts participation in occupation supporting the findings like cerebral palsy child has motor function problem stated on the study of (Ko, I.H. Kim, J.H. Lee, B.H., 2013).

5.3 Association between sex and Occupational participation

The present study shows that there is no association with the sex and occupational participation $p < 0.05$. There is no impact on participation depending on the sex of the participants. However, these data were based on the structured questionnaire named SCOPE.

5.4 Association among types of CP and Occupational participation

According to Rosenbaum and Stewart 2004, many researchers and clinicians working in the field of cerebral palsy (CP) have adopted the frame work of the International Classification of Functioning, Disability, and Health (ICF) to inform choices of outcomes and measures. Hidecker et al. 2012 stated that CP clinical practice and research go beyond describing the anatomy and physiology of individuals with CP to considering their ability to participate in daily activities. From this concept in this study the occupational participation was shown in association with different types of cerebral palsy. Study findings indicate that there is no association with the types of cerebral palsy and occupational participation ($p < 0.05$). Several studies reported conflicting findings between children with CP and typically developing children on of the participation and activities of daily life domains. Dickinson et al. 2007, compared 1,174 children with CP, ages 8–12, to typically developing children where no difference in participation was found between the two groups. Similarly, Chow et al. 2005 found that in children with physical disabilities, including CP, subjective quality of life and participation did not differ from typically developing peers. However, other researchers have found significant differences in participation. Pava, Santos,

Oliveira, and Rocha, 2013 show that there is a delayed development of motor function in children with cerebral palsy according to different types so there is an exertion in involving the functional activity. Activity limitations are presumed to be a consequence of motor disorder and the person who are affected by cerebral palsy has an impairment in their motor activity as a result they may have limitation in the participation of their day to day activities (Rosenbaum, et al. 2006). Another study is showing different results that indicate mild motor impairments, often slight effect on performance (Moreira, R, Magalhaes, L. Alves, C., 2013). Findings of Lowe2010 indicated that for children, participation in school occupations was undermined by challenges.

5.5 Common strengths and challenges

The Short Child Occupational Profile can help to make a child profile by identifying the strengths and challenges of the participants. In this study, showing enjoyment or happiness when playing or doing something are the most common strengths (80.1%) of all participants probably as they need less motor involvement for this activity. The activity only needs facial movements and it may be a cause that movement of the face is relatively possible for all types of cerebral palsy children and also all children are eager to participate in these activities according to children nature. According to the study findings 79.6% of participants faced challenges with solving problems (for example, turning puzzle pieces in a different direction to solve a puzzle, realizing that shoes are on the wrong feet and switching them). It seems that for solving a problem a child needs his/ her cognitive skills as well as the gross and fine motor skills. In particular, gross motor action performing capacity showed differences depending on the degree of impairment of cerebral palsy (Ko, I.H. Kim, J.H. and Lee, B.H., 2013). On the other hand cognition is thought to be critical to successful participation (American Occupational Therapy Association, 2002). As cerebral palsy child has motor impairment according to the variation of types that indicate a range of facing challenges on doing any activity. Participation in any activity is a deliberate process with a meaningful outcome involving contextualized engagement with materials and others (Lawlor, 2003).But child with cerebral palsy involving a larger impairment faces challenges to engage for getting an outcome.

The results presented contribute to a better understanding of the occupational participation of children with CP, especially with the different types of CP and

association with age. Moreover, there was the objective of having association with occupational participation although there is no significant association shown by this study.

5.6 Limitation

The limitation of the present study are-

- There is a limited amount of literature related to the study.
- Researcher does not have any training to collect data on Short Child Occupational Profile (SCOPE).

Recommendation

SCOPE is an assessment tool of having different aspects which can be envisioned by using further research. By the current findings it can be said that SCOPE can be used in any treatment setting for occupational therapy as it largely deals with the participation in different domains of daily life. On the other hand as there is limitation of research evidence so before doing any new research it should be considered.

Conclusion

The presentation of cerebral palsy can be global mental and physical dysfunction or isolated disturbances in gait, cognition, growth, or sensation. (Karen, W 2006). Recent research reflects the current view that child participation is closely related with health status meaning that the persons who are less affected by the disease have more participation in occupation. In accordance with the ICF perspective, Rosenbaum and Stewart 2004, stated that 'Studies of children and youth with CP should include dimensions of activity and participation, as well as environmental factors, to capture the complex interactional nature of the life experiences of these children and their families.' Thus, current research reflects increased attention to the dynamic interactions between participation and neuro impairments, mobility, caregiver assistance, and functional activity.

This study provided evidence about the level of occupational participation of CP child. Here the SCOPE is a tool that can support therapists in making valid interpretation about their client's occupational participation. It can further encourage occupation based practices which focus on the unique strengths and needs of each client.

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APPENDIX

Appendix 1 (A)

Date: 03.08.13

The Head of the Department,
 Department of Occupational Therapy
 Bangladesh Health Professions Institute (BHPI)
 CRP-Chapain, savar, Dhaka-1343.
 Through: Research Supervisor.

Subject: Prayer for seeking permission to conduct the research project.

Madam,

I am Parul Akter, 4th year student of Bachelor of Science in Occupational Therapy program at Bangladesh Health Professions Institute (under the medical faculty of Dhaka University), the academic institute of Centre for the Rehabilitation of the Paralyzed (CRP). As I am a student of 4th year, I have to do a dissertation for my academic purpose. My dissertation title is ***"Identifying the level of occupational performance and participation of cerebral palsy child in indoor pediatric unit of CRP."*** and I will be trying to identify the level of occupational performance and participation of the cerebral palsy child in indoor pediatric unit of CRP. For my dissertation purpose, I need permission from you to continue my research project.

So, I therefore pray and hope that you would be kind enough to give me the permission to continue the research project for my study.

Sincerely yours,

Parul Akter

Parul Akter
 4th year B. Sc in Occupational Therapy
 Bangladesh Health professions Institute (BHPI)
 Center for the Rehabilitation of the Paralyzed (CRP).
 P.O: CRP-Chapain, Saver, Dhaka-1343, Bangladesh.

Permission will be approved by	Signature
Head of the Department Nazmun Nahar Assistant professor and Head of department Occupational therapy department BHPI, CRP, Savar, Dhaka	<p><i>It may allow to conduct the study as per supervisor's comment.</i></p> <p><i>[Signature]</i> 04.08.13</p>
Supervisor Umme Aeyman Lecturer in Occupational Therapy Department of Occupational Therapy BHPI, CRP, Savar, Dhaka	<p><i>she has got the potential to carryout the study. Suggested to conduct study following proposal.</i></p> <p><i>[Signature]</i> 04.08.2013.</p>

Appendix 1 (B)

Date: 03.09.13

The in charge, Pediatric Unit

CRP-Chapain, Savar, Dhaka-1343.

Subject: Prayer for seeking permission to collect data for the research project.

Madam,

I am Parul Akter, 4th year student of Bachelor of Science in Occupational Therapy program at Bangladesh Health Professions Institute (under the medical faculty of Dhaka University), the academic institute of Centre for the Rehabilitation of the Paralyzed (CRP). As I am a student of 4th year, I have to do a dissertation for my academic purpose. My dissertation title is *“Identifying the level of occupational performance and participation of cerebral palsy child in indoor pediatric unit of CRP.”* and I will be trying to identify the level of occupational performance and participation of the cerebral palsy child in indoor pediatric unit of CRP. For my dissertation purpose, I need permission from you to collect data from the child and their carer who are admitted in indoor pediatric unit to continue my research project. It needs 10-15 minutes for collecting data from one participant.

So, I therefore pray and hope that you would be kind enough to give me the permission of data collection to continue the research project for my study.

Sincerely,

Parul Akter

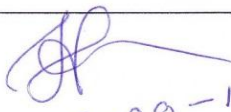
Parul Akter

4th year B. Sc in Occupational Therapy

Bangladesh Health professions Institute (BHPI)

Center for the Rehabilitation of the Paralyzed (CRP).

P.O: CRP-Chapain, Savar, Dhaka-1343, Bangladesh.

Permission will be approved by	Signature
In charge, Pediatric Unit CRP, Savar, Dhaka	 3-09-13 HOSNEARA PERVEEN Incharge Paediatric Unit CRP, Savar, Dhaka.

She is permitted for data collection. please help her..

Appendix 2 (A)

তথ্য বিবরণী

আমি পারুল আক্তার, সি.আর.পি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশনস ইন্সটিটিউটের বি.এস.সি ইন অকুপেশনাল থেরাপি বিভাগের ৪র্থ বর্ষের অধ্যয়নরত একজন নিয়মিত ছাত্রী। আমার কোর্সটা সম্পন্ন করার জন্য আমাকে একটা গবেষণা সম্পন্ন করতে হবে।

এই সুবাদে আমি আপনাকে আমার গবেষণায় অংশগ্রহন করার আমন্ত্রন জানাচ্ছি, আমার গবেষণার বিষয় –“সেরেব্রাল পালসী বাচ্চা যারা সি.আর.পি শিশু বিভাগে ভর্তি আছে তাদের কাজে অংশগ্রহণ এবং সম্পাদনের মাত্রা চিহ্নিত করা”। আমার গবেষণার লক্ষ্য হল বাংলাদেশের সি.আর.পি'র শিশু বিভাগ এ যে সব সেরেব্রাল পালসী শিশুরা ভর্তি হয় তাদের কাজে অংশগ্রহণের মাত্রা চিহ্নিত করা।

এই গবেষণায় আপনার অংশগ্রহন একান্তই আপনার ইচ্ছায় এবং যদি আপনি রাজি না থাকেন তাহলে আপনি আপনার অংশগ্রহন প্রত্যাহার করতে পারবেন।

“বাচ্চার কাজের সংক্ষিপ্ত বর্ণনা স্কেল” নামক একটি স্কেল দিয়ে আপনার উত্তর নেয়া হবে এবং আপনার বাচ্চাকে পর্যবেক্ষণ করা হবে যেটা ১০ থেকে ১৫ মিনিট সময় নিবে এবং আপনার উত্তর সম্পূর্ণ গোপন এবং ব্যক্তিগতভাবে রাখা হবে। আপনার এবং আপনার বাচ্চার অংশগ্রহনের জন্য কোন আর্থিক সহায়তা পাবেন না। এই গবেষণায় অংশগ্রহনের জন্য আপনি সরাসরি কোন লাভবান হবেন না এবং এই গবেষণার কারণে আপনার কোন ক্ষতি বা বিপদ হবে না। সব তথ্যের সম্পূর্ণ গোপনীয়তা মানা হবে। আপনার অনুমতি ছাড়া সংগৃহীত তথ্য গুলো এমনভাবে ব্যবহার করা হবে না যাতে আপনার নাম জনসম্মুখে প্রকাশ পায়।

যদি এই গবেষণা সম্পর্কে আপনার এখন অথবা পরে কোন জিজ্ঞাসা থাকে তাহলে নিম্নলিখিত ব্যক্তিকে দ্বিধাহীন ভাবে জিজ্ঞেস করতে পারেন-

পারুল আক্তার

বি.এস.সি ইন অকুপেশনাল থেরাপি

৪র্থ বর্ষ, সেশনঃ ২০০৯-২০১০

অকুপেশনাল থেরাপি বিভাগ

বাংলাদেশ হেল্থ প্রফেশনস ইন্সটিটিউট

সি.আর.পি-চাপাইন, সাভার, ঢাকা-১৩৪৩

ফোনঃ ০১৯১৬৯৪৩২৬০

সম্মতিপত্র

এই গবেষণায় আমি----- একজন অংশগ্রহণকারী এবং আমি এই গবেষণার উদ্দেশ্য পরিষ্কারভাবে জানতে পেরেছি। আমি যে কোন সময় এবং গবেষণার যে কোন পর্যায়ে আমার অংশগ্রহণ প্রত্যাহার করতে পারি। এ জন্য আমি কারো কাছে জবাবদিহি ও ক্ষতিপূরণ দিতে বাধ্য নই। এই গবেষণায় অংশগ্রহণ করলে আমার বাচ্চার চিকিৎসার অথবা আমার কোন ব্যাঘাত ঘটবে না।

সাক্ষাৎকারের সকল তথ্য যেগুলো গবেষণার কাজে ব্যবহৃত হবে, সেগুলো গোপনীয়তার সাথে নিরাপদ স্থানে রাখা হবে। শুধুমাত্র গবেষক এ তথ্যগুলোর প্রবেশাধিকার পাবে এবং কারও নাম কোথাও না ছাপিয়ে এ তথ্যগুলো গবেষণা পত্রে প্রকাশিত হবে।

আমি উপরোক্ত সকল তথ্য গুলো সম্পর্কে জানি এবং আমি এই গবেষণায় অংশগ্রহণে সম্মতি জ্ঞাপন করছি।

অংশগ্রহণকারীর টিপসই অথবা সাক্ষরঃ----- তারিখঃ-----

গবেষকের সাক্ষরঃ----- তারিখঃ-----

Appendix 2 (B)

Consent Form

Title of the study: level of occupational participation of cerebral palsy child.

Study purpose: As I am a student of 4th year Occupational Therapy and in my content of 4th year I have to do a research on any relevant topic of our profession. I am interested in this area so I want to conduct this research.

As you are a mother of cerebral palsy child, I am inviting you to help us by participating in this study.

If you agree to our proposal of including your child to participate in the study, I would assess your child on some aspect like child expression of enjoyment, daily activities, response to transition, non- verbal communication, problem solving etc. This may require 10-20minutes.

Information that I will collect from you will remain confidential, under lock and key. None other than the investigators of this research; possible study monitor, and any law-enforcing agency in the event of necessity would have an access to the information. Any personal identifiable information will be held and processed under secured conditions, with access to limited appropriate staff of that organization.

Your participation in this study is completely voluntary. You have no benefit or risk regarding your personal, professional or getting treatment. You have the right to withdraw from the study at any time. As I have told you everything regarding this study, now if you are interested to participate in this study you are requested to sign below.

Thank you for your cooperation.

Signature or left thumb impression of participant

Date

Appendix 3 (A)

APPENDIX B: SCOPE SUMMARY RATING FORM

Short Child Occupational Profile (SCOPE) SCOPE Summary Rating Form

Client: _____ ID: _____ Age: Years _____ Months _____ Date of Birth: ___/___/___ Gender: Male _____ Female _____ Grade: _____ Date of referral/admission: ___/___/___ Dx./Reason for referral: _____	Assessor: _____ Signature: _____ Date of Evaluation: ___/___/___ Initial _____ Re-evaluation _____ Discharge _____ Evaluation Setting: _____ CONTRAINDICATIONS (Allergies, etc): _____
Background Information	
Primary caregiver/s: _____	
Where does the client live? _____	
Who else lives in the household? _____	
School/day care information: _____	
Comments: _____	

F	Facilitates	Facilitates participation in occupation.
A	Allows	Allows participation in occupation.
I	Inhibits	Inhibits participation in occupation.
R	Restricts	Restricts participation in occupation.

Analysis of Strengths and Challenges:

Summary of Ratings:

Volition				Habituation				Communication & Interaction Skills				Process Skills				Motor Skills				Environment:				
Exploration	Expression of Enjoyment	Preferences & Choices	Response to Challenge	Daily Activities	Response to Transitions	Routine	Roles	Non-Verbal Communication	Verbal/Vocal Expression	Conversation	Relationships	Understands & Uses Objects	Orientation to Environment	Plan & Make Decisions	Problem Solving	Posture & Mobility	Coordination	Strength	Energy/Endurance	Physical Space	Physical Resources	Social Groups	Occupational Demands	Family Routine
F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

VOLITION

Exploration

The child engages in visual, tactile, and/or oral exploration of objects, persons, and the environment.

F	The child spontaneously initiates and persists in exploration of the environment.	Comments:
A	The child requires occasional cues, encouragement, or support to initiate and sustain exploration of the environment.	
I	The child requires substantial support, cues, or encouragement to initiate and sustain exploratory behaviors.	
R	The child does not respond to or interact with physical and social stimuli.	

Expression of Enjoyment

The child demonstrates satisfaction with activities and/or the outcomes of actions.

F	The child spontaneously expresses enjoyment during and/or following an activity.	Comments:
A	The child's demonstration of satisfaction and enjoyment is somewhat limited during and/or following an activity.	
I	When engaged in activities, the child may demonstrate some enjoyment but it is usually mixed with anxiety and frustration.	
R	The child consistently expresses anxiety and/or frustration when engaged in activities.	

Showing Preferences and Making Choices

The child chooses or demonstrates a clear sense of likes and/or dislikes toward certain objects, events, or people.

F	The child demonstrates a strong sense of preference for a variety of objects, activities, or persons.	Comments:
A	The child hesitates when given choices; requires cues and suggestions in order to indicate a preference or make a choice, but is able to make a choice with support.	
I	The child often relies on others to make choices and is unsure of own preferences.	
R	The child does not choose and/or does not appear to have preferences for objects, activities, or persons.	

Response to Challenge

The child engages in new activities and/or accepts the opportunity to achieve more, or perform under condition of greater demand.

F	The child spontaneously seeks and persists in new or more challenging activities.	Comments:
A	The child spontaneously attempts new or more challenging activities, but is easily frustrated and/or needs some support in order to persist.	
I	The child usually requires significant support to engage in new and more demanding activities and to overcome frustration and persist during such activities.	
R	The child avoids new or more challenging activities because they elicit a high level of frustration.	

HABITUATION

Daily Activities

The child knows how to complete daily self care activities and is able to participate in the performance of these activities (ADLs and IADLs such as dressing, hygiene, meals, etc.).

F	The child knows how daily self care activities are performed and is able to participate in the performance of these activities.	Comments:
A	The child regularly needs directions and cues to know how to do common daily self care activities and participate in their performance.	
I	The child demonstrates limited understanding of how to do daily self care activities and usually requires multiple cues and significant support in order to participate in their performance.	
R	The child does not know how to do common daily self care activities and does not participate in their performance.	

Response to Transitions

When asked by an adult or cued by something in the environment, the child is able to terminate one activity and begin another.

F	The child is able to transition between different activities, demonstrating appropriate changes in affect and arousal level.	Comments:
A	The child sometimes requires cues and/or support to terminate one activity and transition to another.	
I	The child requires multiple cues and substantial assistance during transitions between activities.	
R	The child is very upset and/or bewildered by transitions; does not demonstrate ability to modulate arousal level and affect in response to new activity; becomes disorganized.	

Routine

The child has an awareness of routines and is able to participate effectively in structured daily routines.

F	The child demonstrates an awareness of the sequence and structure of a regular routine, and can anticipate, initiate, and/or cooperate with activities related to these routines.	Comments:
A	The child requires occasional cueing and redirection in order to cooperate with the regular sequence and structure of routines in his/her life.	
I	The child is often unable to participate in the sequence and structure of regular routines.	
R	The child does not demonstrate an awareness of the sequence and structure of regular routines; does not anticipate, cooperate, and/or initiate routine activities.	

Roles

The child is aware of own roles and/or demonstrates behaviors associated with the roles' expectations.

F	The child consistently demonstrates role related behaviors; can verbalize role related expectations or selects and performs role related activities.	Comments:
A	The child is not consistent in following behaviors associated with role expectations and demands, but will demonstrate role related behaviors with some support.	
I	The child requires multiple cues to select activities and follow behaviors associated with role expectations and demands.	
R	The child does not demonstrate an awareness of role related expectations; does not select or perform activities that indicate a sense of belonging and awareness of role demands.	

COMMUNICATION & INTERACTION SKILLS

Non-Verbal Communication

The child demonstrates appropriate and effective non-verbal communication such as facial expressions, gestures, signs, eye contact, and affection to communicate with others in the social environment.

F	The child spontaneously uses non-verbal communication skills to initiate and sustain interaction with others.	Comments:
A	The child exhibits non-verbal communication but only in response to prompting by others in his/her environment.	
I	The child exhibits very limited and/or ineffective use of non-verbal communication during interactions.	
R	The child does not use non-verbal communication during his/her interactions.	

Verbal/Vocal Expression

The child uses verbal/vocal expression appropriately and effectively.

F	The child initiates the use of verbal/vocal expression while exhibiting appropriate tone, volume, and pace.	Comments:
A	When asked and/or given prompts, the child responds using verbal/vocal expression but does not initiate such expression and/or exhibits some limitations related to tone, volume, and pace.	
I	The child rarely uses verbal/vocal expression and/or demonstrates difficulty with tone, volume, and pace during such expression.	
R	The child is unable or unwilling to use verbal/vocal skills to express him/herself.	

Conversation

The child engages in appropriate and effective conversation with peers, teachers, parents, and therapists in order to share and exchange information, ideas, and emotions.

F	The child spontaneously initiates and sustains meaningful conversation in order to convey emotions and/or share and exchange information and ideas.	Comments:
A	Given cues and suggestions, the child participates in meaningful conversation with his/her social environment.	
I	The child has difficulty engaging in meaningful conversation with others and may be hesitant, limited, or abrupt during social interactions.	
R	The child is unable or unwilling to participate in conversations with others. The child may be entirely uncommunicative or may exhibit extremely inappropriate or disjointed conversation.	

Relationships

The child maintains appropriate relationships within his/her social environment.

F	The child is sociable and spontaneously demonstrates cooperation, collaboration with, and awareness of others.	Comments:
A	The child demonstrates some ability to maintain relationships but exhibits some limitations within these relationships.	
I	The child exhibits difficulty interacting and cooperating with others in order to maintain social relationships.	
R	The child cannot maintain relationships due to an unawareness of others or an unwillingness to cooperate and collaborate.	

PROCESS SKILLS

Understands and Uses Objects

The child is able to engage in appropriate selection, organization, and use of objects.

F	The child consistently demonstrates effective selection, organization, and use of objects.	Comments:
A	The child can select, organize, and effectively use objects if provided with step-by-step cues, instructions, and/or demonstrations.	
I	The child experiences difficulty in following cues and/or demonstrations in selection, organization, and use of objects.	
R	The child's selection and use of objects is disorganized. The child does not demonstrate an orientation to object utilization.	

Orientation to Environment

The child exhibits an ability to interact with and adapt to the environment.

F	The child consistently seeks information about the environment, shows an awareness and understanding, and engages in appropriate interaction with the environment.	Comments:
A	The child requires cues to seek, retain, and/or understand information about the environment.	
I	The child's interaction with the environment is impacted by limited ability and difficulty seeking, retaining, and/or understanding information about the environment.	
R	The child is unable to seek, retain, and/or understand information about the environment.	

Plan and Make Decisions

The child is able to evaluate alternatives, decide on a plan, and concentrate to follow through with the plan.

F	When given the opportunity, the child consistently decides what to do and how to perform activities, and is able to maintain concentration to follow through with the plan.	Comments:
A	The child usually needs cues to evaluate and plan how to perform chosen activities, and/or needs help to maintain required concentration to follow through with the plan.	
I	The child is rarely able to make a plan and requires significant cues to follow through with a plan.	
R	The child does not demonstrate an ability to plan and/or follow through with a plan.	

Problem Solving

The child demonstrates an appropriate ability to identify and respond to problems when they occur.

F	The child consistently anticipates problems, generates workable solutions, and evaluates these solutions to determine the best course of action.	Comments:
A	The child can identify difficulties but needs step-by-step cues to generate an effective response.	
I	The child rarely anticipates and adapts to difficulties; needs on-going reassurance when problems are encountered.	
R	The child is unable to anticipate and adapt to difficulties; makes inappropriate decisions.	

MOTOR SKILLS

Posture and Mobility

The child's motor skills promote posture, mobility, and overall occupational performance.

F	The child exhibits a stable, upright, flexible posture and effective mobility during activities.	Comments:
A	The child usually demonstrates the ability to maintain posture and mobility during activities.	
I	The child often demonstrates postural instability and mobility difficulties.	
R	The child is unable to maintain posture and is not mobile.	

Coordination

The child exhibits effective gross and fine motor movements during activities.

F	The child effectively coordinates body parts to achieve fine and gross motor movements.	Comments:
A	The child exhibits uncoordinated movement during some fine and/or gross motor activities.	
I	The child has difficulty coordinating fine and/or gross motor movements during most activities.	
R	The child is unable to coordinate, manipulate, and use fluid movements.	

Strength

The child demonstrates adequate muscle strength during fine and gross motor activities.

F	The child consistently uses adequate strength while grasping, moving, and transporting objects with appropriate force/speed.	Comments:
A	The child exhibits minor difficulty in motor activities requiring muscle strength to grasp, move, and transport objects.	
I	The child has difficulty lifting, moving, and transporting objects with appropriate force and speed.	
R	The child is unable to grasp, move, and transport objects with adequate force and speed due to muscle weakness.	

Energy/Endurance

The child is able to maintain an appropriate energy level in order to participate in occupations.

F	The child consistently maintains an appropriate energy level and tempo throughout all daily occupations.	Comments:
A	The child sometimes demonstrates inappropriate energy levels (too high or too low) during daily occupations.	
I	The child has difficulty maintaining appropriate energy levels during daily occupations.	
R	The child is unable to maintain appropriate energy levels during daily occupations.	

ENVIRONMENT

**The rating should reflect how the environment affects the child
(rather than the child's response to the environment)**

F	Facilitates	Environmental aspect facilitates participation in occupation. No unmet needs.
A	Allows	Environmental aspect allows participation in occupation. Impact of unmet needs is limited.
I	Inhibits	Environmental aspect inhibits participation in occupation. Some unmet needs identified.
R	Restricts	Environmental aspect restricts participation in occupation. Major unmet needs identified.

If the child has been or will be in the hospital for an extensive period of time, the therapist may choose to assess the suitability of a hospital environment.

Physical Space

The layout and arrangement of physical space (at home, community, school, and/or hospital) supports the child's participation.

F	Arrangement of the physical environment is accessible and provides opportunities to engage in various activities; stimulates and supports occupational participation in child's valued roles.	Comments:
A	Arrangement of the physical environment does not adequately support occupational engagement or is somewhat accessible; poses some limitations to the child's participation in valued roles.	
I	Arrangement of the physical environment affords a limited range of opportunities with limited accessibility and support for occupational participation in child's valued roles.	
R	Arrangement of the physical environment is not accessible, does not provide opportunities, and prevents participation in the child's valued roles.	

Physical Resources

Availability of equipment, appropriate play/learning objects, transportation, and other resources (at home, community, school, and/or hospital) support the child's participation.

F	Physical resources (objects such as toys, school utensils, mobility devices) support satisfying and safe occupational participation.	Comments:
A	Physical resources (objects such as toys, school utensils, mobility devices) meet the basic needs for safety and engagement in occupations, but do not fully support satisfying participation in valued occupations.	
I	Physical resources (objects such as toys, school utensils, mobility devices) limit opportunities for satisfying and safe engagement in occupations.	
R	Physical resources (objects such as toys, school utensils, mobility devices) are lacking, inappropriate, and/or unsafe.	

ENVIRONMENT (continued)

Social Groups

The actions and attitudes of other people, including parents, teachers, peers, caregivers, etc. support the child's occupational participation.

F	The social environment is able, willing, or capable of offering optimal and appropriate attitudes to support the child's occupational participation.	Comments:
A	The child's social environment sometimes limits occupational participation due to over or under involvement.	
I	The child's social environment provides minimal support and limited opportunities for participation.	
R	The child's social environment does not support occupational participation due to gross under or over involvement.	

Occupational Demands

Activity expectations and requirements (social and leisure activities, ADLs, IADLs, school work) match a child's abilities and interests, and promote participation.

F	Occupational demands match child's abilities, interests, energy, and available time.	Comments:
A	Occupational demands may not be consistent with the child's abilities, interests, energy, and time.	
I	Occupational demands often affect the child's occupational engagement due to inconsistencies with the child's abilities, interest, energy, or available time.	
R	Occupational demands do not support occupational participation-- either under or over demanding.	

Family Routine

The child's family routine supports the child's participation in occupations.

F	The child's family routine provides optimal support for the child to participate in occupational roles.	Comments:
A	The child's family routine occasionally impacts the child's ability to perform in occupational roles.	
I	The child's family routine provides limited support and opportunities for participation in occupational roles.	
R	The child's family routine prevents the child from participating in occupational roles.	

The Short Child Occupational Profile Parent Report Form

Child's Name _____ Please Return By _____

Please read each statement below. Then, decide if this activity is a **challenge** (something that is difficult for your child) or a **strength** (something your child does well).

Activity	This is a challenge	This is a strength	Examples/Comments:
Touching, looking at, playing with, or trying new things.			
Showing enjoyment or happiness when playing or doing something he/she likes (for example, clapping when finished, smiling).			
Knowing what he/she likes; choosing a favorite toy, person, or activity.			
Continuing an activity even when it becomes difficult.			
Taking care of his/herself (for example, getting dressed, washing his/her body, eating).			
Stopping one activity and beginning another when asked.			
Understanding and following routines (for example, getting ready in the morning, dinnertime routines, beginning the school day, bedtime routines).			
Doing things that are part of being a family member, friend, or student (for example, doing chores at home, playing with a friend, or doing homework).			
Using facial expressions and gestures to indicate wants, needs, and moods.			
Using his/her voice or words to indicate wants and needs.			
Talking with friends, family, and others to share thoughts or ideas (for example, telling parents about the school day, telling a friend a story).			
Interacting with others in an appropriate way (for example, listening, cooperating, taking turns).			
Choosing and using objects appropriately (for example, choosing a pencil to write, using a spoon/fork to eat, putting gloves on hands).			
Noticing and responding to things around him/her (for example, answering a vibrating cell phone, stopping at a stop sign, leaving the building when hearing a fire alarm).			

Activity	This is a challenge	This is a strength	Examples/Comments:
Making and following through with a plan (for example, identifying and playing a game with friends, deciding how to finish homework, deciding what to wear and getting dressed).			
Solving problems (for example, turning puzzle pieces in a different direction to solve a puzzle, realizing that shoes are on the wrong feet and switching them).			
Using his/her body to move and do things (for example, sitting upright at the table, getting from one side of the room to the other).			
Using hands to do things (for example, cutting with scissors, reaching for an object).			
Having the strength to hold, lift, and move objects.			
Having the right energy level throughout the day (for example, not being too active or too tired).			

The environment is every place, object, or person that your child comes in contact with during a typical day. Read each statement and then decide if each part of the environment makes it **hard** for your child to do things, or if it **helps** your child to do things.

Environment	This makes it hard for my child to do things	This helps my child to do things	Examples/Comments:
The space inside and outside my child's home (for example, the bedroom, the family room, the front yard).			
The space inside and outside my child's school and/or other places in the neighborhood (for example, the classroom, the playground, the street, the church/synagogue).			
Toys, adaptive equipment, school materials, and other aids (for example, transportation, communication devices, wheelchair).			
Different people, such as family, friends, and teachers.			
Rules and requirements for doing things at home (for example, doing assigned chores, keeping things neat).			
Rules and requirements for doing things at school and/or in the neighborhood (for example, following homework directions, sitting quietly at a movie theater).			
Our family schedule.			

Appendix 3 (B)

নিজ ইচ্ছাশক্তির ব্যবহার

তথ্য আহরনমূলক অনুসন্ধান

বাচ্চা ব্যক্তি, বস্তু ও পরিবেশ দেখে, স্পর্শ করে এবং ভাষার অনুসন্ধান করে

F	বাচ্চা স্বতঃস্ফূর্তভাবে পরিবেশের তথ্য আহরণ শুরু করে এবং তা বজায় রাখে	মন্তব্য
A	বাচ্চার মাঝে মাঝে পরিবেশের তথ্য আহরণ এবং তা বজায় রাখার জন্য ইঙ্গিত, উৎসাহ অথবা সাহায্যের দরকার হয়	
I	অনুসন্ধানমূলক ব্যবহার ধরে রাখার জন্য বাচ্চার প্রচুর পরিমাণ ইঙ্গিত, উৎসাহ অথবা সাহায্যের দরকার হয়	
R	বাচ্চা শারীরিক বা সামাজিক উদ্দীপকে সাড়া দেয় না	

আনন্দের বহিঃপ্রকাশ

বাচ্চা কোন কর্মকাণ্ডের মাধ্যমে তার সন্তুষ্টি প্রকাশ করে

F	কাজের সময় ও পরে বাচ্চা স্বতঃস্ফূর্তভাবে আনন্দের বহিঃপ্রকাশ করে	মন্তব্য
A	বাচ্চার কাজের সন্তুষ্টি ও বহিঃপ্রকাশ কিছুটা সীমিত	
I	কাজের সময় বাচ্চা কিছু আনন্দ প্রকাশ করে কিন্তু তা উদ্বেগ ও হতাশার মিশ্রণ	
R	বাচ্চা কাজে লিপ্ত হলে সবসময় উদ্বেগ ও হতাশা প্রকাশ করে	

আগ্রহ এবং পছন্দ প্রকাশ করা

বাচ্চা নিঃসন্দেহে কোন বস্তু, ঘটনা অথবা ব্যক্তির প্রতি পছন্দ ও আগ্রহ প্রকাশ করতে পারে

F	বাচ্চা বিভিন্ন বস্তু, ঘটনা অথবা ব্যক্তির প্রতি দৃঢ় আগ্রহ প্রকাশ করে	মন্তব্য
A	বাচ্চাকে কোন কিছু পছন্দ করতে দিলে ইতস্তত হয়, পছন্দ করার জন্য ইঙ্গিত বা পরামর্শের প্রয়োজন হয়, সাহায্যের মাধ্যমে পছন্দ নির্বাচন করতে পারে	
I	বাচ্চা প্রায়ই পছন্দ নির্বাচন করতে অন্যের উপর নির্ভরশীল এবং নিজের পছন্দ/ আগ্রহ সম্পর্কে অনিশ্চিত	
R	বাচ্চা কোন বস্তু, ব্যক্তি বা ঘটনার প্রতি আগ্রহ দেখায় না	

প্রতিদ্বন্দ্বিতায় সাড়া দেওয়া

বাচ্চা নতুন কাজে লিপ্ত হয় এবং বেশি পাওয়ার সুযোগ গ্রহণ করে অথবা বড় কোন দাবির শর্তের মধ্যে কাজ করে

F	বাচ্চা স্বতঃস্ফূর্তভাবে প্রতিদ্বন্দ্বিতামূলক নতুন কাজ খুজে এবং তা করে	মন্তব্য
A	বাচ্চা স্বতঃস্ফূর্তভাবে নতুন প্রতিদ্বন্দ্বিতামূলক কাজ শুরুর চেষ্টা করে, কিন্তু সহজেই হতাশ হয়ে যায় এবং ঐ কাজটি করতে কিছু সাহায্যের দরকার হয়	
I	সাধারণ বাচ্চার নতুন কাজে লিপ্ত হওয়ার জন্য এবং সেই কাজের সময়কার হতাশা দূর করার জন্য বিশেষ সাহায্যের প্রয়োজন হয়	
R	বাচ্চা নতুন অথবা অধিক প্রতিদ্বন্দ্বিতামূলক কাজ পরিহার করে কারন তারা অনেক বেশি হতাশায় ভোগে	

অভ্যাস

দৈনন্দিন কাজকর্ম

বাচ্চা জানে কিভাবে দৈনন্দিন কাজ সম্পন্ন করতে হয় এবং এই কাজে সে অংশগ্রহণ করতে পারে (দৈনন্দিন কাজকর্ম যেমন- জামা পরা, পরিচ্ছন্নতা, খাওয়া ইত্যাদি)

F	বাচ্চা জানে কিভাবে দৈনন্দিন কাজ সম্পন্ন করতে হয় এবং এই কাজে অংশগ্রহণ করতে সক্ষম	মন্তব্য
A	বাচ্চার নিজের যত্নের কাজকর্ম করার উপায় জানতে এবং তাতে অংশগ্রহণ করতে নিয়মিত নির্দেশনা ও ইঙ্গিতের প্রয়োজন হয়	
I	নিজের যত্ন সম্পর্কে বাচ্চার খুব কম ধারণা আছে এবং সাধারণত এই কাজে অংশগ্রহণের জন্য তার বিভিন্ন ইঙ্গিত ও বিশেষ সাহায্যের প্রয়োজন হয়	
R	বাচ্চা জানেনা কিভাবে নিজের যত্ন করতে হয় এবং তার কাজে অংশগ্রহণ করে না	

পরিবর্তনের সাড়া

যখন পরিবেশের মাধ্যমে ইঙ্গিত পায় অথবা বড় কেও বলে তখন বাচ্চা একটা কাজ শেষ ও অন্যটি শুরু করতে পারে

F	বাচ্চা সয়ংক্রিয়ভাবে বিভিন্ন কাজের মধ্যে পরিবর্তন করতে পারে	মন্তব্য
A	একটা কাজ থেকে অন্য কাজে স্থানান্তরিত হতে বাচ্চার মাঝে মাঝে ইঙ্গিত অথবা সাহায্যের প্রয়োজন হয়	
I	কাজের স্থানান্তরের জন্য বাচ্চার বিভিন্ন ইঙ্গিত ও উল্লেখযোগ্য পরিমাণ সাহায্যের প্রয়োজন হয়	
R	স্থানান্তরের কারনে বাচ্চা মানসিকভাবে বিপর্যস্ত ও বিভ্রান্ত; যথাযথ সক্রিয়ভাবে নতুন কোন কাজে লিপ্ত হতে পারেনা; বিশৃঙ্খল হয়ে পড়ে	

নিয়ম মার্কিক কাজ (রুটিন)

বাচ্চা রুটিন সম্পর্কে সচেতন এবং দৈনন্দিন রুটিনে কার্যকরভাবে অংশগ্রহণ করে

F	বাচ্চা প্রতিদিনের রুটিনের ধারা সম্পর্কে সচেতন এবং সে অনুযায়ী কাজ করতে পারে	মন্তব্য
A	রুটিনের নিয়মিত কাজগুলো করতে বাচ্চার মাঝে মাঝে ইঙ্গিত এবং সঠিক উপায় দেখানোর প্রয়োজন হয়	
I	বাচ্চা প্রায়ই তার রুটিনের নিয়মিত কাজগুলো করতে অক্ষম	
R	বাচ্চা প্রতিদিনের রুটিন সম্পর্কে সচেতন নয় এবং সে অনুযায়ী কাজ শুরু করতে পারেনা	

অবস্থান অনুযায়ী নির্দিষ্ট কাজ

বাচ্চা তার নির্দিষ্ট অবস্থান সম্পর্কে জানে ঐ অবস্থান অনুযায়ী ব্যবহার করে

F	বাচ্চা সবসময় তার অবস্থান সম্পর্কিত কাজ ও ব্যবহার প্রদর্শন করে এবং আশানুরূপ ভাষা প্রকাশ করে অথবা তার অবস্থান সম্পর্কিত কাজে অংশগ্রহণ করে	মন্তব্য
A	অবস্থান অনুযায়ী আশানুরূপ কাজ বাচ্চা সবসময় করতে পারেনা কিন্তু সাহায্যের মাধ্যমে সে তার অবস্থান অনুযায়ী ব্যবহার প্রদর্শন করে	
I	বাচ্চার অবস্থান সম্পর্কিত কাজগুলো বাচ্চাই করতে তার বিভিন্ন ধরনের ইঙ্গিতের প্রয়োজন হয়	
R	বাচ্চা তার অবস্থান সম্পর্কিত প্রত্যাশা সম্পর্কে জানেনা, তার অবস্থান সম্পর্কিত কাজটি বাচ্চাই করতে পারে না	

আদান-প্রদান ও ক্রিয়ার দক্ষতা

ভাষা বিহীন যোগাযোগ

বাচ্চা যথাযথ এবং কার্যকর ভাবে ভাষা বিহীন যোগাযোগ করতে পারে (যেমন মুখের ভাব, অঙ্গভঙ্গি, প্রতীকী চিহ্ন, চোখের যোগাযোগ এবং সামাজিক পরিবেশে অন্যদের যোগাযোগ)

F	অন্যদের সাথে যোগাযোগ করতে বাচ্চা স্বতঃস্ফূর্ত ভাবে ভাষা বিহীন যোগাযোগ মাধ্যম ব্যবহার করে	মন্তব্য
A	বাচ্চা শুধুমাত্র অন্যের তৎপরতা ভাষা বিহীন যোগাযোগ প্রদর্শন করে	
I	যোগাযোগের সময় বাচ্চা খুব কম ভাষা বিহীন যোগাযোগ মাধ্যম ব্যবহার করে যা ফলপ্রসূ নয়	
R	বাচ্চা তার যোগাযোগের সময় ভাষা বিহীন যোগাযোগ মাধ্যম ব্যবহার করে না	

ভাষার প্রকাশ

বাচ্চা যথাযথ এবং সঠিকভাবে ভাষার ব্যবহার করে

F	বাচ্চা তার স্বর, শব্দ ও গতির মাধ্যমে তার ভাষার ব্যবহার শুরু করে	মন্তব্য
A	বাচ্চাকে বলে দিলে ভাষার প্রকাশ করে কিন্তু এই প্রকাশ ভঙ্গিতে স্বর, শব্দ ও গতির কিছু সীমাবদ্ধতা থাকে	
I	বাচ্চা খুব কম সময়ই ভাষার ব্যবহার করে এবং স্বর, শব্দ ও গতির মধ্যে জটিলতার সম্মুখীন হয়	
R	বাচ্চা ভাষার ব্যবহারে অক্ষম বা অনিচ্ছুক	

আলাপ- আলোচনা

বাচ্চা যথাযথ ও সঠিক উপায়ে বন্ধু, শিক্ষক, পিতা-মাতা, থেরাপিস্টের সাথে তথ্য, পরিকল্পনা এবং অনুভূতি প্রকাশের জন্য কথোপকথন করতে পারে

F	বাচ্চা অর্থবহ কথোপকথনের জন্য স্বতঃস্ফূর্তভাবে তার অনুভূতি, তথ্য ও পরিকল্পনা ভাগাভাগি করতে পারে	মন্তব্য
A	ইঙ্গিত পেলে বাচ্চা তার সামাজিক পরিবেশে অর্থবহ কথোপকথন করতে পারে	
I	অন্যের সাথে অর্থবহ কথোপকথনে অংশগ্রহণ করতে বাচ্চা জটিলতার সম্মুখীন হয় বাধাগ্রস্ত ও দ্বিধাশীল হয় অথবা সামাজিক কথোপকথনে অপ্রত্যাশিত	
R	বাচ্চা অন্যদের সাথে কথোপকথনে অক্ষম বা অনিচ্ছুক, বাচ্চা হয়ত কথা বলতে পারেনা অথবা আলাপ আলোচনায় খুব অযোগ্য বা কথোপকথনকে বিচ্ছিন্ন করে	

সম্পর্ক

বাচ্চা সামাজিক পরিবেশের সাথে সঠিক বজায় রাখে

F	বাচ্চা সামাজিক এবং স্বতঃস্ফূর্তভাবে অন্যদের সম্পর্কে সচেতন ও সহযোগিতা করে	মন্তব্য
A	বাচ্চা সম্পর্ক বজায় রাখার কিছু ক্ষমতা প্রদর্শন করে কিন্তু বাঁধার সম্মুখীন হয়	
I	বাচ্চা সামাজিক সম্পর্ক বজায় রাখতে অন্যদের সাথে কথা বলতে ও কাজ করতে জটিলতার সম্মুখীন হয়	
R	বাচ্চা সম্পর্ক বজায় রাখতে পারেনা কারন সে অন্যদের সম্পর্কে সচেতন নয় অথবা অনিচ্ছুক	

দক্ষতার প্রক্রিয়া

বস্তুকে চেনা এবং তার ব্যবহার

বাচ্চা সঠিকভাবে বস্তুকে বাছাই করা, গোছানো ও তার ব্যবহার করতে সক্ষম

F	বাচ্চা সবসময় কোন বস্তুকে বাস্তবিকভাবে বাছাই করে, ব্যবহার করে ও গোছাতে পারে	মন্তব্য
A	বাচ্চাকে যদি ধারাবাহিকভাবে ইঙ্গিত দেওয়া হয় তবে বাচ্চা কোন বস্তুকে বাছাই, ব্যবহার ও গোছাতে পারে	
I	বাচ্চা কোন বস্তুকে বাছাই, ব্যবহার ও গোছানোর ইঙ্গিত অনুসরণ করতে সমস্যার সম্মুখীন হয়	
R	বাচ্চা বিশৃঙ্খলভাবে বস্তুকে বাছাই, ব্যবহার করে/ বাচ্চা বস্তুর ব্যবহার সম্পর্কে জানেনা	

পরিবেশের সম্পর্কে জানা

বাচ্চা পরিবেশের সাথে খাপ খাওয়ানোর দক্ষতা প্রদর্শন করে

F	বাচ্চা সবসময় পরিবেশের ব্যাপারে তথ্য সংগ্রহ করে এবং পরিবেশের সাথে খাপ খাওয়ানোর দক্ষতা প্রদর্শন করে	মন্তব্য
A	পরিবেশের ব্যাপারে তথ্য সংগ্রহ করা এবং পরিবেশের সাথে খাপ খাওয়ানোর জন্য বাচ্চার ইঙ্গিতের দরকার হয়	
I	পরিবেশের সাথে খাপ খাওয়াতে বাচ্চা সমস্যার সম্মুখীন হয়	
R	বাচ্চা পরিবেশের সাথে খাপ খাওয়াতে অক্ষম	

পরিকল্পনা করা ও সিদ্ধান্ত নেওয়া

বাচ্চা পরিকল্পনা করে সে অনুযায়ী কাজ করতে এবং বিকল্প ব্যবস্থার মূল্যায়ন করতে পারে

F	বাচ্চাকে যখন সুযোগ দেওয়া হয় তখন বাচ্চা সিদ্ধান্ত নেয় কিভাবে কাজটি করতে হবে এবং মনোযোগ দিয়ে কাজটি করতে পারে	মন্তব্য
A	কাজটি করতে এবং মনোযোগ ধরে রাখতে বাচ্চার ইঙ্গিতের প্রয়োজন হয়	
I	বাচ্চা খুব কম সময়ই পরিকল্পনা অনুযায়ী কাজ করে এবং কাজটি করতে অনেক বেশি পরিমাণ ইঙ্গিতের প্রয়োজন হয়	
R	বাচ্চা কোন কাজের জন্য পরিকল্পনা করে সে অনুযায়ী কাজ করতে পারেনা	

সমস্যার সমাধান

কোন সমস্যা হলে তা সমাধানের জন্য বাচ্চা সঠিক দক্ষতা দেখায়

F	সমস্যা শুরু হওয়ার আগেই বাচ্চা সম্ভাব্য সমাধান অনুযায়ী কাজ করে এবং সিদ্ধান্ত নেওয়ার জন্য এই সমাধানকে মূল্যায়ন করে	মন্তব্য
A	বাচ্চা সমস্যা চিহ্নিত করতে পারে কিন্তু সমাধানের এবং কার্যকর ফল পাওয়ার জন্য পদক্ষেপ অনুযায়ী ইঙ্গিতের প্রয়োজন হয়	
I	বাচ্চা খুব কম সময়ই সমাধান করতে পারে এবং বার বার তাকে অভয় দিতে হয়	
R	বাচ্চা সমস্যার সমাধান করতে পারে না অথবা ভুল সিদ্ধান্ত নেয়	

কর্ম দক্ষতা

অঙ্গভঙ্গি ও সচলতা

বাচ্চার কর্মদক্ষতা, অঙ্গভঙ্গি, সচলতা তার পেশাগত কার্যক্রমকে উন্নত করে তুলে

F	বাচ্চা সবসময় দৃঢ়, সোজা, নমনীয় অঙ্গভঙ্গি প্রকাশ করে এবং কাজের সময় সচল থাকে	মন্তব্য
A	সাধারণত বাচ্চা কাজের সময় তার অঙ্গভঙ্গি ও সচলতা বজায় রাখে	
I	বাচ্চা প্রায়ই অঙ্গভঙ্গিতে দৃঢ়তার অভাব দেখায় এবং সচলতা বজায় রাখতে জটিলতায় ভোগে	
R	বাচ্চা অঙ্গভঙ্গি ও নড়াচড়া করতে অক্ষম	

সমন্বয় সাধন

বাচ্চা কাজের সময় যথাযথভাবে বড় ও ছোট কাজের জন্য অবস্থান পরিবর্তন করতে পারে

F	বাচ্চা যথাযথভাবে শরীরের বিভিন্ন অংশের সমন্বয় করতে পারে	মন্তব্য
A	বাচ্চা কিছু কিছু বড় ও ছোট কাজের সময় সমন্বয়হীন নড়াচড়া করে	
I	বাশিরভাগ বড় ও ছোট কাজের সময়ই বাচ্চা সমন্বয় সাধনে জটিলতায় ভোগে	
R	বাচ্চা সমন্বয় করতে অক্ষম এবং এলোপাতাড়ি নড়াচড়া করে	

শক্তি

বড় অথবা ক্ষুদ্র ক্ষুদ্র কাজের সময় বাচ্চার পর্যাপ্ত পরিমাণ শক্তি থাকে

F	হাত দিয়ে কিছু ধরা, নাড়াচাড়া করা এবং এক জায়গা থেকে অন্য জায়গায় নেওয়ার জন্য সবসময় বাচ্চার যথাযথ শক্তি ও গতিবেগ বজায় থাকে	মন্তব্য
A	মাংশপেশির শক্তির প্রয়োজন হয় এমন কাজে বাচ্চা জটিলতার সম্মুখীন হয় যেমন হাত দিয়ে কিছু ধরা, নাড়াচাড়া করা এবং এক জায়গা থেকে অন্য জায়গায় নেওয়া	
I	কোন বস্তু নাড়ানো এবং স্থান পরিবর্তনে বাচ্চা জটিলতার সম্মুখীন হয়	
R	মাংশপেশির দুর্বলতার কারণে বাচ্চা হাত দিয়ে কিছু ধরা, নাড়াচাড়া করা এবং এক জায়গা থেকে অন্য জায়গায় নিতে পারেনা	

স্থায়িত্ব

বাচ্চার কাজে অংশগ্রহণের জন্য যথাযথ পরিমাণ শক্তিমাত্রা বজায় থাকে

F	বাচ্চা সবসময় তার দৈনন্দিন কাজের জন্য যথাযথ শক্তিমাত্রা বজায় রাখতে পারে	মন্তব্য
A	বাচ্চার শক্তিমাত্রা মাঝে মাঝে তার দৈনন্দিন কাজের জন্য অযোগ্য (খুব বেশি অথবা কম)	
I	বাচ্চার জন্য দৈনন্দিন কাজের প্রয়োজনীয় শক্তিমাত্রা বজায় রাখা কঠিন	
R	বাচ্চা দৈনন্দিন কাজের প্রয়োজনীয় শক্তিমাত্রা বজায় রাখতে অক্ষম	

পরিবেশ

চারপাশের স্থান

প্রাকৃতিক স্থানের বিন্যাস (বাড়ি, সমাজ, স্কুল অথবা হাসপাতাল) বাচ্চার অংশগ্রহণকে সাহায্য করে

F	চারপাশের পরিবেশের ব্যবস্থা প্রবেশযোগ্য এবং বাচ্চাকে বিভিন্ন কাজে অংশগ্রহণকে উৎসাহ ও সুযোগ দেয়	মন্তব্য
A	চারপাশের পরিবেশের ব্যবস্থা কাজে অংশগ্রহণে পর্যাপ্ত সাহায্য করে না অথবা কিছুটা প্রবেশযোগ্য, বাচ্চার অংশগ্রহণকে কিছুটা বাঁধা দেয়	
I	চারপাশের পারিপার্শ্বিক অবস্থা বাচ্চার অংশগ্রহণকে খুব কম সাহায্য করে এবং প্রবেশগম্যতাও কম	
R	চারপাশের পারিপার্শ্বিক অবস্থা প্রবেশগম্য নয় এবং কাজে অংশগ্রহণে বাঁধা দেয়	

চারপাশের জিনিস

যন্ত্রের প্রাপ্যতা, খেলা/ শেখার জন্য ব্যবহৃত বস্তু, যাতায়াত এবং অন্যান্য জিনিস (বাড়ি, সমাজ, স্কুল অথবা হাসপাতাল) বাচ্চার অংশগ্রহণকে সাহায্য করে

F	চারপাশের জিনিস (খেলনা, স্কুলের সরঞ্জাম, চলাচল করার যন্ত্র) বাচ্চার জন্য সন্তুষ্টজনক এবং নিরাপদ অংশগ্রহণে সাহায্য করে	মন্তব্য
A	চারপাশের জিনিস (খেলনা, স্কুলের সরঞ্জাম, চলাচল করার যন্ত্র) শুধুমাত্র প্রাথমিক প্রয়োজন মেটায় কিন্তু তার কাজে সম্পূর্ণ সন্তুষ্টজনক অংশগ্রহণে সাহায্য করেনা	
I	চারপাশের জিনিস (খেলনা, স্কুলের সরঞ্জাম, চলাচল করার যন্ত্র) কাজে অংশগ্রহণে বাঁধা দেয়	
R	চারপাশের জিনিস (খেলনা, স্কুলের সরঞ্জাম, চলাচল করার যন্ত্র) অনুপযোগী অথবা বিপজ্জনক	

সামাজিক গোষ্ঠী

মানুষের ব্যবহার (যেমন- পিতা মাতা, শিক্ষক, বন্ধু, সাহায্যকারী) বাচ্চার কাজে অংশগ্রহণকে সাহায্য করে

F	সামাজিক পরিবেশ বাচ্চার অংশগ্রহণকে সাহায্য করার জন্য যথাযথভাবে সক্ষম ও ইচ্ছুক	মন্তব্য
A	সামাজিক পরিবেশ মাঝে মাঝে বাচ্চার অংশগ্রহণকে বাঁধা দেয়	
I	সামাজিক পরিবেশ বাচ্চার কাজে অংশগ্রহণকে খুব কম সহায়তা করে	
R	সামাজিক পরিবেশ বাচ্চার কাজে অংশগ্রহণকে সহায়তা করেনা	

কাজের চাহিদা

প্রত্যাশিত এবং নির্দেশিত কাজ (সামাজিক ও অবসর সময়ের কাজ, দৈনন্দিন কাজ, গুরুত্বপূর্ণ কাজ, স্কুলের কাজ) বাচ্চার কাজে অংশগ্রহণকে সাহায্য করে

F	বাচ্চার প্রতি প্রত্যাশিত কাজের চাহিদা তার ক্ষমতা, আগ্রহ, শক্তি ও সময়ের সাথে মিলে যায়	মন্তব্য
A	প্রতি প্রত্যাশিত কাজের চাহিদা বাচ্চার ক্ষমতা, আগ্রহ, শক্তি ও সময়ের সাথে সবসময় মিলেনা	
I	বাচ্চার প্রতি প্রত্যাশিত কাজের চাহিদা প্রায়ই তার কাজে অংশগ্রহণকে আক্রান্ত করে	
R	বাচ্চার প্রতি প্রত্যাশিত কাজের চাহিদা তার কাজে অংশগ্রহণকে সহায়তা করেনা	

পারিবারিক রুটিন

বাচ্চার পারিবারিক রুটিন বাচ্চার কাজে অংশগ্রহণকে সাহায্য করে

F	বাচ্চার পারিবারিক রুটিন বাচ্চার কাজে অংশগ্রহণকে সবচেয়ে বেশি সহায়তা করে	মন্তব্য
A	বাচ্চার পারিবারিক রুটিন মাঝে মাঝে বাচ্চার কাজে অংশগ্রহণে প্রভাব ফেলে	
I	বাচ্চার পারিবারিক রুটিন বাচ্চার কাজে অংশগ্রহণকে খুব কম সহায়তা করে	
R	বাচ্চার পারিবারিক রুটিন বাচ্চার কাজে অংশগ্রহণকে বাঁধা দেয়	

অভিভাবকের বিবরণী অনুযায়ী বাচ্চার কাজের সংক্ষিপ্ত বর্ণনা

বাচ্চার নাম

বয়স.....

দয়া করে নিচের প্রতিটি উক্তিপড়ুন তারপর সিদ্ধান্ত নিন কাজটি কি বাঁধা (এমন কিছু যা আপনার বাচ্চার জন্য কঠিন)

না একটি শক্তি (এমন কিছু যা আপনার বাচ্চা ভালভাবে করতে পারে)

কাজ	এটা একটা বাধা	এটা একটা শক্তি	উদাহরণ/ মন্তব্য
স্পর্শ করা, তাকানো, খেলা করা অথবা নতুন কিছু চেষ্টা করা			
খেলার সময় অথবা পছন্দের কোন কিছু করার সময় তাকে আনন্দিত বা খুশি দেখানো (যেমন- যখন কোন কিছু শেষ হয় তখন হাততালি দেয়া, হাসা)			
সে যা পছন্দ করে তা জানা, তার প্রিয় খেলনা, প্রিয় ব্যক্তিত্ব অথবা প্রিয় কাজ বাছাই করতে পারা			
একটি কাজ চালিয়ে যাওয়া এমনকি যখন এটা করা খুব কঠিন হয় তখনও			
নিজের যত্ন নেওয়া (যেমন- পোষাক পরা, শরীর ধোয়া, খাওয়া)			
একটি কাজ শেষ করা এবং যখন বলা হয় তখন আরেকটি আরম্ভ করা			
দৈনন্দিন কাজ বুঝতে পারা ও সে অনুযায়ী কাজ করা (যেমন- সকালে তৈরি হওয়া, রাতের খাবারের রুটিন, স্কুলের দিন শুরু করা, ঘুমানোর রুটিন)			
পরিবারের সদস্য, বন্ধু, অথবা ছাত্র হিসেবে কিছু কাজ করা (যেমন- গৃহস্থালির কাজ করা, বন্ধুদের সাথে খেলা অথবা বাড়ির কাজ করা)			
মুখের ভাব এবং অঙ্গভঙ্গির মাধ্যমে চাহিদা, প্রয়োজন অথবা মনের ভাব বুঝানো)			
চাহিদা অথবা প্রয়োজন নির্দেশ করতে তার কণ্ঠস্বর বা শব্দের ব্যবহার			
পরিকল্পনা বা চিন্তাভাবনা ভাগাভাগি করতে বন্ধু, পরিবারের সদস্য, কিংবা অন্যান্যদের সাথে কথা বলা (যেমন- স্কুলের দিন সম্পর্কে বাবা মাকে বলা, বন্ধুদের সাথে গল্প করা)			
অন্যদের সাথে সঠিক উপায়ে যোগাযোগ করা (যেমন- শোনা, সহযোগিতা করা, আদান প্রদান করা)			
কোন জিনিস পছন্দ করা ও সঠিকভাবে ব্যবহার করা (যেমন- লেখার জন্য পেন্সিল পছন্দ করা, খাওয়ার জন্য চামচ ব্যবহার করা, হাতে মোজা পরা)			
আশেপাশের জিনিসপত্র লক্ষ্য করা এবং এগুলোতে সাড়া দেয়া (যেমন- একটি কম্পনরত মুঠোফোনের জবাব দেয়া, থামার চিহ্ন দেখলে থামা, আঙুলের বিপদ সংকেত শুনে ভবন ত্যাগ করা)			
পরিকল্পনা করা ও সে অনুযায়ী কাজ করা (যেমন- বন্ধুদের চিহ্নিত করা এবং তাদের সাথে খেলা, কিভাবে বাড়ির কাজ শেষ করবে সে সিদ্ধান্ত			

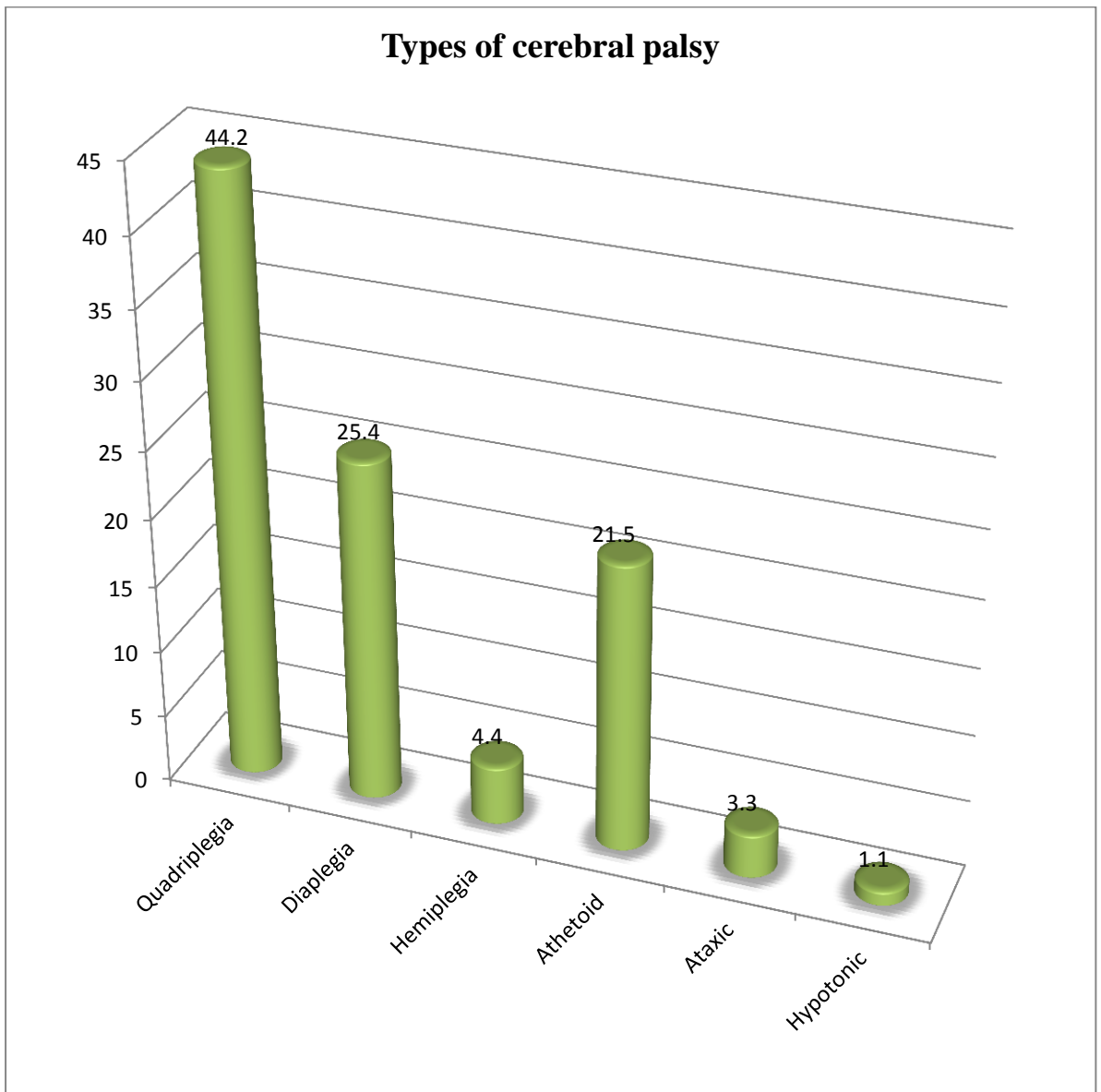
নেয়া, কোন জামা পরবে তা ঠিক করা)			
সমস্যা সমাধান করা (যেমন- পাজল মিলানোর জন্য পাজলের খণ্ডগুলো বিভিন্নভাবে রাখা, পায়ে উল্টো জুতা পরেছে কিনা তা বুঝতে পারা ও তা ঠিক করা)			
শরীর নাড়াচাড়ার মাধ্যমে কোন কাজ করা (যেমন- চেয়ারে সোজা হয়ে বসা, রুমের এক জায়গা থেকে অন্য জায়গায় যাওয়া)			
কাজ করতে হাত ব্যবহার করা (যেমন- কাচি দিয়ে কাটা, কোন কিছু ধরা)			
কোন কিছু ধরা, উঁচু করা এবং সরানোর শক্তি			
সারাদিন প্রয়োজনীয় শক্তি মাত্রা বজায় থাকা (যেমন- খুব বেশি সক্রিয় অথবা ক্লান্ত না হওয়া)			

পরিবেশ হচ্ছে প্রত্যেকটি স্থান, বস্তু অথবা ব্যক্তি, আপনার বাচ্চা সারাদিনে যার সংস্পর্শে আসে। প্রত্যেকটি উক্তি পড়ুন এবং সিদ্ধান্ত নিন পরিবেশের অংশগুলো আপনার বাচ্চার কাজ কি কঠিন করে তুলছে না কাজটি করতে সাহায্য করছে।

পরিবেশ	এটা বাচ্চার কাজকে কঠিন করছে	এটা বাচ্চার কাজকে সাহায্য করছে	উদাহরণ/ মন্তব্য
বাচ্চার ঘরের ভিতরের ও বাইরের জায়গা (যেমন- শোবার ঘর, বসার ঘর, সামনের বারান্দা)			
বাচ্চার স্কুলের ভিতরে এবং বাইরের স্থান অথবা প্রতিবেশীদের স্থান (যেমন- শ্রেণীকক্ষ, খেলার মাঠ, রাস্তা, গির্জা অথবা ধর্মমন্দির)			
খেলনা, খাপ খাওয়ানোর যন্ত্র, স্কুলের সামগ্রী এবং অন্যান্য সাহায্যকারী জিনিস (যেমন- যাতায়াত, যোগাযোগের যন্ত্র, হুইল চেয়ার)			
বিভিন্ন ব্যক্তি যেমন পরিবারের সদস্য, বন্ধু এবং শিক্ষক			
বাড়ির কাজের নিয়ম নীতি এবং আবশ্যিকতা (যেমন- গৃহস্থলি কাজ করা, সঠিকভাবে জিনিস রাখা)			
স্কুল কিংবা প্রতিবেশীদের কাজকরার নিয়ম ও আবশ্যিকতা (বাড়ির কাজের নিয়ম মেনে চলা, সিনেমা হলে শান্তভাবে বসে থাকা)			
পারিবারিক কার্য তালিকা			

Appendix 4

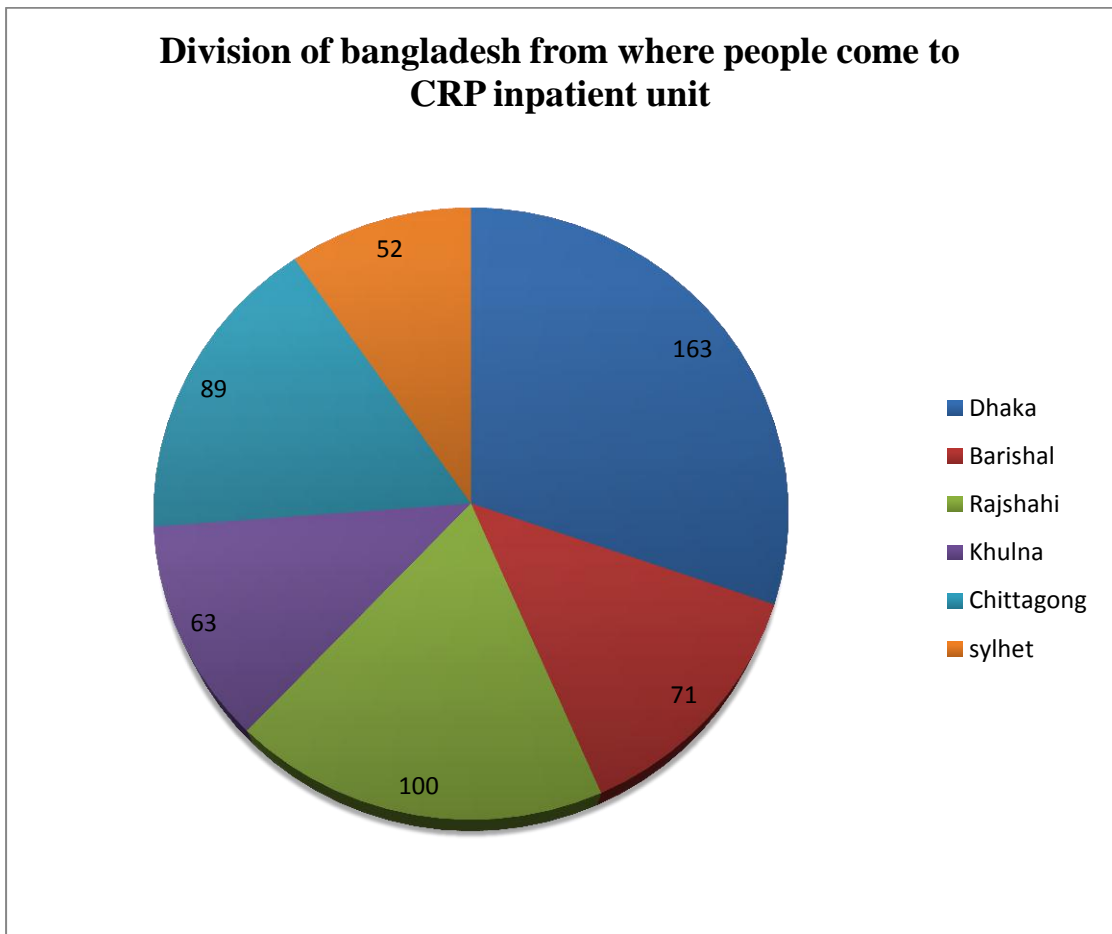
All the types of cerebral palsy of the participants are given below on the chart. Here spastic type of CP is divided according to the limb involvement like quadriplegia, diaplegia and hemiplegia.



Appendix 5 (A)

Patient comes from all divisions of Bangladesh from June 11 - July 2012

Total inpatient was 538.



Appendix 5 (B)

Total inpatient was 538 from June 2011 to July 2012; among them 460 were Cerebral Palsy.

