

**PARTICIPATION IN ACTIVITIES FOR DAILY LIVING BY LEARNERS WITH
CEREBRAL PALSY: A CASE OF DAGAMA SPECIAL SCHOOL IN LUANSHYA
DISTRICT, ZAMBIA**

By

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**A Dissertation Submitted to the University Of Zambia in Partial Fulfilment of the
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DECLARATION

I declare that the work presented in this dissertation entitled, “Participation in Activities for Daily Living by learners with Cerebral Palsy: A Case of Dagama Special School in Luanshya District, Zambia,” is to the best of my knowledge and belief my own work and that it is original. The dissertation contains no material that has been accepted for an award degree or diploma by the University of Zambia or any other institution. All the works that are not mine have been acknowledged.

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CERTIFICATE OF APPROVAL

This dissertation of **Lutwi Queen Unene** has been approved as the partial fulfilment of the requirement for the award of the degree of Master of education in Special Education of the University of Zambia.

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ABSTRACT

This study investigated the participation of learners with Cerebral Palsy in Activities for Daily Living at Dagama Special School in Luanshya district, Zambia. This study aimed to establish whether learners were engaged in activities for daily living independently at home and at school. A case study design was used in this study. Purposive sampling was used to sample 20 key informants. The sample consisted of 2 managers, (Head teacher and deputy teacher), 4 teachers and 5 house parents, 4 parents, 4 learners and 1 physiotherapist. Primary data was collected through interviews, lesson observations and focus group discussions done with key respondents. Secondary data was collected from reports, articles, previous research findings, books journals and the internet. Data was analysed thematically. The findings showed that not all pupils with cerebral palsy were independent in performing Activities for daily living. The teachers said that they helped the children when it came to the use of lab equipment for instance, writing and movement within the classroom. Individualised Educational programme was not followed much but grouped teaching was mostly done. Parents too though tried to train their children, not all engaged in daily chores or occupations necessary to manage the day. Challenges in taking part in the daily chores, class work and play or extra-curricular activities existed due to differences in severity of disability and training from home as well shortage of house parents and limited physiotherapy received. Two of the home environments where the learners come from were not conducive for them to perform daily activities that would require a lot of space and movement. The school environment was conducive as it was built to accommodate the mobility of wheelchairs and those with clutches. The study recommended that a multi-disciplinary approach be applied in helping learners with cerebral palsy participate in activities for daily living at home and at school. This will allow teachers, parents and therapists to work together to train the learners to be independent. Also continuing professional development was recommended for teachers to handle learners with cerebral palsy aright. Parents need sensitization through workshops.

DEDICATION

I dedicate this work to my husband, my parents and children who were there for me financially, morally and encouragement.

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ABBREVIATIONS

ADL	Activities of Daily Living
CP	Cerebral Palsy
IEP	Individualized Educational Programme
UNCRC	United Nations Convention on the Rights of a Child
UNESCO	United Nations Education, Scientific and Cultural Organisation

CHAPTER ONE

INTRODUCTION

This chapter presents the background of the study, statement of the problem and the purpose of the study. It also includes the study objectives, study questions, limitations and delimitations, significance of the study, theoretical framework and operational definitions.

1.1 Background

Cerebral Palsy is a motor condition that occurs in the developmental period. Pakula et al, (2009) and Munsaka & Matafwali (2013) have noted that Cerebral palsy has no cure and is non-progressive in nature. Cerebral Palsy occurs mostly during birth, sometimes before birth or after birth. However, in the 1840s William John Little explained the condition and attributed the cause of spasticity and paralysis to brain damage during infancy, specifically pre-term birth and perinatal asphyxia (lack of oxygen to the brain) (Bishop, 1958). The following definitions of Cerebral palsy by different authors will establish some understanding about the condition. Pakula (1996) in Singogo, Mweshi & Rhoda (2015) defines cerebral palsy as a most common cause of neurological impairment in children and can be associated with lifelong disability. Motor, sensory, speech and other cognitive impairments are experienced by people living with cerebral palsy. Munsaka & Matafwali (2013) revealed a recent definition of Cerebral Palsy proposed at a workshop in Maryland, United States of America in 2004 which states that:

It is a group of permanent disorders of the development of movement and posture, causing activity limitations that are attributed to non-progressive disturbances that occurred in the developing foetal or infant brain. The motor disorders of Cerebral Palsy are often accompanied by disturbances sensation, perception, cognition, communication behaviour, by epilepsy and secondary musculoskeletal problems (Shapiro, 2004: S3-7).

Cerebral palsy is a neurological developmental disorder that affects the motor control of the brain. It is a disorder of posture and movement. It is not known how it is caused. However, lesions to the brain during pregnancy, during birth or after birth are the possible causes of cerebral palsy (Bax, 1964; Munsaka and Matafwali, 2013). It is in four types namely, Athetoid, Spastic, Ataxia and Mixed (Athetoid and Spastic). Spastic cerebral palsy is characterised by muscle stiffness and permanent contractions, athetoid cerebral palsy is

characterised by uncontrolled, slow writhing movements whereas Ataxic cerebral palsy is poor coordination and balance. Children with Cerebral Palsy experience motor challenges limiting their participation in school and community related activities. UNESCO (1989) noted the following:

Cerebral Palsy was once regarded as a barrier to education because a majority of children with such disabilities were regarded as ‘ineducable.’ This meant placement in a special school or sub-normality hospital... However pressure from parents and voluntary agencies interested in the education of cerebral palsy children helped establish special schools for cerebral palsy children and others with similar disabilities. The 1950s proved to be the years of experiment and professional learning during which it became evident that meaningful education for these children was possible regardless of intellectual deficiencies. These years were for trial and error but they were also the years when professionals were able to learn and to develop techniques and skill to deal with the complexities of cerebral palsy (UNESCO, 1989:1).

In Zambia, children with Cerebral Palsy have limited access to education because there are few schools providing education to these learners (Arens & Molteno, 2008). One of the schools that have been in existence over the years is Da Gama Special School in Luanshya district, Copperbelt Province of Zambia. The school was established in 1966 when the education of learners with cerebral palsy was in its initial stages. Dr. Fisher thought it wise to have children with physical challenges to have an education with a hope of them ‘becoming productive and self-reliant, develop their potentialities and become great contributors towards society.’ The school has a total of 140 physically challenged learners who are in boarding and 32 day scholars who are not disabled. Thirty three (33) of the physically challenged have Cerebral Palsy with varying severities. The learners at the school have performed above average academically indicative of academic potential of learners with Cerebral Palsy. Despite this achievement however, a number of learners with CP still face challenges such as difficulty bathing oneself, dressing up, eating on their own and washing their clothes and food preparation.

Prevalence of Cerebral Palsy

Cerebral palsy is the most common disability in childhood (NDIC, 2008). The studies done by Arneson et al. (2009); Bhasin et. al (2006); Paneth & Korzeniewski (2006) report that on a world scale, cerebral palsy ranges from 1.5 to 4 per 1000 live births. In 2008, the ADDM CP Network showed that cerebral palsy was common in boys than girls, also common among Black children than white. Most 77.4% of the children were spastic while 58.2% could walk

independently, 11.3% walked using hand held devices and 30.6% had limited or no walking ability or are wheel chair bound. Those with co-occurring Epilepsy were 41% and 6.9% had co-occurring ASD.

Cerebral palsy research in Africa is not widespread due to a number of factors. Donald et al (2014) revealed that little is reported on cerebral palsy. Needed therapy, relevant guidelines and interventions are lacking. Early intervention only happens in families that can afford privately funded health care and may access screening. He further said that it all depends on the parent to identify the problem and present it to the medical facilities otherwise most children do not access basic health care due to unavailability and inadequacy leaving most children without appropriate intervention.

A study done by Singogo, Mweshi & Rhoda (2015) revealed that mothers of children with cerebral palsy face challenges as they are caring for their children. Most mothers thought that their children were just obese not knowing that the child has cerebral palsy. This is attributed to lack of diagnostic facilities in hospitals. Thus when these children grow the mothers end up doing Activities of Daily Living for their children. This has led to the mothers being discriminated, divorced and unemployed because they lack support even from the people who are close to them.

Learners with Cerebral Palsy can exhibit some impairment in speech, feeding problems, sight, seizures, difficulty with bladder and bowel control, Learning disabilities, breathing difficulty due to postural difficulty and intellectual disabilities (United Cerebral Palsy, 2017). These impairments may pose a great challenge to leading a normal, dignified and independent life for a cerebral palsy. This is so because they may end up depending on others to do everything for them. This includes Activities of Daily Living (ADLs) as well as school work or other necessary activity. This problem can be a burden if not addressed early in one's life. In this case a Cerebral Palsy learner must have a history of early identification, early intervention, and on-going therapy that helps the learner to lead a dignified and independent life.

Studies around the world have proven that a cerebral palsy child can live a dignified and independent life through early identification, having the required therapy and engaging in activities of daily living. Because of the functional limitations, cerebral palsy calls for the need for therapy in speech, physiotherapy and occupational therapy. The most pronounced therapy is occupational therapy because the child is required to live an independent life of

course not living out the other two therapies. With occupational therapy, the therapist will assess a child to find out what the child is able or not able to do. According to the outcome of the assessment, the intervention will focus on improving a child's ability to do daily activities such as washing up in the morning, eating, opening doors, having conversations with peers, playing, managing tasks and preparing for a good night sleep by cleaning their teeth and putting on their pyjamas (Stern, 2016).

The researcher came across a teacher's handbook on Activities of Daily Living for children with physical disability meant for grades 1 to 9 (CDC, 1993). Unfortunately, most lessons were taught in abstract form. Additionally, some lessons are not applicable for a child with cerebral palsy, such as digging a pit latrine. The child with a cerebral palsy may have the knowledge of the activities to do but if the child is unable to carry out the tasks then it defeats the whole purpose of doing it. This calls for a therapy or skills needed to inculcate in the child in order to help him/her to engage in the basic activities. Children with cerebral palsy need a series of therapy in order for them to live a meaningful life.

1.2 Statement of the problem

The Disability Act (2012) Division 3 Article 32(a) aims at enabling 'Persons with Disabilities to attain and maintain maximum independence, full physical, mental, social and vocational abilities, full inclusion and participation of life.' In order for children with cerebral palsy to become fully independent, occupational therapy as a rehabilitation process is cardinal for them. For a child with Cerebral Palsy to live an independent life, he or she needs functional skills and fully engage in activities for daily living. A highly stimulating environment is a must to enable the child explore it and participate in daily activities independently or with minimal support (Munsaka and Matafwali, 2013). Research has shown that learners with Cerebral Palsy need to be trained to do ADLs with the help of therapies like occupational therapy and physiotherapy. It is not known whether all the pupils engage in activities for daily living as most often, children with CP depend on their peers in class work as well as self-care activities.

1.3 Purpose of the study

The aim of this study was to examine the extent to which engagement in activities of daily living promotes independence in the children with cerebral palsy.

1.4 Objectives

The study was guided by the following objectives:

1. To examine whether the learners with cerebral palsy perform daily living activities independently at home and at school.
2. To establish the challenges learners with cerebral palsy face when performing activities of daily living.
3. To determine the strategies used at home and at school in teaching Activities of Daily Living to learners with Cerebral Palsy.

1.5 Research questions

The study was guided by the following questions:

1. Do the learners with cerebral palsy perform activities of daily living independently at home and at school?
2. What challenges do children with cerebral palsy face when performing daily living activities?
3. What strategies are used at home and at school in teaching Activities of Daily Living to learners with Cerebral Palsy?

1.6 Significance of the study

It is hoped that this study will generate information on the participation of learners with Cerebral Palsy in Activities of Daily living. This information will be generated from parents, teachers, learners, school managers, house parents and physiotherapist. The information will be based on the engagement in ADLs at home and at school, the challenges the learners face as they are performing ADLs and lastly the strategies used to teach ADLs to learners with Cerebral Palsy so that the policy makers could address the challenges in question.

It is also hoped that this study will add to the existing body of knowledge on participation in Activities of Daily living for learners with Cerebral palsy. It would provide information on the extent to which a learner with Cerebral Palsy would be independent as he or she is taking part in ADLs. It will also stimulate the reactivating of teaching ADLs to learners with Cerebral Palsy and future research on Activities of Daily living and Cerebral Palsy.

1.7.1 Limitations of the study

The study should not be generalised to all areas in Zambia since it used a purposive sampling procedure.

1.7.2 Delimitations of the study

The study will confine itself to Dagama Special School for children with physical disability.

1.8 Theoretical framework

The study applied the people-environment-occupation model (PEO) founded by Law et al (1996). This theory was in response to an identified need of occupational therapy literature that describes the theory and clinical application of the interaction between the person, the environment and the occupation. The model is a framework that guides clinical reasoning in analysis and understanding of the interdependent interaction and therefore can form a foundation for application in practice. It adopts a transactional approach that emphasises interdependence between the environment and the person. Thus any occupational therapy assessment tool can be used as it does not give any guidelines on intervention. The components in this model are the person, the environment and the occupation (Law et al, 1996; Christiansen and Baum, 1991). The overlaps of the components differ in size at any time depending on these factors, person-environment, person-occupation and environment-occupation interactions (Law et. al, 1996).

For example, a child with Spastic diplegic Cerebral Palsy has difficulty with handwriting. The learner cannot be separated from the environment and the activity or occupation, in this case handwriting. The three entities interact with each other in order to attain independence. According to the theory, the learner is the person, the school tasks and activities represent the occupations and her home and school represent their environments. The environment has to be modified in order to make it easy for the learner to perform the activity, in this case, handwriting. The work load for the learner has to be reduced computer use has to be introduced both at home and school. An IEP can be drawn involving different parties to help the learner be successful.

Therefore, a child with cerebral palsy needs his or her environment modified in order to manage the day. The child cannot be separated from his or her environment in order to perform a certain task for instance getting ready for school, the child cannot do this in class but at an appropriate place with the necessary equipment if any. With the theory in mind, the

child cannot be separated from the environment in which he or she performs a particular task. For instance getting ready for school, the child cannot do without the bathroom so if it is bathing and use of toilet, the child has to use the necessary environment. When it is writing or other class activities the class room will be the environment as well as the playground if need arises. No wonder this theory is applicable because the child cannot be separated from the environment and occupation in order to achieve the needed independence. If the child finds it hard to perform the needed tasks, still the environments have to be taken into account and assist the child learn the tasks in the same environments. This is because the children and their needs differ, that is why an IEP is necessary to include as the intervention

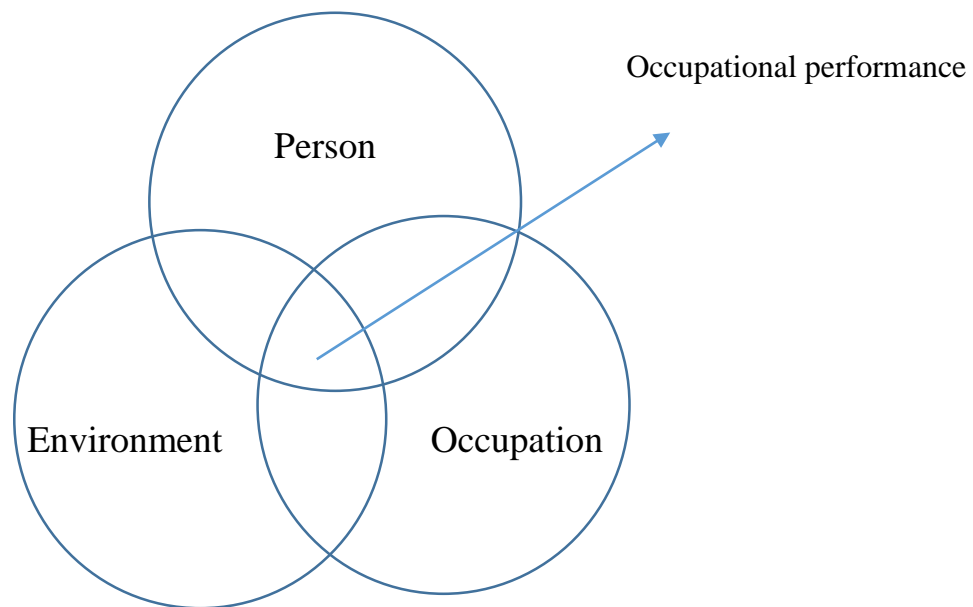


Figure 1: The Person-Environment-Occupation (PEO) Model (Law et al., 1996)

1.9 Definition of terms

1. Activities of Daily Living

These are activities or tasks done necessary for one to carry out throughout the day. These include dressing, eating and play. There are two in nature; basic and instrumental activities of daily living. Basic related activities are things one does such as self-care and instrumental ones include shopping, cleaning and helping others.

2. Cerebral palsy

A neurological disorder caused by lesions to parts of the brain resulting in poor low muscle tone. Cerebral Palsy affects the posture of the body, movement, eating, speech, thinking as well as writing.

3. Engagement/ Participation

In this study the word engagement means to take part, to be involved or to perform.

4. Environment

In this study the environment is the place where the child is mostly found. In this case a school going child has the home, school and the community as their environments.

5. Occupation

In this study, occupation refers to work or activities that a human being does for daily living. For example, eating, dressing, cleaning and shopping to mention but a few. This is because a person is a working human being or occupational being.

6. Occupational therapy

This is the use of assessment and treatment to develop, recover or maintain the daily living and work skills of people with physical, mental or cognitive disorder. The goal of Occupational therapy is to achieve **independence** of the individual in question.

7. Individualised Educational Programme (IEP)

This refers to an educational programme that is offered to a child in need of attention specifically addressing the individual need. This is done in class and can be applied at home in order to make the programme effective and have the child improve in a particular task; in this case activities of daily living to enable one achieve independence and self-worth.

1.10 Summary

This chapter introduced the study with the background of the study, statement of the problem and the purpose of the study. It also includes the study objectives, study questions, significance of the study, theoretical framework and definition of terms, limitations and delimitations of the study. In this chapter it has been noted that the desire of the Disability Act (2012) is to attain maximum independence and participation in life for the physically challenged. Hence the above step was taken without knowing the extent to which learners

with cerebral palsy would participate in life activities in order to attain independence. Hence there was need to carry out this study. The following chapter, chapter two, focuses on the literature review relevant to the study.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews literature relevant to the study. It looks at participation in Activities for Daily Living at home and at school. It also includes the challenges that the learners face as they are engaging in Activities of Daily Living. Lastly, it looks at the strategies used at home and at school of teaching Activities for Daily Living to learners with Cerebral Palsy.

2.1 Engagement in Activities of Daily Living by Cerebral Palsy Learners at School and at Home

Activities of Daily Living (ADL) originated in the 1950s by Sydney Katz and his team at Benjamin Rose Hospital in Cleveland, OH. Sydney Katz studied people who had hip fracture and found it hard to perform activities of daily living. This led to Katz developing a scale to measure patients' ability to live independently. This is because researches done on the patients showed that they performed tasks ranging from more complex to less complex activities for daily living (Wikipedia, 2016). Activities of Daily Living (ADL) are in two categories, Basic and Instrumental activities of daily living. The Basic ADL includes activities such as feeding, bathing, dressing, incontinence, transference and toileting. Instrumental ADLs include cooking, house cleaning, shopping, laundry, use of phone, transportation, and medication intake and money management. These activities are necessary for one to manage the day independently and with dignity. However, for a person living with Cerebral Palsy this can be a very difficult task to do. While Cerebral Palsy is a disorder that affects posture and movement, it also comes with associated impairments. Nsama, (2013) and Munsaka & Matafwali (2013) reveal that these impairments include, sensory (visual impairments and hearing impairments), Epilepsy, speech problems, feeding, incontinence and intellectual disabilities.

According to Noelker and Browdie (2013) Basic Activities of Daily Living consist of self-care tasks that include functional mobility (moving from one place to another while performing activities) such as walking, getting in and out of bed, in and out of chair, bathing, washing, dressing, self-feeding, personal hygiene and grooming, for instance, brushing teeth, hair style and combing. Toilet hygiene too is an essential activity that once a child learns the skill, gains self-worth, so the child has to get to the toilet without difficulty, cleaning oneself and getting back up. Instrumental Activities of Daily Living enable individuals live

independently in a community. These include housework, preparing meals, taking medications, managing money, shopping for cloths and grocery, use of telephone or other forms of communication.

Stern (2016) defines Activities of daily living (ADLs) as the things normally done such as eating, dressing, grooming, work, homemaking, play and leisure. A survey done on the United States population showed that there is a variation in ADLs and adaptive equipment and devices used to enhance and increase independence in performing the activities due to individual differences. A learner with cerebral palsy needs speech therapy, physiotherapy and occupational therapy in order to improve the quality of life. This study emphasises the occupational roles such as daily living activities, play and education that a child with cerebral palsy can engage in and live an independent life. Self-care includes such things as feeding, hygiene, toileting, bathing and dressing. These are known as basic or fundamental activities of daily living. But a child with cerebral palsy will find it a challenge to perform such activities.

For a learner to have a productive day he or she must also take care of oneself. This means that one must engage in ADL without difficulty. This entails that training at home and at school must take place. The learner can have the knowledge and understanding of the activities but if the 'engagement' is not there then the child will still not have an independent life. This is due to disability or muscle tone, stiff or low, that can hinder the person to do what he or she has knowledge of. Participation in activities of daily living by a learner with cerebral palsy is critical as the disability can make it hard for the learner to do things on his or her own but may need assistance hence the present study.

A study done in Kenya by Odhiambo, Omoke and Aloka (2016) on effectiveness of motor skill training on performance of dressing as an activity of daily living by Kenyan pupils with cerebral palsy, revealed that training learners with cerebral palsy to dress is essential for their independence. The study recommended that teachers of learners with physical disability be trained on motor skill training programmes suitable for learners with functional limitations to habilitate their performance in all the activities of daily living. In a related study, in Kenya by CDC (2006) with a population of 18 patients with physical disabilities revealed that patients with weak muscle need the help of physiotherapy and occupational therapy as well as a multi-disciplinary team for proper rehabilitation. This means that learners with cerebral palsy have to train from an early age, at home and at school. The parents, teachers and other stake

holders responsible for the learner's wellbeing have a duty to train until the learner is ready to be independent.

Play is another avenue that is of much importance to children. Menon (2016) revealed that, 'play is very important because it affects cognitive, physical, social and emotional development of a child. Play also improves brain and language development as Vygotsky put it. Play also has a health benefit as children do not become obese, it improves the immune system, increases life expectancy.' Menon (2016) also mentioned that 'studies reviewed that one hour of physical activity gives a person two hours life expectancy. Also in the United States it was found that adolescents who were involved in play were less likely to abuse drugs.'

Play is an essential activity that children must engage in, in order to become independent both in their childhood and in adulthood (Munsaka and Matafwali, 2013). Play and recreation is very vital as is emphasised in the United Nations Convention on the Rights of a Child (UNCRC, 2005). She concluded that parents have to encourage their children to play. Munsaka and Matafwali (2013) also concluded that 'parents/guardians, teachers, caregivers should ensure that they do everything possible to provide an environment where children can perform their work, namely play.' Just as Menon (2016) alluded to, Munsaka and Matafwali (2013) added that denying play to children is a serious violation of one of the most important rights of children. If a child is able to engage in play without difficulty, then the child is said to be independent.

Measurement of ADLs can be a challenge when it comes to disability because of differences in severity, theoretical perspective and cultural differences. Harley & Palmer (2011) concluded that the use of Katz Activities of Daily Living index of independence scale was the best and recommended valid measures of varying functioning level consistent with International Classification of Functioning Disability and Health. They further said that using the social model as the reliable perspective, disability is no longer viewed as purely medical phenomenon but the person is given the chance to use the environment as long as the environment is modified to suit the impairment. Katz used six core Activities of Daily Living that are widely used and tested. No wonder it is one of the two valid measures of function consistent with the International Classification of Functioning.

Studies done by Odhiambo, Omoke & Aloka (2016); Stern (2016); emphasise on training the learners to engage in activity, modifying the environment to suit the learner. This study was taken because in Zambia more has to be done to achieve the independence of learners with Cerebral Palsy by training them early starting from home and when they are at school.

2.2 Challenges Learners with Cerebral Palsy Face when Performing ADLs

Cerebral palsy (CP) learners can have a rewarding life if their condition was discovered early in life and intervention applied as early as possible. This also does not mean that everyone with CP will have all the impairments mentioned. Each Cerebral palsy learner is unique and the severity differs from one person to another. CP can be severe, moderate and mild.

Absence of diagnostic equipment has made it difficult for some medical personnel to detect cerebral palsy at early stages no wonder some lose out on early intervention and living a dignified life afterwards. Katz et al. (1963) in Noelker and Browdie (2013) claimed that there was an ordered regression in skills as part of the natural process of aging. This means that lack of activity can affect a child's performance in Activities for Daily Life. This can be a work up call to teachers, parents and caregivers of children with cerebral palsy that these skills have to be taught as early as possible so as to help the child's motor skills trained and be flexible to perform activities of daily living and attain the dignity and independence they need.

Physiotherapy is needed for cerebral palsy learners to gain good posture and movement as well as stretch muscles (WRD, 2016; Munsaka & Matafwali, 2013). Without rehabilitation a person with cerebral Palsy ends up having very stiff muscles and has difficulty walking, speaking and using hands well.

A recent study done by Lopes (2017) shows that mobility is a key factor in self-care independence. He noted that mobility influences the ability of Cerebral Palsy children to carry out self-care activities independently. Here mobility refers to taking public transportation and getting in and out of chair/wheelchair, car, bed or bath tab; self-care and communication. He concluded that offering physiotherapy to Cerebral Palsy children will improve mobility of children in self-care activity leading to significant improvement in quality of life.

Singogo, Mweshi & Rhoda (2015) also acknowledged that mothers end up doing ADLs for their children as their children are very dependent on them. This could mean that the parents do not let their children do any chores at home and they are not taken to any therapy to help them stretch their muscles. This could also mean that the parents do not train their children to bath on their own but are busy bathing their children hence making them lazy so to speak. In another study done by Keilhofner (1992), it was concluded that the lack of occupation was a 'breakdown in habits that lead to physiological deterioration with the concomitant loss of ability to perform competently in daily life.' It was proven that once a child does not engage in activities necessary for survival, the physiological make up deteriorates resulting in inactivity and incompetence.

2.2.1 Early Identification

Early identification of a child's disability and need of treatment is very important in a child's life. Early identification is critical in one's life because it brings about positive outcomes as it serves as a prerequisite for success as Munsaka and Matafwali (2013) explained.

A child with CP may develop social withdrawal because of the degree of dependence he or she puts on the family members and caregivers. Once a child has been diagnosed with CP at an early age, he or she will go through an assessment by a multidisciplinary group of professionals for instance, speech therapist, physiotherapist, occupational therapist, teachers, parents and medical doctors. Since Cerebral Palsy has associated impairments, the approach will look at various aspects such as speech, motor function, balance and so on. This test establishes what is really wrong with the learner and necessary measures can be taken then. For instance in class, the teacher can improvise a bigger of fat pencil for the child to be able to write without or less difficulty. When it comes to eating, a spoon can be different from the others such as having a fat handle so as to enable the child to hold the spoon properly.

Munsaka & Matafwali (2013) noted that early identification is economic saving as opposed to rehabilitation programmes. They further noted that early identification maximises independent living. Once one knows how to live and handle CP, there will be no need for him or her to depend on others. Early Identification enables one to receive the needed therapy in order to engage in ADL. This reduces pressure on the parents and caregivers.

Unfortunately, lack of awareness among parents and practitioners is evident in Zambia (Arens & Molteno, 2008). This has given rise to CP patients not receiving the appropriate medical attention, therapy and education deserving of them. Most of the time, Cerebral Palsy is

diagnosed later in one's life. This affects the patient's engagement in ADL in good time to help one be independent but end up becoming a burden on the parents and caregivers by making them doing things for them all the time.

Rye (1989) in his article on children with severe Cerebral Palsy, said that parents or care givers must balance between overprotection and excessive demand of independence. He said that caregivers must accept the child unconditionally while striving to make him or her independent or self-reliant. He further said that studies of effects of early intervention with Cerebral Palsy children in form of home-based or centre-based programs and effects of early education in segregated schools or integrated classroom indicate that early intervention and early education programs enhance handicapped children's motor and mental development and in important ways support and encourage parents as care givers and teachers to their children providing valuable experiences in interaction with their peers and teachers as well as constructive use of toys and tools. He concluded that 'various studies show that early intervention is worthwhile although this is adequately done in developed countries, the situation in third world countries is different.'

A study done in the United States by Van Zelst et al. (2006) brings out the fact that younger children (3-8 yrs) with hemiplegic cerebral palsy performed activities of daily living familiar to them better than the older ones (9-12 yrs) under the supervision of a trained Occupational therapist. This result called for further research as the motor skills seemed to worsen with age. This can be attested by a study done by Hayase et al. (2004) on age- related changes in activities of daily living ability, it was discovered that ADL ability increased sharply from age 3-6 years and improved beyond 6 until 15 years. From 15 the ADL performance stayed the same up to 50 years and from then gradually declined to the end of age range studied. Interestingly there happens to be a challenge with measurement of ADL in varying countries because of differences in culture and religion. There is need for early identification and intervention in Zambia to avoid less or no participation in Activities for Daily living, hence the study.

2.3 Suitability of Home and School Environments for Teaching Activities of Daily Living

In this study, the environment includes the school, home and the community around the learners. For a child with cerebral palsy to live a rewarding life, the environment that one finds himself or herself must be one that is stimulating or rather user friendly. Munsaka and

Matafwali (2013) clearly put it that the environment has to be highly stimulating both at home and school in order to maximise the child's potential to learn. A school going child needs to perform activities suitable for the appropriate age. For example, play is at the maximum including socialising with friends. If none of the needed activities are taking place the child's emotion and esteem is affected and ends up withdrawing from peers. A number of activities involve the use of hands, either picking a ball or playing a puzzle game, the child has to be conversant with such activities so as to train the fine motor skills through fun activities. There is need therefore to come up with an individualised education programme (IEP) (Munsaka and Matafwali, 2013; Menon, 2016) to ensure that the child receives the needed attention both at home and school.

A study done by Fauconnier (2009) on participation in life situations of 8-12 year old children with cerebral palsy across Europe has shown that classification is consistent with the social model of disability. The impairment is not the main focus but the impact the impairment has on personal and social life of the individual. Since classification defines 'participation' as involvement in life situations, it is understood to be a consequence of a dynamic interaction between a person and environmental factors rather than a direct consequence of illness. He further indicated that the social model regards disability as failure of the environment to be adjusted sufficiently to meet the needs of the individual. Thus he concluded by saying that the social model predicts that participation vary between countries.

Modification to the environment used by children with cerebral palsy is necessary for achieving a rewarding life. Baum and Law (1997) insist that persons with disability have to receive the needed help in the environments that they are found in to assist them obtain the needed skills and make the modifications to remove barriers that limit their occupational performance. Baum (1993) in Baum and Law (1997) emphasised that individuals engaging in activity not only does improve a person's functional status but also enhances human function. Wilcock (1994) added that people need to make use of their capacities through engagement in individually motivating and on-going occupation, thus enhancing their health.

Understandably children with cerebral palsy have individual differences. This simply means that whilst one may need help in self-care the other will need help in handwriting yet another has needs in play or social interaction. This calls for Individualised Education Program (IEP) on the part of the teacher, parent or guardian. What should be put in mind also is that the

environment in which the child is found is the most important place and any activity that can be planned for the child must take place in the respective environments.

Firstly, when it is in the morning and the child is preparing for school, the child must learn how to go to the bathroom and wash up, use the toilet, brush teeth, dress and eat. This naturally occurs in the home so parents can take the lead in helping the child prepare for class.

Secondly, when a child is at recess or gone for break, he or she may find it difficult to play or socialise. The easy way to get round this problem is to bring in toys or games. This will force the child to engage in play as well as converse with the friends around him. The environment is the school.

Thirdly, the child may find it difficult to write using a pencil. It could be that the pencil is too thin to be held with comfort. This calls for adjustments to be done to the pencil. It will have to be thicker in order to be held properly and to achieve writing. The same can be done to forks and spoons used by children with cerebral palsy as Jones (1946) pointed out in her paper, 'the cerebral palsy child.' There is need to modify and make adjustments to homes and schools in Zambia to accommodate learners with Cerebral Palsy, hence the study.

2.3.1 Strategies to teach Activities of Daily Living

Learners with cerebral palsy need a lot of time and attention in order to achieve the needed goals. For the learner to engage in Basic as well as Instrumental Activities of Daily Living, calls on much effort on the part of the parents and teachers. In this case, including the house parents who take care of the learners whilst in boarding school. There are a number of ways or strategies a learner can be helped to be independent.

Caution has to be taken however that the level of severity is known by the teacher, parent and house parent to avoid frustration. This is because some learners' disability does not improve even with much training. Rye and Skjorten (1989) explains that those learners with visuo-motor co-ordination problems have directional problems so their writing and drawing may not come out as planned. He further noted that 'it takes a lot of extra energy just to perform relatively simple tasks and the results may frequently be very disappointing.'

2.4 Summary

This chapter presented literature that was relevant to the study. It has been noted that although a learner with cerebral palsy can have the knowledge of Activities of Daily Living, little can be done if the learner's condition does not allow him or her to perform the needed activity. This simply means that therapy is missing. Once the learner starts to receive help through therapies such as occupational therapy, physiotherapy and speech therapy, engagement in ADLs will be improved. This calls for early intervention if good results are to be achieved. It takes a lot of patience to actually help a child with cerebral palsy to live an independent life. The suitability of the environment for teaching learners with Cerebral palsy is essential as they can be modified to suit the learner. The following chapter presents the methodology that was employed in the current study.

CHAPTER THREE

METHODOLOGY

This chapter focuses on the methods used to carry out the present study. It describes the research design, population of the study, the sample size, sampling procedure for data collection, procedure for data collection, data analysis and ethical considerations.

3.1 Research Design

The researcher used a case study design that is qualitative in nature. According to Baxter and Jack (2008) ‘qualitative case study is an approach that facilitates exploration of a phenomenon within its context using a variety of data sources.’ Ngoma (2006) notes that, ‘a research design is a set of logical steps taken by the researcher to answer the research questions. In this case, the researcher a case study design structured in a way that the objectives are met and the research instruments bring out the required answers.

The qualitative design allowed the researcher to freely interact with the participants and led to understanding of the extent the learners go in performing ADLs in their homes and school. The nature of the disability made the researcher arrive at the case study design because of the variety of severity the disability can have. Not all learners with Cerebral Palsy behave the same. The difficulty that on may have may differ with the other no wonder the case study design had to be used in order to get the experience of individual learners.

3.2 Population

The target population includes pupils, teachers, parents, caregivers or house parents at Dagama Special School and the physiotherapist that visits the school but works at a nearby hospital.

3.3 Sample size

Data was collected from 20 key informants comprising of the following: Two (2) school managers; the Head teacher has teaching experience of 27 years of which 20 was spent in Special Education. The deputy head teacher has a teaching experience of 37 years of which 24 years were spent in Special Education. The teachers were (4) teachers in total. The grade 3 teacher has a Primary Certificate and a Counselling and guidance qualification. She is currently studying Special Education. She has teaching experience of 24 years of which she

spent 10 years in Special Education. The grade 12 teacher of Physics has a secondary teacher's diploma and has no Special Education qualification. He has taught for nine (9) years and has spent eight (8) years teaching in Special Education. The grade four (4) teacher has a primary certificate and a diploma in Special Education. She has ten (10) years teaching experience of which eight (8) years she spent in Special education. The grade 9 teacher of English has a Primary Certificate Secondary teacher's Diploma and is currently studying for her degree in Languages. She has a teaching experience of 21 years in Special Education. There were four (4) house parents who work with children at Dagama Special School. They work in shifts. One house parent attends to all children in the dormitory (there are two dormitories, one for boys and the other one for girls). There were four (4) Parents of children with cerebral palsy: Parent 1 was 32 years old, single and unemployed. Parent 2 was 34 years old house wife and has a diploma qualification. Parent 3 was a widow and a marketer. Parent 4 was a married woman and a security guard.

There were four (4) Learners. Learner 1 was a grade 3 girl aged 12 years old. Learner 1 was diagnosed with cerebral palsy at birth. She is hemiplegic meaning one hand and one leg are affected, in her case; both her left hand and left leg are weak.

Learner 2 was a grade 4 boy aged 12 years old and his left hand is affected. He lives with both parents. His mother had a prolonged labour, and he did not cry at birth and there was a delay in the tying of the umbilical cord. The child was diagnosed with cerebral palsy at the University Teaching Hospital.

Learner 3 was a grade 12 girl aged 18 years old. Her mother is a widow. She had a complicated pregnancy of twins. The twin died in the womb so the surviving one had to be delivered at six months. She was diagnosed with cerebral palsy at 24 months.

Learner 4 was a grade 9 girl aged 20 years old. She was diagnosed with cerebral palsy at 9 months. Her muscles are stiff and this has affected her speech, walk and grip. There was one (1) physiotherapist who comes to Dagama Special School to attend to the learners.

The researcher had the sample size of twenty participants because they were the ones who would give the needed information. For instance, the school had two (2) managers, the head teacher and the deputy head teacher at the time of the study. The researcher needed accurate information about the learners and parents, so the parents in the study were accessible and agreed to be part of the study.

3.4 Sampling procedure

The study used purposive sampling method in order to select the respondents because of its internal validity. Kasonde-Ngandu (2013) defines purposive sampling as the gathering of people, places and things. The method targets a group of people believed to be reliable for the study and in-depth analysis related to the focal issue being studied. Palys (2008:697) describes purposive sampling as ‘a series of strategic choices about with whom, where and how one does one’s research.’ Purposive sampling was used in selecting the school because it has children with varying severities and the learners come from different backgrounds. The researcher selected the respondents who would give the required information. These were: the learners, the parents, the teachers, the school manager school house parents and the physiotherapist

3.5 Research instruments

The researcher used Katz index independence scale (Wallace & Shelkey, 2007) to measure the Basic ADLs. Katz Index Independence Scale measures six (6) functions which are bathing, dressing, toileting, transferring, continence and feeding. The learners are scored yes or no for independence in each of the six functions. If the learner scores 6, it means he or she is independent, a score of 4 indicates moderate impairment and a score of 2 indicates severe impairment. The tool is valid and reliable as it has been used for over 35 years.

The researcher also used Lawton & Brody Instrumental ADL scale (Graf, 2007) to measure more advanced activities of daily living. The instrument measured eight areas of function, these include; ability to use a telephone, shopping, food preparation, housekeeping, laundry, mode of transportation, responsibility for own medication and ability to handle finances. The scores range from 0 (low function or dependent) to 8 (high function or independent).

Interview guides for the head teacher, deputy head teacher, learners, teachers, physiotherapist and parents. Focus group discussion guide was used for house parents and observations checklists were for lessons.

Interviews were chosen to make it easy for the researcher to find the needed information. The questions were open ended meaning that the respondent would express themselves freely.

Focus group discussion guide and observation checklist were chosen as well for the purpose of triangulation.

3.6 Procedure for data collection

Before collecting data I, as the researcher sought permission from the head teacher of Dagama Special School to conduct the study. The head then introduced me to the parents of the learners in this study. Their phone numbers were also availed to me as the school is a boarding school, so most parents do not stay near the school but out of town. The data was collected between February 2017 and March 2017. Interview guides were prepared for the learners to answer freely. The learners were assured that the data collected would just be for academic purposes and not affecting their school work in any way. The questions were open ended allowing the learners to express their feelings on the problem being investigated. Instead of using the learners' names, codes were as follows: Learner1, Learner2, Learner3 and Learner4.

The parents also were interviewed using interview guides. The interview guides were prepared in such a way that the parent was able to explain the history of the child starting with the time of pregnancy through birth and time of diagnosis of the condition.

The school managers and the physiotherapist were given interviews that were open ended. They expressed themselves well and this allowed them to bring out the required information. The house parents were given focus group discussion guides to bring out the needed data.

The information gathered from all the participants helped with the measurement of independence by filling in the Katz index of independence scale and the Lawton & Brody Instrumental Activities of Daily Living.

3.7 Data Analysis

Data was analysed thematically since the study was qualitative in nature. Also, Katz index of independence scale and Lawton & Brody Instrumental Activities of Daily Living (IADL) scale were used to analyze the levels of independence of the learners. A careful analysis of information from interviews, focus group discussions and secondary data was done to identify information that answered the research questions. The data was classify according to themes. This facilitated the in-depth analysis of the participation in Activities for Daily Living (ADL) by learners with Cerebral Palsy at Dagama Special School. The analysis also brought out the reasons why some children depended on their friends in class and self-care activities.

3.8 Ethical consideration

Ethical clearance was obtained from the University of Zambia Ethics Committee. Confidentiality was assured to all respondents. They were also assured that names would be anonymous as the work was for academic purposes. The researcher sought permission from the school manager. Being a boarding school the parents are not found in the same town as the school. Opportunities for meeting the parents were on open days, closing days and visiting times. But in this case the school manager made it possible for the researcher to have the contact numbers for parents of the learners in the study. This made it possible for the researcher to have contact with the parents even though they are very far from the school. The researcher obtained consent from the actual participant before collecting data.

3.9 Summary

The above chapter presented the methodology of the study. A case study design was used in order to obtain the needed data from the respondents. The analysis was done thematically and using Katz index of independence and Lawton and Brody IADL scale to measure levels of independence of the learners. The following chapter four presents the findings of the study.

CHAPTER FOUR

PRESENTATION OF FINDINGS

This chapter presents the findings of the study. The findings are presented according to the following research questions: 1. How do the learners with cerebral palsy perform daily living activities independently at school and at home? 2. What challenges do children with cerebral palsy face when performing activities of daily living? 3. What strategies are used at home and at school in teaching Activities of Daily Living to learners with Cerebral Palsy?

There are 33 learners with cerebral palsy of different ages and severity at the school. The researcher's main focus was on four learners with cerebral palsy in grades 3, 4, 9 and 12. The teachers, school managers, parents, house parents and the physiotherapist help establish their performances, challenges and suitability of the environment the learners are found in of which they are also part.

4.1 Engagement in Activities of Daily Living at by Cerebral Palsy Learners at Home and School

With regard to learners engaging in daily activities independently, the researcher got views from school managers, teachers, parents, house parents and learners themselves. As a summary of their independence, the researcher used the Katz Index of Independence in Basic Activities of Daily Living instrument as a measurement of the selected learners' independence. Instrumental Activities of Daily Living were measured using the Lawton and Brody scale.

Engagement in Activities of Daily Living depended on the severity of disability. Learners 1, 2 and 4 were able to do the Basic Activities of Daily Living such as dressing, eating, using the toilet but with difficulty. Learner 3 needed help in a number of activities such as eating, bathing, toileting and transference. When it came to Instrumental Activities of Daily Living, learners 1, 2 and 4 were able to perform a number of activities though not all. Again learner 3 proved to be dependent.

Severity of the disability of a learner is what hinders total engagement in activities of daily living. For instance, learner 1 cannot stand for a long time because of weak legs. Learner 2 does not have a firm grip on things because of this, the mother once feared to let him handle the baby. But when she gave him he did it quite well. Learner 3 cannot do much to be

independent but requires help from others. She cannot write so class work is done on a computer or classmates help when necessary. She tries to make her bed but eating, bathing and dressing, help is required. Learner 4 cannot do things at a quick pace. Her writing, walking and speech are affected. She is able to wash plates, sweep but not cook.

4.1.1 Learner 1

Learner 1 is a grade 3 girl aged 12 years old. Her mother is 32 years old, single and unemployed. Learner 1 was diagnosed with cerebral palsy at birth. She is hemiplegic meaning one hand and one leg are affected, in her case, her left hand and left leg are weak. Her father left her mother just when she was born so the mother raised her single-handedly. When the mother was asked if the girl can do ADLs at home, she confirmed that she can sweep, bath, dress, able to use the toilet and eat on her own but with difficulty since her hands are jerky.

Learner 1 can write in class though slow and the handwriting not so legible. This could be attributed to her poor pencil grip as she grabs the pencil with all her fingers. Her class teacher said that, *the learner is asked to develop a skill to have positive interpersonal relationship; I also let her participate in activities such as snakes and ladders and ball games or traditional game such as 'chiyenga.'* However, Learner 1 has jerky hands and weak legs so it is difficult for her to participate in some activities that require her to stand for a long time or running and throwing ball.

4.1.2 Learner 2

Learner 2 is a grade 4 boy aged 12 years old and his left hand is affected. He lives with both parents but the mother is a house wife but has a college qualification. Parent of learner 2 is aged 34 years, married and a house wife with a diploma qualification. She had a prolonged labour, the baby did not cry at birth and there was a delay in the tying of the umbilical cord. The child was diagnosed with cerebral palsy at the University Teaching Hospital.

When his mother was asked if he engages in ADLs she said: *my son washes clothes, baths and sweeps the house. I fear letting him to cook because I think he can burn himself and also hurt his siblings who are younger than him. I do help him at times but I always emphasise teaching him to do chores. His grip is not firm on the left side. I remember I once denied him to hold the baby for fear of letting him fall but I noticed this hurt him. So one day I gave him to hold the baby and he did it so well I could not believe it.*

His teacher said that with class work, he is able to do it without difficulty though his left hand is weak. His teacher confirmed that whilst at school, *he is able to write, sweep, eat, able to throw ball and dress on his own*. The learner also confirmed that he is able to bath, dress and eat before going to class.

4.1.3 Learner 3

Learner 3 is a grade 12 girl aged 18 years and has Athetoid cerebral palsy. Her mother is aged 47 years and is a Marketeer. She was born at 6 months 2 weeks. Reason for this was that the mother started experiencing pain in her abdomen. When she went for a check-up, it was established that one twin in the womb was dead and the other twin was affected by the fluid that changed colour in the womb. The baby was delivered but unfortunately there was no incubator for the infant. So the child was taken at home and kept in a room warmed by a brazier and the baby was covered in cotton wool. The skin would change from yellow to grey to pink. The child would be taken outside to sun bask. At 8 months of age, the parents noticed that the child had a problem and were referred to Livingstone hospital and physiotherapy prescribed to help with the stiff muscles the child had. At 24 months old she was diagnosed with cerebral palsy but it was only last year when it was established that she had Athetoid cerebral palsy and all limbs are affected. Her father died when she was young and so the mother is raising her single-handedly.

She is wheel chair bound; she is unable to use her hands well because of involuntary movements they make. She cannot write so she uses a computer for class work and sometimes gets help from her classmates. When asked if she can do most ADLs at home and school, she said that: *I can make my bed, as for bathing, it is not a good job because I cannot reach my back, so I get some help from house parents. In class I use my computer to type my notes.*

Her physics teacher confirmed that: *writing is a problem so she uses her laptop for notes and exercises. She is grouped with classmates during laboratory experiments; sometimes the experiments are made theoretical for her sake.*

At home, the mother said that she has to make sure she feeds her before she goes to the market to sell. She leaves her in the house alone and when she works for more than three hours, she checks on her daughter and prepares some food for her to eat.

4.1.4 Learner 4

Learner 4 is a grade 9 girl aged 20 years and all her limbs are affected though she is able to walk, she struggles as the legs are not completely stretched and her fingers' fine motor skills are affected. Parent of learner 4 is aged 46 and a Security guard, had her child diagnosed at the age of 9 months. A number of tests were done to rule out other disabilities including intellectual challenges. She said that her child took long to sit, she could not walk as well. So she was carried until the age of 9 years. This has led to her doing things slowly and her pencil grip is not fine and her writing too is slow. She lives with both parents.

When she was asked about engaging in activities for daily living, here is what she had to say: *I wash plates, sweep sometimes but I do not cook. I can write on my own slowly. Though my writing is slow I finish my class work and notes. I find it hard to run when at the field. Physiotherapy has helped me to walk but if there can be a therapy that can help me manage to fetch water, run and jump, I can be happy.*

One of her subject teachers informed the researcher that social behaviour is fostered in the learners in order to enhance them to be independent. She said: *I teach them values of society. Group work, presentations and class discussion. This has helped learner 4 to open up and participate in class work. I make sure that she is integrated with others in class.*

The researcher wanted to know if the child could now perform any activities on her own. The parent stated as follows: *My daughter can wash and sweep but the water has to be drawn for her. Sometimes I wash with her. When it comes to self-care, which is bathing, dressing and eating, she can do it herself though it takes her a long time to do them.*

4.1.5 Performance of Basic and Instrumental Activities of Daily Living according to Katz and Lawton & Brody Scales of independence

Learner 1

The Basic ADLs that learner 1 is able to perform are bathing, dressing, using the toilet, holding her bladder and feeding herself but with difficulty.

When it comes to performing Instrumental ADLs, she said, *I am able to use the phone and my grip is not stable, she takes her time. She does not go to shops alone to buy things like bread. She also said that, I do not prepare meals in the home but can sweep and mop with difficulty. I can wash some of my clothes but with difficulty as trained by my mother.*

When it comes to transportation, she takes a bus or taxi accompanied by her mother or a family member. She is able to take her medication when instructed and she is able to handle money properly.

Learner 2

With what the mother and teacher said the researcher noted that learner 2 is able to perform basic ADLs such as, he bathes with some difficulty because one hand is weak and cannot reach the back for instance. He can dress, use the toilet, hold his bladder (continence) and eat on his own.

Additionally, when it comes to instrumental ADLs the boy is able to use the phone with one hand, he does not go to the shops alone unless accompanied, and the mother does not allow him to go alone. At home he can sweep the home; this is similar with what the researcher observed once. The boy can sweep the classroom when school is over with some difficulty of course. The mother also said, *I have not yet allowed him to cook for fear of burning himself and the siblings. He can sweep and make his bed but when it comes to washing his clothes, his mother helps him to do so.*

When it comes to use of transport, he uses the mother's car and a taxi accompanied by someone. He is able to take medications according to dosage and recommended times. When he is given money by his mother for use at school, he handles it very well. The mother noted that he saves and uses the money responsibly especially that he is in a boarding school.

Learner 3

Learner 3 is able to do some Basic ADLs such as make the bed and dress with difficulty. She cannot eat and bath alone but with some help. She uses a chamber pot for toileting and her continence is good. Just like the mother noted, *she is able to travel from Livingstone to Lusaka without needing a toilet.*

When it comes to Instrumental ADLs she is able to use the phone with difficulty, she does not go to the shops, and she does not prepare meals, but can make her bed and sweep the floor using a stick broom since she is wheelchair bound. She does wash her clothes though at times her mother helps her because of the involuntary movements of her hands which make washing a struggle. But when it comes to handle money, the mother says she does it very well. Her budget during the term is so good that sometimes the money does not finish.

Learner 4

The Basic ADLs that learner 4 can perform are bathing, dressing (she takes time), use of toilet, she has good continence and can eat on her own. The mother said that, *my daughter takes her time to do most of the chores around the house*. This also applies to school work as the teacher put it.

With Instrumental ADLs learner 4 the mother said that *she is able to use the phone, she does not go to the shops and she does not cook. She can sweep the home and surroundings with difficulty. She cleans the plates and washes her clothes with difficulty though her I help her especially drawing water from a well for her to use. She does not use any transport, unless when I am travelling with her. This is due to her weak legs that cannot walk long distances or stand for longer periods. She is able to handle money properly.*

4.1.5 Measurement of independence of the learners

As a way of analysing the independence of the learners, the researcher used the Katz index of independence score instrument as shown below:

Table 1: Basic Activities of daily living

	Learner 1	Learner 2	Learner 3	Learner 4
1. Bathing	1	1	0	1
2. Dressing	1	1	1	1
3. Toileting	1	1	0	1
4. Transferring	1	1	0	1
5. Continence	1	1	1	1
6. Feeding	1	1	0	1
Scores:	6	6	2	6

Key: Independence or high function: 5-6

Moderate function:3-4

Severe impairment and dependence: 0-2

According to Katz index of independence in Activities of daily living, the high score 6 represents independence and the low score 2 represents severe impairment and dependence. In this study learner 3 is dependent while learners 1, 2 and 4 are independent. (Source: Field work data, 2017)

Adopted from Wallace (2007)

Table 2: Instrumental Activities of daily living.

	Learner 1	Learner 2	Learner 3	Learner 4
1. Able to use phone	1	1	1	1
2. Shopping	0	0	0	0
3. Food preparation	0	0	0	0
4. House keeping	1	1	1	1
5. Laundry	1	1	1	1
6. Mode of transport	1	1	0	0
7. Responsibility for own medication	1	1	0	1
8. Ability to handle money	1	1	1	1
Scores	6	6	4	5

Key: High functioning or independent: 6-8

Moderate functioning: 4-5

Low function or dependence: 0-3

According to Lawton and Brody IADL scale as shown in Table 2 above the scores indicate that learner 3 is dependent (needs help) and the others are independent. For a female to be fully independent the highest score must be 8 but for the male folk, the highest score must be 5. (Source: Field work data, 2017)

Adopted from Graf (2007)

4.2 Challenges learners with cerebral palsy face when performing ADLs

There are a number of challenges that learners face when performing Activities of Daily Living as shown below:

4.2.1 Learner 1

Learner 1 holds the pencil with difficulty and handwriting is not clear. She said, *when it is time to play at the field, I cannot manage to run and throw ball like the others.* The mother noted that, *my daughter cannot walk for longer distances due to her weak muscles.*

4.2.2 Learner 2

At home the boy cannot cook, needs help when washing and cannot go to the shops alone. The mother said that, *I help him and at the same time I teach him some chore like washing*

and sweeping. I have not tried cooking because I am scared he can burn his siblings especially that the grip is not firm and cannot pick smaller objects.

4.2.3 Learner 3

Learner 3 finds it difficult to perform ADLs because of her involuntary movements. She said: *I need help pushing my wheelchair, I need someone to feed me. I cannot eat Nshima on my own. I can only drink using a juice bottle. I can wash with difficulty, I make my bed and clean plates.* One house parent said that *learner 3's abilities are limited especially that she is wheelchair bound. Thus she cannot bath, dress, use the toilet or feed herself.* Unfortunately in class the computer gives her problems and this affects her work. She further said: *In class I use a laptop for my notes. Since I cannot write, some teachers don't understand my difficulties and time is not given to me to finish.*

4.2.4 Learner 4

Learner 4 finds it difficult to cook at home, draw water from a well, putting clothes on the line after washing and walking long distances. The mother also noted that sometimes she washes with her and draws water for her as she cannot manage to pull the bucket from the well.

In class, she said, *I try to draw diagrams, I write the notes and do class exercises but my speech is not very clear, so I don't talk much.*

4.2.5 Availability of therapy

The school only has one physiotherapist who attends to a total of 140 learners each week. This in itself indicates that the learners do not receive regular physiotherapy to help them be flexible and perform Activities of Daily Living as required. There are some who have speech disorders but speech therapy is absent as well as occupational therapy that can help with fine motor skills development.

When the physiotherapist was asked to explain the kind of help he offers to learners with cerebral palsy he said, *if a learner is diplegic meaning legs more affected than hands, aids like callipers or splints are recommended, those with severe quadriplegia and on a wheelchair, the learner is taught how to transfer to the bed, toilet and back.*

The physiotherapist added that, *since there is no cure for cerebral palsy, the only help we have for the learners is physiotherapy for them to learn Activities of Daily Living, ultimately*

to make them independent. For the period I have worked with learners at this school, I have seen learners who could not sit or do things on their own, but with the help of physiotherapy, they could sit and kneel.

Those with speech problems need speech therapy and those with problems with fine motor skills fail to do fine movements, pick up something and eating is messy and time consuming, these need occupational therapy but unfortunately these therapies are not available. Thus physiotherapy is the help they receive at the moment and some come twice a week and homework is given for them to practice.

When he was asked if the room was conducive to work in and if the therapy the children receive is sufficient, he said that the room is small and he is the only one who attends to 140 learners.

4.3 Suitability of Home and School Environments for Teaching Activities for Daily

Living

The deputy head teacher had this to say: *the school is suitable and friendly as it has well leveled grounds. She continued by saying, the classrooms are spacious and conducive. The learners sit on the carpet when it is time for reading during Literacy. Classes and bathrooms are spacious enough to accommodate them and perform their daily living activities.*

4.3.1 Learner 1

She is able to move freely in the classrooms, dorms, dining room and bathrooms since they are spacious. However, the home environment as the mother put it, *is not spacious enough, the distances to the nearest places are long so the child cannot walk long distances and buses and taxis are what we use.*

4.3.2 Learner 2

The school environment is suitable for him to perform activities for daily living. The class teacher observed that *he can sweep, play with friends and throw ball and eat without difficulty. One house parent noted that the boy is able to bath using the modified showers and dress himself though may take his time. The mother noted that the boy is able to play outside with his friends, he plays football just outside the house, I trained him to bath alone, though he takes his time because he uses just one hand, he can sweep and dress on his own but I haven't trained him to cook yet because of his left hand that is weak. I remember once I*

stopped him to hold the baby but I saw that he was so affected and so I made him hold the baby and he did so with care and the baby did not fall.

4.3.3 Learner 3

When asked if she can do some Basic and Instrumental ADLs in her environments, she said, *I try to wash and make my bed though with difficulty.* Most of the times I have my friends help me with bathing because my hands cannot reach my back and they dress and feed me. This is because the dormitory is spacious enough. The bathrooms too are modified but because of her limitation, she mostly uses chambers with help.

The home environment is not suitable for her as the house is small, it does not have enough space to let the wheel chair move freely.

4.3.4 Learner 4

Both the home and school environment are suitable for learner 4 to perform ADLs. The school is built in such a way that all places are accessible. The deputy head teacher noted that the school is spacious and conducive for learning. She continued by saying that in primary classes there are carpets to sit on, computers and aids for their mobility. She observed that *the school allows the learners to move with ease. The environment is disability friendly. It has well levelled grounds, the classes and dormitories are spacious enough to accommodate them and perform their daily activities without any difficulties.*

The mother to learner 4 said that her home is conducive for the daughter to perform activities for daily living.

4.4 Lesson observations

This was done in order to ascertain if the learning of the learners with Cerebral palsy is done accordingly. The researcher wanted to know if the lessons are prepared in line with the needs of the learners, if the learners participate in class, if IEPs are used in their learning and see if the learners are independent in class, face any challenges in class as well as see if the class environment is suitable for ADLs.

4.4.1 Learner 1

The class has two teachers, one is the overall teacher and the other one is an assistant teacher. The lesson observed was well prepared. The class is large so preparation of IEP is not done

but the assistant teacher helps with the slow learners. The lessons are more of class work and less of outdoor activities.

Learner 1 has a speech problem and so it difficult to produce audible sounds but the classmates are used with her and sometimes make sense of what she says. She does interact with friends. She is able to write on her own but with difficulty. She is slow in writing.

Teaching materials are scarce. The teacher makes use of what she can find or make as a teaching aid. The text books are readily available, the only challenge is that some subjects translated in Bemba do not have Bemba names of objects or machines, for example, 'komputa.'

The classroom environment was spacious enough for easy movement and has a lot of talking walls which is good for the learners.

4.4.2 Learner 2

This class only has one teacher. The language of instruction is Bemba. The lesson observed was well prepared and the learners participated well. IEP is not pronounced so group teaching is done but the class teacher tries to help those who are slow and who cannot handle pens, books and other items well. She modifies the curriculum to suit the learners. Also she does remedial work with learners who have handwriting problems.

Learner 2 has an affected left hand but this has not affected his handwriting. His handwriting is legible. He does interact with friends and plays football and other games when at the field.

Teaching materials are scarce so it is up to the teacher to come up with ideas on how to teach certain lessons, otherwise the text books are there.

The teacher makes sure there is enough space for movement. Talking walls are there but not much.

4.4.3 Learner 3

This learner is in grade 12 and the teachers vary according to subject. The teacher interviewed was her physics teacher. The lesson observed was a lab. The lesson was well prepared but as for the learner, she could not do an experiment because her hands are not stable. She can only observe. This sometimes makes the teacher prepare a lab experiment into theory so as to make the learner benefit. The teacher prepares an IEP for the learner *when a*

task is not performed as the others so a different task is given that is manageable within the topic.

The learner cannot write on her own so she uses a computer for her notes, tests and class exercises. But at times, the classmates write for her. Learner 3 interacts with her classmates and others around her. The teacher encourages group work.

The teacher revealed that there are no teaching materials. This calls for the teachers' creativity. Otherwise the school provides text books and the teacher prepares charts for talking walls.

4.4.4 Learner 4

The learner is a grade 9 and the teacher observed was a teacher of English. The lesson was well prepared and the learner proved to be a good listener but is a slow writer. Her handwriting too is big and not very legible. Her hands shake when writing so the handwriting has a zig zag form.

The teacher said that *some teaching materials are not available but the text books are enough*. IEP is not done but group work is done. The teacher prepares charts for the walls.

4.5 Summary

This chapter presented the findings of the study. The findings of the study were presented according to the following themes:

(1) Engagement in activities of Activities of Daily Living at home and school. The study revealed that three learners in this study proved to be independent but not completely as they needed some help due to the severity of their conditions. One learner needed help in almost everything, for instance eating, bathing, dressing and food preparation.

(2) Challenges learners face when performing Activities of Daily living. The severity of the learners' disabilities posed a great challenge in taking part in ADLs because of lack of early intervention, late training or none at all and irregular physiotherapy contribute to non-performance.

(3) Suitability of home and school environments for teaching Activities of Daily Living. The school management revealed that the school is conducive for learners as the classrooms are spacious. The bathrooms and toilets are user friendly meaning they have handles and the

rooms are spacious for wheelchairs to navigate freely. House parents also find it easy to help the learners. The following chapter presents the discussion of findings with objectives.

CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter discusses the findings of the study. The findings are presented according to the following research themes: 1.To examine whether the learners with cerebral palsy perform daily living activities independently at school and at home. 2. To establish the challenges children with cerebral palsy face when performing activities of daily living. 3. To determine if the environment is suitable for the performance of daily living activities.

5.1 Engagement in Activities of daily living by cerebral Palsy learners at home and school

The results show that three (3) learners showed levels of independence though having difficulties in performing both Basic and Instrumental Activities of Daily living. One learner exhibited dependency on others in both Basic and Instrumental ADLs. The severity of their disabilities varied hence the performance also varied. For instance in Basic ADLs learner 1 scored 6, learner 2 scored 6, learner 3 scored 2 and learner 4 scored 6 . When it came to Instrumental ADLs, learner1 scored 6, learner 2 scored 6, learner 3 scored 4 and learner4 scored 5. The scores purely explain that each learner is unique and the needs are unique as well. This means that there is need for IEPs for each learner. Below is the discussion of findings on the engagement in ADLs.

Participation in ADLs by the learners in this study has proved not to be comprehensive. This is attributed to the nature of the disability one has. The levels of independence exhibited in the learners were not high but partial and moderate as the nature of the disability would make it difficult to do things quickly and perfectly. For instance, learner 1 could play simple games, sweep, bath and use toilet by using only one hand which was jerky. Learner 2 also uses one hand to do chores and get ready in the morning. Learner 3 needs a lot of help as she is wheel chair bound and her hand makes involuntary movements. Learner 4 does things at a slow pace as her muscles are stiff and make it difficult to hold a pen well, wash and sweep. Her legs are bending at the knees and cannot stand straight so her walking is affected. So no wonder she cannot walk or stand for longer periods or participate in sports activities. Her speech too is affected.

The school has a physiotherapist who can help with improvement of muscle tone unfortunately the school has only one physiotherapist to attend to all learners at the school.

Given the differences the learners exhibited, the researcher came up with a way to measure the independence of each learner. Since ADLs vary from country to country, the researcher had to come up with a tool that would not show biasness in terms of culture and activities. So, the Katz index of independence in ADLs Scale and Lawton & Brody Instrumental ADLs Scale adopted from Graf (2007) & Wallace (2007) were used as instruments to measure the independence of the individual learners. Harley & Palmer (2011) concluded that the Katz index of independence scale was a reliable tool to use as it was consistent with international classification of functioning disability and health. With the help of the Katz index of independence scale and Lawton and Brody IADL scale, the three (3) learners in this study proved to be independent at different levels and these are learners 1, 2 and 4. Learner 3 proved to be dependent.

The learners were knowledgeable of what is expected of them but the fact that they were not participating in ADLs fully can be attributed to lack of or minimum training and therapy they received at home and at school. Learners with cerebral palsy need speech therapy, occupational therapy and physiotherapy as pointed out by Stern (2016) but the learners have speech problems, motor skill problems and movement problems due to the stiff muscles they have.

5.2 Challenges learners with Cerebral Palsy face when performing ADLs

With regard to challenges that the learners face when it comes to performing ADLs, early intervention was not done, training the learner to participate in ADLs at an appropriate age was absent and severity of disability due to minimum physiotherapy received.

There seems to be a lack of early identification for early intervention to take place. A child who is identified early is given attention at an early stage and with time, that disability is overtaken so to speak because the child will have known how to do things and how to carry oneself in society. Education does not last forever, one day this child will have to be independent, so early identification is vital for one. The detection of Cerebral palsy in the learners in this study happened at different stages. Some were diagnosed early whilst others later in life. This had an impact on their levels of functioning. For example, learner 4 was diagnosed at 9 months, learner 3 was diagnosed at 24 months, and learner 1 and 2 were

diagnosed at birth. After diagnosis the duty of training remained entirely in the hands of the parents to work out the possible help or training their children would have in order to suit in the environment they were found in and survive a day's cares. Mother to learner 2 said, *I fear to let him cook for he can burn his siblings*. If training is not started early in life, it is difficult for the learners to participate in ADLs. This is in line with what Katz et al. (1963) in Noelker and Browdie (2013) alluded to, they said that there was an ordered regression in skills as part of a natural process of aging. As people grow the motor skills deteriorate so early training is essential as the child will master the skills and the motor skills will be used to activity and become flexible and independent later in life. Munsaka and Matafwali (2013) emphasised that early identification is critical in one's life because it brings about positive outcomes as it serves as a prerequisite for success. They added that in early intervention, a multidisciplinary team is involved and that this approach is economic saving as opposed to rehabilitation programmes.

Rehabilitation is not regular with the learners especially at home. One parent said that hospitals are far, another parent said it is expensive to pay for physiotherapy. Physiotherapy is present only at school but scanty as only one physiotherapist is there to attend to all learners. Munsaka & Matafwali (2013) emphasised that physiotherapy is needed for learners with Cerebral palsy to gain good posture and movement as well as to stretch muscles. But in the case of the learners in this study, their postures and movement indicate that the therapy they receive is not enough or not at all. This finding is conflicting with Lobes (2017) who revealed that physiotherapy helps improve mobility and self-care activity. The learners have difficulty participating in ADLs which is a clear indication of lack or irregular physiotherapy. Learner 4 even expressed a need, she said *I wish there was another type of therapy which I can receive to improve my muscle tones*. So one challenge the learners have is not having a fair share in physiotherapy. This has led to lack of occupation or participation in a number of activities. This is in line with Keilhofner (1992) who noted that a 'lack of occupation was a result of break down in habits that lead to physiological deterioration with the concomitant loss of ability to perform competently in daily life.'

Additionally learner 3 has been proved to be dependent. Her mother before she goes out, she said, *I make sure that I feed her before I go to the market to sell* and she ensures that all is well. This is in line with the study done by Singogo, Mweshi and Rhoda (2015) who acknowledged that mothers end up doing ADLs for their children as their children depend on

them. This can translate a lack of therapy or parents not letting their children participate in ADLs early in life.

The parents in this study might have discovered the conditions of their children but they might have to deal with the reality. For instance, one father left his wife because of the disability of the child and the woman had to fend for herself, another was widowed along the way, the other two have marriage mates but one had to be a house wife to take care of her children whilst that other one had to be a security guard. Learner 4 walked at the age of 9 years. This meant carrying her. This also delayed training. Learner 3 is wheelchair bound and the parent would feel sorry for her to the point of not training her early. Learner 2, a boy, who could do some chores and activities, could not be trained in cooking because the mother felt sorry for him. Learner 1 could do some activities but with difficulty as she has Jerky hands. This finding is in line with Rye (1989) who discouraged overprotection of children with severe disability. He said this could hinder independence in the child.

Another challenge is a lack of knowledge among parents and practitioners as Arens and Malteno (2008) put it. Rye (1989) applauded early intervention as ‘resulting in handicapped children’s motor and mental development and in important ways support and encourage parents as caregivers and teachers to their children.’ He concluded that various studies show that early intervention is worthwhile though it is adequately done in developed countries compared to developing ones.

The age at which ADLs are taught seems to be a challenge as well. The learners in this study range in age from 12 to 20 years old. According to a study done by Hayase et al. (2004) ADL increases sharply from age 3 to 6 years and improved beyond 6 to 15 years and ADL performance stayed the same from 15 to 50 years. This is also in line with what Van Zelst et al. (2006) noted, he said that younger children between 3 and 8 years performed better than older ones between 9 and 12 who even received supervision. With the little that the learners could do, it shows that their parents, teachers and house parents did all they could in the time they spent with them. The time of starting school differs with each individual learner. How much the parents put in before the learner entered school and if they received any therapy become the biggest question to answer.

5.3 Suitability of Home and School Environments for Teaching Activities of Daily

Living

The home environment for learner 2 was conducive according to the learner and the mother. The boy plays with his siblings as well as friends outside. The outside is spacious for him to move about. The mother to learner 2 said that she trained him *to bath alone though he takes his time because he uses one hand*. This is in line with Munsaka and Matafwali (2013) who put it clear that the environment for a learner with cerebral palsy has to be highly stimulating, both at home and school. Fauconnier (2009) brings out the fact that the environment plays a major factor in classification of individuals with cerebral palsy. He says the social model regard disability as a failure of the environment to adjust sufficiently to meet the needs of the individual. He thus concluded that participation varies between countries. The school under study has tried its best to do whatever there can be done to help the learners with cerebral palsy to benefit. It has modified bathrooms, made dormitories spacious, and dining rooms too. Also the navigation of wheelchairs and clutches too has been made easy.

IEP is not present at the school but group teaching is what is predominant. Remedial work is done with those with handwriting problems in grade 4. The subject, ‘Activities of Daily living for the physically challenged’ has since stopped being taught at the school. For effective training, the level of severity has to be known by the teacher as pointed out by Rye (1989).

5.4 Summary

The chapter has discussed the findings of the study. In this chapter it has been noted that not all learners in this study were independent in performing both Basic and Instrumental ADLs. This was because of the challenges with severity of their disabilities and also an absence of the ADL subject as well as lack of training at home. Also physiotherapy is not adequate as the school only has one physiotherapist.

The study has clearly applied the Person-Environment-Occupation theory because a learner with Cerebral Palsy cannot be separated from the environment and the occupation. For instance the learners in this study could not participate in an activity away from the appropriate environment. So what was needed was modifying the environment in order to suit the learner.

In line with what the Policy of making sure that persons with disability participate in life and become independent, the findings show that therapy available is not adequate to help improve motor skills to enable them perform independently. The nature of severity had contributed to the learners not entirely doing things on their own but they need help in some areas.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the findings of the study. The study sought to examine whether the learners with cerebral palsy perform daily living activities independently at school and at home. Also it sought to establish the challenges children with cerebral palsy face when performing activities of daily living. It further sought to determine if the environment was suitable for the performance of daily living activities.

6.1 Conclusion

The findings reveal that three (3) learners proved to be independent though not perfectly as they had to do the activities with difficulty. One learner proved to be dependent because her condition could not allow her to participate. One of her hands move involuntarily. The challenges that the learners face are lack of or minimum training at an early stage, irregular physiotherapy and severity of disability which makes it difficult to engage in ADLs. The environments for the learners differ in that some homes prove to be conducive whereas others are not spacious for navigation of wheel chairs. The school proved to be conducive for the learners to perform ADLs.

The findings of the study revealed that Activities of daily living was once offered as a subject at primary level but as years went by teachers stopped teaching the subject. However, being the normal 'occupations' that one has to do in order to manage a day, parents, teachers and house parents are there to instil it to the children with cerebral palsy. Some teachers said that in class some children need help when it comes to writing and use of apparatus in labs. So most teachers encourage group work and indoor games like snakes and ladders and traditional games like 'Chiyenga' order to make the children socialise and interact freely with their friends. Parents revealed that it is not easy to raise a child with cerebral palsy so but they try to teach them skills. This depends on the severity of the disability. The house parents revealed that with some children who are severe, they help them in almost everything, from bathing them, dressing them and feeding them. However, the severity of their disability does not directly affect their academic performance because some who have severe cerebral palsy are very intelligent and now it rests on the teachers to provide notes, ask friends to help him or her write a test and the school to write to Education Council of Zambia to allow a teacher who can understand the speech of the child in order to write for the child.

The study also revealed that the teachers use a lot improvising in order to teach the children because the curriculum does not really suit the learners for example the use of T-squares, compass and protractors as well as lab equipment. The Individualised Education Programme is not followed much but group teaching is what is common. Most parents do not take part in their children's school activities and this make the school do most of the training. But young ones who did not have proper toilet training are sent back home in order for the parents to help them. The physiotherapist admitted that the physiotherapy the children receive helps in a way but recommended that therapies like speech and occupational therapy are needed in order for the children to benefit to the full.

6.2 Recommendations

- The study recommended that the parents need to have knowledge of their children's disability very early in the child's life so that if it means starting the various therapies need, the child is not rendered untrainable later in life.
- Teachers also need to have knowledge of the various types of cerebral palsy and their severities so that when it comes to teaching they may administer the correct Individualised Educational Programme.
- The government of Zambia through the Ministry of General Education should hold workshops to sensitise the parents and house parents and Continuing Professional Development on a regular basis to enable them be knowledgeable about the disability and how to handle and train them.
- A multi-disciplinary approach is also an added advantage for parent and teachers to work closely with the speech, occupational and physical therapists so that whatever activities that the therapists recommend, the children are able to practice at home and at school. This will enable the child, though with noticeable difficulty, to handle to perform an activity because of the regular practice.
- Teachers and parents must come up with Individualized Educational Programmes (IEPs). IEPs are needed to be established for the learners' areas that they cannot do on

their own. For instance, all Learners are not allowed to cook by their mothers. But once training is done, the learners may manage to do the activity.

- The Ministry of General Education must emphasise on making Speech and occupational therapy available for the learners with cerebral palsy like in the case of Learner 1, communication in class is difficult with friends and the class teacher.

6.3 Suggestions for Future Studies

I suggest that more is done in the area of Cerebral Palsy and participation in Activities for Daily Living. Emphasis must be put on strategies applied when training the learners with Cerebral Palsy must receive. Occupational therapy must be available in Zambia in order to make participation possible.

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APPENDICES

Appendix A: Interview Guide for Children with Cerebral Palsy

Dear respondent

I am a postgraduate student in the school of education pursuing a master degree in special education at the University of Zambia and i am carrying out a study on the topic: **Participation in Activities for Daily Living by Learners with Cerebral Palsy: A case of Dagama Special School in Luanshya District, Zambia.** It is intended to establish the level of independence a child with cerebral palsy attains by engaging in activities of daily living. You have been selected to be one of the respondents in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

Thanking you in anticipation of your cooperation.

Yours sincerely,

RESEARCH STUDENT.

School:

Age:

Gender:

Grade:

1. Do you know when you were diagnosed with cerebral palsy?
2. If so, how was it done?
3. Explain how it is like living with cerebral palsy.
4. Have you manage to cope with the disability?
5. When did you start school?
6. Do you like being in school?
7. Do you think it was beneficial to be in school?
8. What kind of play activities do you engage in at home and at school?
9. Do you find it easy to play with friends?
10. When at home do you clean the home when asked to do so?

11. Do you wash your own clothes?
12. Explain what else you do that you don't require help from someone?
13. Are there any chores or activities that you cannot do on your own?
14. What challenges do you have when it comes to play activities?
15. Do you attend any therapy at the school?
16. Do think it is beneficial to attend this therapy?
17. What changes or improvements have you noticed with yourself as you received this therapy?
18. Do you think you need other therapies to help you with some difficulties that you have?
19. Can you mention any help you think you need?
20. Do have any challenges when it comes to taking part in any activity at school or at home? Explain.
21. When it comes to class work, do you write on your own?
22. What difficulties do you have when it comes to class work?
23. How do you manage to acquire notes or hand in an exercise?
24. Do you receive any help from friends or teachers whilst in class?
25. When it comes to self-care, do you manage on your own?
26. If not what kind of help do you need?
27. Do you manage to take care of your surroundings when asked to do so?
28. Do you think your environment (home and school) is suitable for performing your daily living activities?

Appendix B: Interview Guide for School Managers

Dear respondent,

I am a postgraduate student in the school of education pursuing a Master degree in special Education at the University of Zambia and I am carrying out a study on the topic **Participation in Activities for Daily Living by Learners with Cerebral Palsy: A case of Dagama Special School in Luanshya District, Zambia**. It is intended to establish the level of independence a child with cerebral palsy attains by engaging in activities of daily living. You have been selected to be one of the respondents in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

Thanking you in anticipation of your cooperation.

Yours sincerely,

RESEARCH STUDENT.

Biographical information:

School:

Years in teaching service

Years in special education:

1. Do you have learners with special education needs at your school and if yes what type of disabilities and prevalence?
2. How many autistic learners does your school have?
3. What measures do you put across to accommodate cerebral palsy learners in the school and classroom environments?
4. Do the learners with cerebral palsy require specialised materials and if yes, what type?
5. Do you have qualified personnel to cater for learners with cerebral palsy?
6. Do you have adequate personnel to meet the special needs of learners with cerebral palsy?

7. Do you involve learners with cerebral palsy in school programs and if yes mention them?
8. What play or extra-curricular activities does the school offer to the children?
9. Do the children have implements to move around the school?
10. What kind of Implements do the children use?
11. Is it easy for the children to go around the school without any difficulty?
12. Do you think the children with cerebral palsy find it easy to play with their friends?
13. What challenges do they have when it comes to play activities both in class and outside?
14. When it comes to class work do they write on their own?
15. Do the children take part in other activities in class besides writing?
16. What practical activities does the school give the children to do that enhance their independence?
17. When it comes to self-care, do they manage on their own?
18. Do they manage to take care of the surroundings?
19. Do you think the school environment is suitable for performing their daily living activities?

Appendix C: Interview Guide for Teachers

Dear respondent,

I am a postgraduate student in the school of education pursuing a Master degree in special Education at the University of Zambia and I am carrying out a study on the topic: **Participation in Activities for Daily Living by Learners with Cerebral Palsy: A case of Dagama Special School in Luanshya District, Zambia.** It is intended to establish the level of independence a child with cerebral palsy attains by engaging in activities of daily living. You have been selected to be one of the respondents in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

Thanking you in anticipation of your cooperation.

Yours sincerely,

RESEARCH STUDENT.

School:

General education qualification:

Special education qualification:

Years of experience in special education:

Years in teaching service:

1. Does your school have children with cerebral palsy?
2. What do you understand by the term cerebral palsy?
3. What instructional strategies do you offer cerebral palsy children:
 - a) Do you use Individualised educational Programmes (IEPs) to some pupils or do you use grouped teaching?
 - b) What are your goals for children with cerebral palsy?
 - c) Does the curriculum meet their needs?
 - d) How do you make the learning environment successful for the learners with cerebral palsy?
 - e) Do you offer some help to children facing difficulty in taking part in activities in class or when it comes to writing.

4. How do you foster social behaviour in children with cerebral palsy?
5. What play or extra-curricular activities do you offer to children in order for them to attain independence?
6. Does the school offer therapies or offer a subject 'Activities for Daily Living' that help the children attain independence in their daily activities?
7. Do you think the children find it easy to play with friends?
8. What challenges do the children face in class?
9. What challenges do you face as you in your teaching?
10. Are parents involved in their children's education?
11. Do you have a good rapport with the parents of children with cerebral palsy?
12. Have some parents faced some challenges in handling their children? Have you helped in overcoming some of the challenges faced by the parents?
13. Is the classroom conducive for the learning of the children?
14. Are the classes large enough to enable the children move around?
15. Do you have adequate teaching materials for children with cerebral palsy?
16. If not explain some initiatives you employ in order to meet the needs of the children?
17. What strategies do you apply to help the child participate in class and at play?
18. Do they receive any help from their friends or yourself whilst in class?
19. Do the children manage to take care of their surroundings for example cleaning the class?
20. Do you think the environment is suitable to perform activities for daily living for children with cerebral palsy?

Appendix D: Interview Guide for Parents

Dear respondent

I am a postgraduate student in the school of education pursuing a Master degree in special Education at the University of Zambia and I am carrying out a study on the topic: **Participation in Activities for Daily Living by Learners with Cerebral Palsy: A case of Dagama Special School in Luanshya District, Zambia.** It is intended to establish the level of independence a child with cerebral palsy attains by engaging in activities of daily living. You have been selected to be one of the respondents in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

Thanking you in anticipation of your cooperation.

Yours sincerely,

RESEARCH STUDENT.

Biographical information

Age:

Highest level of education:

Occupation:

1. When was your child diagnosed with cerebral palsy?
2. How was your child diagnosed with cerebral palsy?
3. How would you describe a child with cerebral palsy?
4. Do you feel having a child with cerebral palsy is an easy thing?
5. What has been your experience in raising your child? Do you have any challenges?
6. What have been your coping strategies to the disorder?
7. When did your child start school?
8. Do you involve yourself in your child's education?
9. Do you on a regular basis contact your child's teacher to discuss your child's performance?
10. Does your child receive any therapy that can help your child be independent?

11. If so, how does he access the therapy?
12. Is the school offering any therapy that you feel has helped your child in some areas?
13. Do you think your child needs other therapies that can help your child improve with other difficulties he or she has?
14. What do you think should be done to help your child attain independence?
15. At home, does your child take part in any chores at home?
16. How do you help your child to get to do chores?
17. Do you have confidence that your child can be found at the market or any social place without your help?
18. What challenges does your child have when it comes home chores and self-care?
19. Do you think the home and school environments are suitable for your child to perform the activities for daily living?

Appendix E: Focus Group Guide for House Parents

Dear respondents,

I am a postgraduate student in the school of education pursuing a Master degree in special Education at the University of Zambia and I am carrying out a study on the topic: **Participation in Activities for Daily Living by Learners with Cerebral Palsy: A case of Dagama Special School in Luanshya District, Zambia.** It is intended to establish the level of independence a child with cerebral palsy attains by engaging in activities of daily living. You have been selected to be one of the respondents in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

Thanking you in anticipation of your cooperation.

Yours sincerely,

RESEARCH STUDENT.

School:

Work experience:

1. Given that you spend most of the time with the child at the school, what activities do the children engage in that may help them do things on their own?
2. Do the children receive any therapies you know of?
3. Does the school offer activities that can help children be independent?
4. Please mention some of the activities the school offers.
5. What challenges do you face with some who cannot do things on their own?
6. What challenges do the pupils have when it comes to performing self-care activities?
7. What help do offer pupils in order for them to perform activities without difficulty?
8. Do you always do things for the children regardless of their ability to take care of their needs?
9. Looking at the environment that surrounds the children, is it suitable for them to perform the activities for daily living?

Appendix F: Interview Guide for the Physiotherapist

Dear respondent,

I am a postgraduate student in the school of education pursuing a Master degree in special Education at the University of Zambia and I am carrying out a study on the topic: **Participation in Activities for Daily Living by Learners with Cerebral Palsy: A case of Dagama Special School in Luanshya District, Zambia.** It is intended to establish the level of independence a child with cerebral palsy attains by engaging in activities of daily living. You have been selected to be one of the respondents in this research and be assured that all the information that you will give shall be treated with strict confidentiality and used for academic purposes only.

Thanking you in anticipation of your cooperation.

Yours sincerely,

RESEARCH STUDENT.

Biographical information

Age:

Highest level of education:

Occupation:

1. What does physiotherapy start with?
2. Do you know about cerebral palsy?
3. What is the importance of having physiotherapy for cerebral palsy?
4. How do you help the learners at this school?
5. Do you think there is a cure for Cerebral palsy?
6. Do you see any improvements in the learners you help?
7. Do you think these learners need therapies like Occupational therapy and speech therapy?
8. How often do you offer physiotherapy to the learners?
9. Is there any improvement in the learners?
10. Do you the environment is suitable for the learners to perform ADLs?

Appendix H: Observation Schedule

1. Observe lessons and check the following:	
a) Lesson preparation	/1
b) Methods of teaching	/1
c) Teaching aids	/1
d) Pupil's participation	/1
d) Check if teachers prepare Individualised Educational Programme (IEP) for children.	/2
e) Extra- curricular activities	/2
2. Check how children interact during play and if they take part in any activity.	/1
3. Check if children show levels of independence as they are with friends	/1
4. Do the children with cerebral palsy write on their own during lessons.	/1
5. Check if the children have any challenges during lessons.	/1
6. Check availability of teaching materials and aids and in the absence, what strategies do teachers use instead.	/1
7. Check extra-curricular activities children are involved in at home and at school.	/1
8. Check if environment is conducive for child to perform activities for daily living.	/1
TOTAL	15

Thank you for your cooperation.