

**KNOWLEDGE OF MOTHERS OF CHILDREN WITH COMMUNICATION
DISORDERS ON COMMUNICATION MILESTONES**

DESMOND NII LANTE LAMPTEY

10478957

**A RESEARCH DISSERTATION SUBMITTED TO THE SCHOOL OF BIOMEDICAL
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DECLARATION

I, DESMOND NII LANTE LAMPTEY declare that this dissertation is the result of my own independent research. It has neither been submitted anywhere nor being concurrently submitted in candidature for any degree. All sources consulted are well cited and referenced.

I hereby give permission for the Department of Audiology, Speech and language therapy, to seek dissemination/publication of the dissertation in any appropriate format. Authorship in such circumstances to be jointly held between me as the first author and the research supervisors as subsequent authors.

Signed..... Date.....

DESMOND NII LANTE LAMPTEY
(10478957)

Signed..... Date.....

DR. DZIFA A. ATTAH
(PRINCIPAL SUPERVISOR)

Signed..... Date.....

DR. COLLINS BADU AGYEMANG
(SECONDARY SUPERVISOR)

Signed



.....
Department)

Date...**17/11/2020**

(HEAD OF DEPARTMENT)

DEDICATION

This work is dedicated firstly to the Almighty God, who has been a permanent rock in my life.

It is also dedicated to my uncle, Mr. Ebenezer Odartei Lamptey, who has played a fatherly role in my life and remained a financial pillar behind my education from preschool till now. It is also dedicated to all my family members who encouraged me in the course of my study.

Lastly, I dedicate this work to myself for the hardwork and resilience I have put into it and not giving up.

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ABSTRACT

Background: The role mothers play in the development of language in their children remains significant and can never be downplayed. The knowledge of mothers influences their decisions, practices, beliefs, and behaviour towards their children in their developmental years which may lead to facilitating the development of child's speech and language abilities or otherwise.

Aim: This research is aimed at exploring the knowledge of mothers of children with communication disorders on communication.

Methodology: A qualitative study design guided by semi-structured interview guide was adopted for this research. The participants were interviewed and recorded. A purposive sampling technique was used to obtain the participants for this study. Twelve participants were selected for the study. These participants were mothers of children with communication disorders who visited the speech therapy clinic, Korle-Bu Teaching Hospital for management. A Participant was selected if her child with a communication disorder is between the ages 0 to 5 years and has received a diagnosis of a communication disorder. Inputs made from interviews were analyzed by the researcher and developed into various themes which were discussed.

Results: The study revealed that mothers have fair knowledge of communication milestones between zero to two years but do not know much concerning communication milestones between three to five years.

Conclusion: The study established that mothers had some knowledge on communication milestones but need more concrete information on communication milestones from suitable places like the Antenatal and Postnatal clinics as well as the speech and language therapy clinics.

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LIST OF ABBREVIATIONS AND DEFINITION OF TERMS

ASD	Autism Spectrum Disorders
CKCDI	Caregiver Knowledge on Child Development Inventory
CP	Cerebral Palsy
KBTH	Korle-Bu Teaching Hospital
KIDI	Knowledge of Infant Development Inventory
PCI	Parent Child Interactions
PLS	Preschool Language Scales
SLT	Speech and language Therapy/ Therapist
SRT	Social Representative Theory
UN	United Nations
UNCRPD	United Nations Conventions on Rights of Persons with Disabilities

CHAPTER ONE

INTRODUCTION

1.1 Background

Language is a vital indicator of a child's general development and cognitive ability (Begum & Kalam, 2012). Dosman et al.,(2012) have put together an evidence based developmental milestones which includes the communication milestones children are expected to acquire at certain age ranges in their journey of development especially from birth to age five. The communication milestones show in a hierarchical order, the various communication skills or abilities a child is expected to be able to do at specific stages in his or her growth. Several studies have pinpointed the importance of early language skills in children as a journey to literacy and a good predictor for both current and future success (Begum & Kalam, 2012; Dehaene-Lambertz et al., 2010; Weigel et al., 2006; Williams et al., 2014). Communication serves as the bedrock of human life (Fricke et al., 2013) as it is the only means by which information and ideas are shared between individuals or groups.

The role mothers play in their children's communication development remains significant and can never be downplayed (Ertem et al., 2007; Huang et al., 2005; Safwat & Sheikany, 2014; Williams et al., 2014). Mothers are the main determiners of their children's early communication environment and key players in the child's language development (Bornstein et al., 2020). The knowledge of mothers influences their decisions, practices, beliefs, and behaviour towards their children in their developmental years (Bornstein & Cote, 2004; Bornstein et al., 2020; Ertem et al., 2007) which may either lead to facilitating the development of the child's abilities or vice versa. Thus, if mothers are aware of communication milestones, there is some level of surety that any unusual behaviour in their children will be noted and attended to duly through the setting of

realistic goals (Begum & Kalam, 2012). Knowledge of communication milestones will equip mothers with the ability to anticipate the next milestone their children must acquire and to check keenly to ensure that the child has acquired the expected skill at that particular stage (Dosman et al., 2012).

Maternal knowledge of communication milestones have been proven to be influenced by culture (Bornstein & Cote, 2004; Ertem et al., 2007; García et al, 2000) and socioeconomic status (Safwat & Sheikany, 2014; Tamis-Lemonda et al., 2002; Weigel et al., 2006). Huang et al., (2005) also showed that mothers from different racial backgrounds have varying knowledge of communication milestones and more especially different ways of interacting with their children in stimulating their early speech and language development.

Stephens et al., (2015) deduced from the United Nations statistics given in the United Nations Convention on Rights of Persons with Disabilities that about fifteen percent of any given population may have communication disorders. If this is true, there is a higher probability that children with communication disorders in Ghana will likely be in the thousands. Addressing issues of communication disorders require early identification. Landa et al., (2007) acknowledge that early identification of communication difficulties remains a difficult venture, however, Stephens et al., (2015), argue that there have been massive improvements in early identification of communication disorders.

Parental perceptions are considered essential to the development of language and Parent-Child Interactions (PCI) (Safwat & Sheikany, 2014). Mothers who have knowledge of normative communication milestones are most likely to stimulate their children towards attaining the expected communication milestones per their age (Bornstein et al., 2020). This implies that maternal knowledge can lead to mothers either creating a suitable environment to stimulate their

children or not. Some stimulation activities reported in some studies are mothers read to their babies, sing, engage them in conversations although the babies may not have acquired speech yet as well as talk about what they are doing (Huang et al., 2005; Williams et al., 2014). For example, when bathing for the child, they keep telling the child they are bathing or mention the various parts of the bodies as they wash that part.

There have been studies on the knowledge of communication milestones amongst groups like first-time mothers, teenage mothers, depressed mothers and mothers with low income (Huang et al., 2005). To the best of my search, not much has been done on knowledge of communication milestones among mothers of children with communication disability in Ghana (Wylie et al., 2016). No empirical study has established that children end up with communication disorders due to the level of knowledge their mothers have on communication milestones. It is only hoped that knowledge of communication milestones will help mothers of children with communication disorders to set accurate goals for their children in their communication development.

In Ghana, persons with communication disorders seek for remediation from different sources including meeting herbal specialist, visiting religious leaders and sometimes a general practitioner of medicine (Wylie et al., 2017a). It is important the first steps people take to address communication difficulties especially in the early ages. This is because a good intervention in the early stages guarantees a better outcome (Begum & Kalam, 2012) towards maximizing the child's communication abilities. It is also believed that knowledge of communication milestones will help mothers and other childhood care personnel to help monitor the development of their children (Begum & Kalam, 2012). It is imperative then, that a study is conducted to explore the knowledge of mothers of children with communication disorders on communication development.

There is therefore the need to delve into how much these mothers know concerning communication milestones, where they gather such knowledge as well as the various activities in which they engage with their children with communication disorders with the aim of facilitating their early communication development.

1.2 Statement of the Problem

Early identification of atypical language development helps with the remediation of any further negative impacts it may have on the child (Duby et al., 2006) such as affecting literacy and definitely, education. This is because early identification may lead to further evaluation of the suspected condition, diagnosis and then treatment. If mothers in general have adequate knowledge of communication milestones, it will enable them to identify problems with communication development in their children's early years as they know what to expect from the child at each specific stage (Kogila et al., 2016). Equally such knowledge will help mothers of children with communication disorders on how to engage their children to facilitate their communication abilities. In the western world, mothers have shown a considerable understanding of early speech and language development as compared to developing countries like Ghana, where due to lack of studies in this area, nothing has been documented in relation to mothers' knowledge of communication milestones. In Ghana, communication disorders have not received adequate attention (Wylie et al., 2017a) from both policy makers and citizenry. Most studies that have compared knowledge of mothers among different cultures and developed countries have concluded that American mothers and white mothers had more knowledge of communication development than mothers from other countries in the Asian, European and American continent (Bornstein et al., 2020; Huang et al., 2005). Also studies in developing countries like India indicated that mothers exhibited low level of knowledge of communication milestones (Karuppappan et al., 2020; Kogila

et al., 2016). The reasons for such variance are associated with lack of communication health services, lack of awareness of the existence of such services among the citizenry and many others. These conditions are no different from the current state of Ghana. There are limited rehabilitation services for persons with communication disorders, very few speech and language therapists to attend to the populace, lack of awareness on the availability of such services and inadequate research on communication disorders (Wylie et al., 2016, 2019; Wylie, Mcallister, et al., 2017). Owusu, (2016) reports that as at 2016, there were about six speech and language therapists in Ghana. However, the Allied Health Professional Council has established the training and registration of speech and language therapists to help grow the service in the country (Owusu, 2016). Institutions like the University of Ghana and the University of Allied Health Science have commenced the training of speech and language therapists (Owusu, 2016; Wylie et al., 2016). Bornstein and Cote, (2004) acknowledge that mothers are generally curious and do all they can to gain access to information concerning the development of their infants. Some rely on internet, others on family and friends, books and many more. In a study by Wylie et al., (2017), mothers of children with communication disabilities in Ghana reported that the sources where they would likely seek help to remediate their children's condition were pastors, fetish priests and other sources as compared to a health professional. The choice of mothers to seek help from traditional and spiritual sources has led to many negative outcomes such as late identification when these sources fail to provide any form of remediation for the child's communication difficulty. The Ghanaian media has been flooded in the past with pathetic cases of persons with communication disabilities being maltreated or labelled as suffering from evil spirits by these pastors and fetish priests.

It is therefore essential to find out how much these mothers know concerning early communication development, where they get access to information concerning early speech and language development and the various means they use in interacting with their children who have communication disorders.

1.3 Research Questions

1. What knowledge do mothers of children with communication disorders have regarding typical communication development within the first five years of life?
2. Where do mothers of children with communication disorders get information about early speech and language development?
3. What stimulation strategies or activities do mothers of children with communication disorders engage in with their children and how effective do they find these activities?

1.4 Aim of Research

The aim of the study is to explore the knowledge of mothers of children with communication disorders on communication milestones.

1.5 Research Objectives

The following objectives would be used in achieving the above-stated aim:

1. Explore the knowledge mothers of children with communication disorders have regarding typical communication milestones within the first five years (0-5years) of the child's development.
2. Explore the sources from which mothers of children with communication disorders get information about early speech and language development.

3. Explore the stimulation and communication strategies these mothers use at home to interact with these children.

1.6 Significance of Study

It is expected that this study will unearth the knowledge of mothers of children with communication disorders on communication milestones and how this can help in the early identification of communication difficulties in their children. The findings of the study will serve as a guide to nurses and clinicians especially speech and language therapists on the need to educate mothers who visit the clinic on early communication development. The study will explore the various sources from which mothers gain knowledge about children's early communication development and the validity of this knowledge by comparing it to evidence-based literature. It will also unveil how much education these mothers receive on early communication development especially ranging from childbirth to age 5 (0-5 years) in antenatal classes. It will also explore the various strategies mothers of children with communication disorders employ in engaging these children. Unearthing the knowledge mothers of children with communication disorders, have on communication milestones and the stimulation strategies they employ in engaging with their children, will enable speech and language therapists to know how to educate these mothers on various strategies they can use in communicating with their children to help maximize their communication abilities, especially in their early years.

1.7 Organization of Chapters

The study is organized into six main chapters. Chapter One entails the introduction to the study. It covers the background, problem statement, aims and objectives of the study, research questions, scope of the study, significance of the study, and organization of the study.

Chapter Two consists of the literature review which includes relevant theories and literature on the concepts of communication, communication milestones and communication disorders. The chapter also presents reviews pertinent literature in relation to knowledge of mothers on communication development. It also presents the theoretical framework which defines the study.

Chapter Three presents the research methodology and study framework and outlines the analytical strategies that were adopted for the study. The methodology chapter also describes the research design, research setting, population, sampling technique and data collection methods. It also provides the procedure for data collection and analysis as well as the ethical principles that were adhered to.

The results of the study were presented and analyzed in chapter four. This chapter further presents discussions of results obtained in relation to relevant literature discussed in chapter five.

Chapter six which is the final chapter includes the summary, conclusions and recommendations. It also establishes future research direction, provides a number of recommendations for mothers, and concluded with recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents information gathered from other studies related to the topic of interest. The literature was reviewed from books, articles and published journal articles. The literature review includes a broad definition of communication, communication milestones and communication disorders. It also considers the assessment of communication disorders and, knowledge of mothers on communication milestones and stimulation strategies.

2.2 Review of Concepts

This section presents review and discussion of the key concepts in the study. For the purposes of the current study, the following key concepts are discussed communication, communication milestones and communication disorders.

2.2.1 Communication

Communication is the basic means by which individuals express themselves to each other. In most countries, it is an essential skill which guarantees an individual's success (Stephens et al., 2015). Communication is any verbal or non-verbal behaviour that influences the attitudes or behaviours of others (Knapp et al 2015). Verbal communication refers to speech or spoken language used in sending information from one individual to another. Non-verbal communication attitudes are gestures as in sign language, eye contact and touch. More often than not, the major focus of parents is towards verbal communication because it is considered central to child development (Stephens et al., 2015). Speech is the basic unit of communication. It deals with the individual sounds of a

particular language. These sounds are put together to form words. However, there are certain rules which govern how these sounds are put together in order to form words. Speech production is very essential in a child's development. There are high expectations always pending the first time the child may attempt making oral sounds. Tamis-Lemonda et al (2002) posit that first words of a child serves as a momentous feat in the eyes of their parents. Language is a medium of communication which helps individuals understand the thoughts, ideas and knowledge of others in a society (Begum & Kalam, 2012). Language development is considered a multifaceted process and a foundation to communication skills, school readiness and achievements (Safwat & Sheikany, 2014). With such relevance in society, it is clear that communication underpins the social, emotional and cognitive wellbeing of an individual. Persons who have difficulty with verbal communication have not escaped the stigmatization and unfair treatments of other individuals in the Ghanaian society (Stephens et al., 2015). There is a critical period for language exposure and acquisition (Begum & Kalam, 2012). The implication is that once a child's age is beyond the critical period for acquiring language, the child is most likely to not acquire language even when given an exposure to a language environment. Feral children have been a major evidence to this claim. In the Ghanaian community, parents begin to seek help once their growing children show no sign of speech (Wylie et al., 2013). Parents do get worried when their children are not talking at an age they are expected to. They also get worried when these children are exhibiting fewer communication skills than expected at certain ages. For example, when a three-year-old child keeps using only single words to communicate, their parents are most likely to express worry. An inability of a person, whether child or adult, to communicate as required per their age may result in a communication disability or disorder (Wylie et al., 2013) and as such caregivers are most likely to show concern especially in the case of children.

2.2.2 Communication Milestones

Developmental milestones are distinguishable abilities or skills that occur in an expected order across a period of time and reflects the interaction of a child's developing neurological system (Dosman et al., 2012). Developmental milestones can be grouped into three, namely: motor development, language development and socio-emotional development (Dosman et al., 2012; Kogila et al., 2016). Most studies that have explored knowledge of mothers on communication milestones focus on all three aspects of development (Bornstein & Cote, 2004; Bornstein et al., 2020; Dosman et al., 2012; Ertem et al., 2007; Tamis-Lemonda et al., 2002). The knowledge of mothers on communication are assessed including their knowledge on fine and gross motor milestones, cognition and socio-emotional development however knowledge of each of these facets is accounted for separately in the findings of these studies. Only fewer studies (Begum & Kalam, 2012; Williams et al., 2014) have strictly focused on assessing maternal knowledge on communication milestones with no interest in other aspects of development like motor milestones, cognitive and socioemotional development.

Communication milestones are specific goals or targets children are expected to achieve at a certain age range (Begum & Kalam, 2012). Speech, language and communication milestones are the main tenets of language development (Visser-Bochane et al., 2019). Language development is the process by which a child develops language. In the development of language, children must first certain develop certain prelinguistic skills like attention, turn taking and even play skills. These are very essential skills that must be developed before language emerges. They serve as the foundation on which language is built. Studies on Autism Spectrum Disorder (ASD) and language development have revealed that children on the autistic spectrum have these prelinguistic skills affected which in turn affects their language development (Landa et al., 2007). This indicates the

necessity of these prelinguistic skills to language development. Surprisingly, most parents do not seem to have acknowledged these prelinguistic skills as a prerequisite for language development. Their major focus is on the first word of the child (Tamis-Lemonda et al., 2002) which makes them believe their children will be able to talk. Communication milestones takes into consideration these prelinguistic skills and also points out the ages at which a child is expected to have such skill. Language can be divided into two components. These are expressive language and receptive language. Expressive language is based on articulation, thus how individuals use language to express themselves, make requests and share ideas. It also involves expressions which are not verbal such as a child pointing to an object to request for it or hand-leading someone to an object of interest. Receptive language is based on comprehension. The ability to understand the information or message being relayed from an individual. Communication milestones takes into consideration both expressive and receptive language. It points out the language skills a child is expected to possess at a certain age both expressively and receptively.

Several studies have been conducted on communication milestones from history. These studies were goaled at examining the universality of communication milestones. This is to ensure if children from different cultural backgrounds are likely to attain communication milestones at different ages. Lansdown et al., (1996) conducted a multicultural study involving 28,139 children (0-6) years of age from local and urban China, India and Thailand. The findings of the study pointed out that there are similarities in the ages at which children attain communication milestones between and within countries involved, especially amongst the younger children. Dosman et al., (2012) also posit that there is a need for documented ages at which children attain certain milestones found in literature to be more evidence based to avoid misdiagnosis of communication disorders by clinicians.

The relevance of communication milestones is that once caregivers have knowledge of these, they have a fair idea of what to expect from their children at every point in time. This helps in easy identification of any mishaps in the child's language development (Visser-Bochane et al., 2019). As simply put by Hidecker et al., (2018), communication milestones are used in the surveillance of developmental delays.

2.2.3 Communication Disorders

Children must grow to acquire language per the expectations of society. Once children do not fully acquire language or miss these communication milestones excessively, they are considered to be experiencing some form of communication disorder (Begum & Kalam, 2012). Atypical speech and language development is one of the most common developmental problems in childhood (Visser-Bochane et al., 2019). Problems with language development may be expressive, receptive or both (Begum & Kalam, 2012). With expressive language development disorders, a child may encounter a delay in speech production, fewer words than expected per age or a total lack of words by the child. Receptive-wise, a child may have difficulty with understanding language. He may not respond to his or her name, not follow instructions or have difficulty with understanding complex instructions but may understand simple instructions. It is most likely that a child undergoing difficulties with receptive language may have problems with expressive language. This is because in the language development process, children produce what they may have heard within their immediate environment. As such, any problem with hearing and understanding will affect the ability to talk. In a typical Ghanaian home, parents do not hesitate to caution older children to be mindful of words being used in the presence of the little ones now acquiring

language. This obviously is to avoid the child from getting to imitate or learn these negative words that are being used in their environment. A clear indication that children produce what they hear.

Although some studies have pointed out that knowledge of communication milestones helps in the early identification of communication disorders (Begum & Kalam, 2012; Williams et al., 2014), other studies believe the venture remains a very herculean task (Stephens et al., 2015; Wetherby et al., 2007) especially in developing countries like Ghana. In developed and well-resourced countries, the situation is better managed (Stephens et al., 2015). The difficulty with early identification may be due to the fact that most communication disorders become much obvious after 24 months when most children commence schooling (Scherzer et al., 2012). Perhaps as these children begin schooling, it provides a better opportunity to observe their behaviours and skills in comparison to that of their peers. Any major differences may attract the concerns of teachers, supervisors or caregivers in that space. When parents find out that their children have communication disorders, they put in all their efforts ready to seek all needed services and counsel to help address their children's condition (Reynolds, 2010).

Communication disability may occur in isolation like verbal apraxia, or it may be secondary to an underlying biomedical condition such as stroke (Wylie et al., 2016). In children, communication disorders may be secondary to conditions like Autism Spectrum Disorder (Landa et al., 2007; Wetherby et al., 2007), Cerebral Palsy (Hidecker et al., 2018) and Down syndrome (Mcnaughton & Light, 2013). In isolation, it may occur as a language delay (Mclaughlin, 2011).

Communication disorders may also be from birth thus developmental, in cases like autism or it may be acquired across one's lifespan due to an accident such as stroke (Wylie et al., 2016). The prevalence of communication disorders in Africa and Ghana are missing from literature. Stephens et al., (2015) believes this could be due to insufficient and inaccurate records of communication

disorders within this space. Generally, parents are able to tell their child has a communication disorder due to delayed speech, inability to feed and social relations with people in his or her environment (Stephens et al., 2015). The best way to diagnose communication disorders is by using accurate assessments.

2.3 Theoretical Framework

The current study focuses on exploring critical social knowledge of mothers of children with communication disorders regarding children's communication development milestone and disorders. Fundamentally, the study explores what the mothers know, where they get their knowledge from and what they do with their knowledge. In order to deeply explore these three issues, I draw on two theories as framework to explain the study. These are the Evidence-based Communication Milestones Model (Dosman et al., 2012) and Social Representations Theory (Moscovici, 1988).

2.3.1 Evidence-based Communication Milestones Model

To be able to understand the knowledge these mothers have on communication milestones, it is vital to first understand what the typical communication milestones are per literature. The Evidence-based Communication Model identifies different communication milestones and disorders at various stages of children's development (Dosman, Andrews & Goulden, 2012).

Many studies have explored communication milestones across different populations to verify its universality and concluded in the positive (Ertem et al., 2007). These authors of the various studies do share the similar concepts of the language milestones a child acquires at a particular age range. There are a few times where some of these milestones presented have some skills overestimated

or underestimated. An example is one study may expect children to produce their first word within eight months to one year, another may state that between ten months to one year. This study adopts Dosman et al., (2012) study on communication milestones. Their study considered the need to be explicit and very accurate about the exact age range a child is expected to acquire certain developmental milestones across five domains to avoid a possible misdiagnosis by clinicians. The domains are gross motor, fine motor, speech and language (communication), cognitive and socio-emotional milestones. They employed other evidence-based studies on communication milestones. They considered the oldest age at which a child is expected to achieve a particular milestone and standardized tests backed with referenced percentiles to determine the age range at which a child is likely to achieve each milestone. The table below shows the communication milestones of children from birth to age five years adopted from (Dosman et al., 2012) for the purposes of this study.

Table 1: Evidence-based communication milestones (0-5) years framework

AGE	COMMUNICATION MILESTONES
Newborns	Root suck; primitive reflexes; orients to sound; smiles to voice; variable cries
Two (2) months old	Gurgles
Four (4) months old	Coos
Six (6) months old	Looks toward person talking; vocalizes to answer; laughs
Nine (9) months	Looks to familiar named objects; inhibits to “no”, vocalizes to initiate
Twelve (12) months One (1) year	Turns to name; understands routine commands; babbles/ gestures intentionally for behaviour regulation (request: reaching, pointing;

	refusal: pushing or arching away) and social interaction (attention seeking: move arms and legs; social game: imitate clapping; representational: bye-bye)
Twenty-four (24) months Two (2) years	Has about 50 words; forms two-word phrases; talks instead of gestures; nods yes; can blow kisses and give high-fives (representation), speech is fifty percent (50%) intelligible to strangers.
Thirty-six (36) months Three (3) years	Follows two-step commands; three to four-word sentences, sequential narratives; understand wh- questions (what, which and why); speech is seventy-five percent (75%) intelligible.
Forty-eight (48) months Four (4) years	Follows three step commands; understands complex sentences; reports on past events; creates imaginary stories; word play; jokes
Sixty (60) months Five (5) years	Recalls part of a story; narratives have plots; future tense; speech is hundred percent (100%) intelligible

Source: Dosman et al. (2012)

2.3.2 Social Representations Theory

I also draw on the Social Representation Theory (SRT) to explain this study. The SRT was developed by a French Psychologist called Serge Moscovici in the late 1960s when he researched on social knowledge of mental disorders in France (Moscovici, 1988). He defined social representations as practical social knowledge that people draw on in their everyday lives (Moscovici, 1994). Since developing the theory, SRT has been applied in various applied fields of

health including mental health, cancer, diabetes, hypertension among others (Campbell & Jovchelovitch, 2000; de-Graft Aikins, 2002, 2005).

The fundamental assumption of the theory is that practical social knowledge has three components; content, sources and functions (Moscovici, 1981). Content of social representations focuses on what people know, or the everyday sociocultural knowledge that people hold about a particular health problem (Moscovici, 1994). In applying the SRT to this study, the content was used to explore the knowledge that mothers of children with communication disorders have regarding typical communication development within the first five years of life.

Sources of representations focuses on assessing the sources where individuals get their knowledge from (Moscovici & Duveen, 2000). Within the context of this study, the sources were used to explore where the mothers of children with communication disorders get information about early speech and language development. Previous studies have reported that the dominant sources of knowledge on health problems include scientific knowledge (which come from health experts), common sense knowledge (which come from everyday observation), religious (which come from beliefs in supernatural narratives), media (traditional and social media) and their own experience of health conditions (Campbell & Jovchelovitch, 2000; de-Graft Aikins, 2002, 2005). The sources where the mothers get knowledge of communication development milestones and disorders are explored and compared and contrasted against these dominant sources.

Function of representations has to do with what people do with the knowledge they have (Moscovici, 2008). In other words, the theory argues that social knowledge is very powerful in a sense that it informs people's actions and practices (Moscovici & Duveen, 2000). Within the context of health for instance, functions of representations explore the various ways and means through which people seek treatments or manage their health conditions (Moscovici, 2008).

Therefore, in applying the SRT to this study, the function of representations focused on exploring the strategies or activities which mothers of children with communication disorders engage in with their children and how effective they find these activities.

Using the SRT as a framework for this study has the strength of unearthing the repertoire of knowledge of non-professional groups, which in this study are the mothers. However, the theory has some limitations. The key limitation is that the theory does not focus on the effectiveness or otherwise of the content of knowledge, or the reliability of the sources of knowledge and the utility of the functions of knowledge (Campbell & Jovchelovitch, 2000). The focus is just understanding what exists in lay groups so that professional health practitioners can work better with lay groups. Therefore, regardless of the limitation, the SRT has the potential of empowering professional health practitioners to better understand their clients and help them manage their conditions better (de-Graft Aikins, 2005).

2.4 Review of Empirical Studies

This section presents review and discussions of empirical studies that have investigated the maternal knowledge of communication milestones and disorders. The studies are reviewed around three thematic areas; assessment of knowledge on communication milestone, maternal knowledge of communication milestones, and stimulation strategies used by mothers.

2.4.1 Assessment of Knowledge on Communication Milestones

There are assessment tools and kits that are used to assess knowledge of an individual on communication milestones. These tests must be standardized to ensure that the results generated are empirical. The problem however is that there are no universally accepted standardized tests

used in assessing all populations globally (Dosman et al., 2012; Duby et al., 2006). This is because assessment tools must be culturally and linguistically appropriate (Kathard & Pillay, 2013) to achieve efficient results. Studies that have explored knowledge of mothers on communication milestones mostly do not only focus on communication but include their knowledge on milestones for motor development, cognition and socio-emotional development. Duby et al., (2006) reports that recent studies are focusing more on broader scope of milestones rather than a specific area.

Standardized tests are created for specific populations. These populations mostly happen to be in the developed countries due to the availability of resources (Stephens et al., 2015). Also, speech and language therapy employs Eurocentric beliefs and models (Nixon et al., 2015) in rehabilitation. Africa is now adopting these allied health professions with little or no studies in these areas (Gupta et al., 2011; Wylie et al., 2016). The lack of resources and the novelty of the field of speech and language therapy in Africa may account for the reasons there are no standardized assessments to assess both children's language development and mothers' knowledge of communication milestones effectively. Standardized assessments are normed on children from a particular culture and linguistic background. Assessing children from different cultural and linguistic backgrounds with a particular assessment tool normed on a different group of people will lead to a misrepresentation of results (Qi & Marley, 2009).

The most widely used standardized assessments in assessing maternal knowledge on communication milestones is the Knowledge of Infant Development Inventory (KIDI) (Bornstein & Cote, 2004; Bornstein et al., 2020; Huang et al., 2005; Karuppappan et al., 2020). In these studies, the KIDI was used to assess maternal knowledge on a broader scope of development milestones including communication. Thus mothers' knowledge on communication milestones was not the sole focus of these studies. Bornstein et al., (2020) reports that the KIDI was the first

assessment tool prepared by MacPhee and Mex Nee, (1983) and the most widely used in the assessment of maternal knowledge. It was normed on four groups: college students, mothers, doctoral level psychologists and pediatricians who were all American citizens (MacPhee & Mex Nee, 1983). “The KIDI is made up of a 75-item questionnaire that assesses knowledge of parental practices, health and safety guidelines and norms and milestones relevant to children’s growth from birth to age two” (Bornstein et al., 2020). Each KIDI item must target an information that pediatric professionals believe mothers must know (Bornstein et al., 2020). It is not surprising that in a study that assessed knowledge of mothers from Argentina, Belgium, Italy, South Korea and the United States of America; there was a need to translate the KIDI from English to the languages of the other countries as well as consider the cultural appropriateness of certain questions in the KIDI (Bornstein et al., 2020). Several multicultural studies that compared maternal knowledge of child development across different cultures (Bornstein & Cote, 2004; Bornstein et al., 2020; Huang et al., 2005) reported that American mothers seem more knowledgeable than mothers from other cultures and countries of origin. Bornstein et al., (2020) reports that even though there is a careful translation of the KIDI and a careful consideration of the cultural appropriateness of these questions when addressing people from other ethnic backgrounds, it still remains a limitation in the use of the KIDI on mothers from other backgrounds such as (Karuppappan et al., 2020) who assessed mothers’ knowledge of developmental milestones in India using the KIDI.

Another standard tool used in assessing maternal knowledge on child development is the Caregiver Knowledge on Child Development Inventory (CKCDI) in (Ertem et al., 2007). The aim of the study was to explore the knowledge of about 1,200 mothers with children who are three years of age or below in developing countries. The author reveals that several assessment instruments used in both developing and developed countries were reviewed, however, no single one was considered

suitable for the purpose of the study. The reasons were that either the instrument as a whole or items in it were culture specific and difficult to understand by mothers in Turkey or the instrument focused on older children or did not include knowledge of stimulation activities. The CKCDI focused on a number of developmental skills, which are sight, vocalization, social smiling and overall communication development. This is also another indication that the assessment tool did not focus solely on communication development but other aspects as well. Other tools used in assessing maternal knowledge are the Hawaii Early Language Learning Profile Checklist and the Bayley Scale of Infant Development (Tamis-Lemonda et al., 2002) used in assessing teenage mothers' knowledge on child development milestones.

There are two major studies that focused on maternal knowledge of communication milestones (Begum & Kalam, 2012; Williams et al., 2014) with no focus on other areas like motor development and cognitive development.

Begum & Kalam (2012) explored the understanding of mothers on child communication development. The study was conducted in Dhaka, Bangladesh involving 10 mothers. The Preschool Language Scales (IV) (PLS-4) was employed as the assessment tool to assess mothers' understanding. The PLS was first published in 1969 and the fourth version in 2002, and was normed in English and Spanish (Zimmerman & Castilleja, 2005). It assesses the various components of language based on expressive and receptive language (Zimmerman & Castilleja, 2005). As such, in order for Begum & Kalam, (2012) to use the assessment tool in their study, they translated the PLS-4 into Bangladeshi language. As pointed out by (Bornstein et al., 2020; Qi & Marley, 2009) that the use of assessment tools normed on a particular culture, context and language on a different group of people mostly does not give a true reflection of the situation on grounds despite giving it a careful consideration.

Lastly, another major means of measuring mothers' knowledge on communication milestones is the use of literature. In a study, (Williams et al., 2014), a survey of first time mothers' knowledge on communication milestones and strategies used in facilitating their children's communication skills, the authors used evidenced based communication milestones documented in literature as the yardstick to measure mothers' knowledge on communication milestones. Thus, the inputs made by mothers were measured against the consistency of what literature has found out and made evident on communication milestones.

As studies from past (Lansdown et al., 1996) till recent ones (Kogila et al., 2016; Visser-Bochane et al., 2019) have proven that there is a high level of consistency in which children across the globe attain communication milestones per their ages. For example, every baby in the world is expected to coo between the fourth and the fifth month. This is independent of where you are born, country of origin and any other factors. This makes literature a sure tool to rely on in assessing maternal knowledge especially as there is no need to consider any cultural factors or linguistic factors due to standardization. In fact studies like (Dosman et al., 2012; Tamis-Lemonda et al., 2002) despite the use of standardized tools in their various assessments, at a point in time, included evidenced based milestones found in literature to add to their assessment due to cultural differences and linguistic variance of the participants involved in their studies. This indicates that literature can be used in the assessment of maternal knowledge and it will give a true reflection of what these mothers know concerning communication development. Especially in a country where there are not yet standardized tests developed in this regard.

2.4.2 Maternal Knowledge of Communication Milestones

Maternal knowledge refers to what mothers know concerning developmental norms and milestones (Huang et al., 2005). The knowledge mothers have about developmental milestones helps them to understand normal child development as well as enable them identify potential problems with delayed development (Kogila et al., 2016). This is in line with communication. Mothers with knowledge of communication milestones are more likely to be able to identify problems with their children's early language development. In a survey that explored the knowledge first time mothers had on communication milestones, Williams et al., (2014) found out that these mothers gathered knowledge of communication milestones from friends, family, parents, internet and then health professionals. About one-third of these mothers reported seeking information about communication development from the internet whiles thirty-five mothers out of the total fifty-four reported that they received some form of education on communication milestones from their antenatal visits during their pregnancy. In another study which investigated the knowledge teenage mothers have on developmental milestones, the findings showed that these mothers' knowledge of children's development were mostly pecked at the current developmental stage of their children (Tamis-Lemonda et al., 2002). This means that if a mother's child was three years of age, it was most likely that all the mother would know about children's development was from birth to age three. Tamis-Lemonda et al., (2002) reports that majority of the children of these teenage mothers were less than twelve months of age. As such mothers were able to tell the appropriate age range for onsets of early communication milestones occurring before twelve months compared to those that occur after twelve months. If such is the case, then maternal knowledge can be said to be influenced by experience (Bornstein et al., 2020). This is true comparing to the typical Ghanaian culture, where first time mothers must have either their mothers

or an older female relative around to help with the caring of the neonate. After mother gives birth to a second and third child, they are considered well vested in the art of neonatal care and may not necessarily require any guidance from an older female. In fact, studies in this field have proven that maternal knowledge is associated and influenced by sociodemographic factors such as age, socioeconomic status and education (Huang et al., 2005; Karuppanan et al., 2020). Huang et al., (2005) defined most of these sociodemographic influence on maternal knowledge as high risk factors, thus mothers in this category are most likely to show a lack of knowledge on communication milestones. These include first-time mothers (Williams et al., 2014), adolescent mothers (Tamis-LeMonda et al., 2002), depressed mothers, low income mothers, mothers of preterm infants (Roopnarine et al., 2015) and culture (Bornstein et al., 2020; Huang et al., 2005). Currently, there have been no studies on the knowledge of mothers of children with communication disorders on communication milestones. It is therefore unknown where to classify this category of mothers as low risk or high risk in this regard.

What mothers know concerning milestones is considered very important as health professionals depend on the information given by mothers as first-hand information to help in assessing their children (Bornstein & Cote, 2004). In fact, the assessment of a child's development is dependent on the report of the parents and direct assessments carried out by the clinician (Nordahl-Hansen et al., 2014). Miller et al., (2017) compared parental reports to outcomes of direct assessments by clinicians. The findings showed that there were no significant differences in the outcomes of what parents reported and what the clinician found out after assessment. This implies that parental report on children's developmental milestones are reliable per the study. However, the study indicated that parents were good at recalling and reporting gross milestones (early first step) and medical outcomes (birth weight and illnesses during infancy) but their ability to recall early language

development milestones were lower. This is also reported in a recent study that assessed mothers' knowledge on developmental milestones using the KIDI (Karuppanan et al., 2020). The use of the KIDI implies that all developmental milestones: motor, language, cognitive and socio-emotional development were assessed. The conclusion was that generally mothers have lower knowledge on communication milestones (Karuppanan et al., 2020). Mothers do not have sufficient knowledge of communication milestones (Begum & Kalam, 2012) and they have expressed the need for more information on communication milestones to be made available to them (Williams et al., 2014).

Generally, studies that have compared knowledge of mothers on child development across different race or cultures on communication milestones have found out that there are variances in what mothers know. In an early study, Huang et al., (2005) compared knowledge of white mothers, Hispanic mothers and African-American mothers on developmental milestones. The aim of the study was to find out if there was a significant association between maternal knowledge of child development and parenting behaviours among different mothers of different race. The findings showed that Hispanic and African-American mothers associated greater knowledge of child development by providing a higher quality home environment. Also, Hispanic mothers associated greater knowledge of child development with good mother-child interaction during a free play context. Lastly, white mothers associated greater knowledge of child development with a high-quality mother-child interaction during teaching. The basic conclusion was that improvements in maternal knowledge of child development will improve parenting practices.

Another multicultural study, Bornstein et al., (2020) assessed parental knowledge using the KIDI across five different countries: Argentina, Belgium, Italy and the United States of America. The outcome showed that mothers from the United States showed higher estimates of parenting

knowledge than the other four countries. Argentine and South Korean mothers had the lowest levels of knowledge on parental knowledge. It must however be noted that these studies may have limitations due to the use of the KIDI. The KIDI was normed on the American population and as such despite its careful translation to suit other cultures in studies like these, the American mother may have a natural upper hand. Bornstein et al., (2020) makes a claim that cognition about parenting in different parts of the world especially outside industrialized nations might reflect traditional bases of knowledge.

There is therefore the necessity to consider the knowledge of mothers on communication milestones in developing countries. In a study that considered the understanding of ten Bangladeshi mothers on their role in children's language development, Begum and Kalam, (2012) concluded that these mothers did not have sufficient knowledge of children's language development as well as the effects of such menace despite being literates. Australia is known to have a good number of Speech and Language Therapy services (Wylie et al., 2013). It is also a developed country. A study conducted in Australia sought to explore the knowledge of fifty-four first time mothers on communication milestones and strategies employed by these mothers to facilitate early speech and language development in their children (Williams et al., 2014). The findings showed that mothers did not have adequate knowledge of communication milestones. However, the study was staged in the outer regional areas of Australia, where there is no access to speech and language services, the need to travel across a long distance to access services, expensive travel costs and decreased awareness of services. These conditions are much similar to the landscape of Ghana in relation to Speech and Language Therapy services. This indicates that even in developed countries where factors like these are at play, the outcomes of speech therapy services are likely to be same as developing countries that are now trying to establish the field.

Kogila et al., (2016) involved thirty mothers in a study in India to assess mothers' knowledge on communication milestones as well as establish a relationship between mothers' knowledge and sociodemographic factors like age, education and family size. They concluded that the influence of sociodemographic factors on maternal knowledge was insignificant. This is questionable as the study only involved thirty mothers from the Chettinad district in India. However, the other findings were that about sixty three percent of mothers had moderate knowledge while thirty seven percent had inadequate knowledge of communication milestones.

Another study was recently staged in India by Karuppanan et al., (2020) with the aim of determining how much mothers know concerning communication milestones as well as the association of sociodemographic factors like mother's age, education, occupation and number of children mother has. The study also used the KIDI which assesses mothers' knowledge on all developmental milestones including communication, motor, socio-emotional and cognitive development. The study employed one hundred and seventy-four mothers from the Kachipuram district in India. Chi-square analysis however revealed that only maternal education influenced maternal knowledge on parenting, the other sociodemographic factors were insignificant. In relation to maternal knowledge on developmental milestones, the study concluded specifically that mothers exhibited low levels of knowledge, especially physical and language development milestones had the least knowledge. The studies concluded that this may be due to lack of communication to health experts and lack of exposure to sources of information on communication milestones.

2.5.3 Stimulation Strategies Used by Mothers

In the language development process, interventions are basic efforts made to help address a communication difficulty. An intervention may be direct or indirect. Direct intervention involves an interaction between the therapist and the client with the communication disorder (Nordahl-Hansen et al., 2014). Indirect intervention involves the therapist educating the mother or caregiver to be able to engage the child outside therapy contexts (Buys, 2020). Children visit the clinician once a while when given an appointment. However, these mothers are always with their children, as such equipping them with the required knowledge on engaging these children in their home settings will empower them. This will also help boost the children's communication abilities. McLeod, Harrison and Wang, (2019) posit that failure to receive early intervention can lead to long term impacts on academic, occupational and even emotional outcomes.

Parents who have knowledge about normative child development are most likely to create a language-friendly environment to promote parent-child interactions between parents and their children which will boost their language abilities (Bartlett et al., 2018). Williams et al., (2014) suggests that there is little evidence that caregivers understand the facilitative role of early communication stimulation and its influences on language development. Despite such claims, the study still indicated that mothers involved believed that early language stimulation was important for communication, emotional and neural development. As such, parents employed stimulation strategies like explaining what they are doing to the child, singing, reading and exchanging glances at each other and objects.

In a study to evaluate whether the quality and quantity of Parent-Child Interaction (PCI) had any contribution towards child language development, Safwat and Sheikany, (2014) hypothesized that different PCI patterns could play a major role in facilitating children's language development. The

findings showed that majority of parents failed to create an environment which is rich for language development. In fact, some parents expressed surprise that their involvement was required during therapy and doubted if they could make time to participate in such activities with their children. An early study (Ertem et al., 2007) pointed out that studies in Western countries indicate that knowledge of mothers about their infants and young children's development has important implications. The implications are that, if mothers' knowledge is that children must acquire a particular milestone early, they become intolerable towards the child and if the mothers' knowledge is that a child must acquire a certain milestone later, they become relaxed instead of stimulating the child towards the acquisition of such milestone.

Huang et al., (2005) posit that caregivers with accurate knowledge of developmental milestones have a fair idea on how to stimulate their children towards acquiring communication milestones, which enable them attain better outcomes. They indicate that they use activities such as telling these children stories, read to the babies and talking to the children in a conversation.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the method used in the study; the selected site chosen for the study, the participants, inclusion and exclusion criteria, the sampling technique, data gathering procedure, instrument used, data analysis and validation process.

3.2 Study Design

The study adopted a qualitative study design using semi-structured interviews and thematic analysis. Qualitative study designs provide in-depth description of experiences (Cresswell, 2007) while semi-structured interviews suits this quest by enabling key participants sampled for the study to share their personal experiences, attitudes, perceptions and beliefs related to the topic of interest (DeJonckheere & Vaughn, 2019). An exploratory research was used because it is an approach that is likely to address a novel area with little to no prior research (Brown, 2006).

3.3 Study Site

The study was conducted at the speech and language therapy clinic, Korle-Bu Teaching Hospital (KBTH). According to Okoroh et al., (2020) KBTH was founded in 1923 and remains the largest tertiary teaching hospital and the major referring hospital in Ghana. This is where the first speech and language therapy clinic was still established. It still serves the national population although new speech therapy clinics have been created in other hospitals like Ridge Hospital and the Cape Coast Regional hospital. The hospital is situated in the southwestern part of Accra, the capital of Ghana. The hospital treats patients referred from centers all over Ghana and neighboring West African countries.

3.4 Study Population

There is currently no population-based data on the prevalence of communication disabilities in children within Ghana to the best of my knowledge.

The population for the study consisted of mothers who have children between the ages of zero (0) to five (5) years with communication disorders, who were visiting the study site for management. This population was chosen because an early observation of families who visit study site showed that most of these children with communication disabilities who were brought by their mothers to the clinic were within this age range.

3.4.1 Inclusion criteria

The inclusion criteria included:

1. The mother voluntarily agreeing to partake in the study
2. The mother had at least a child with a diagnosis of a communication disorder.
3. The child with communication disorder is between the ages of (0 – 5) years old.

3.4.2 Exclusion criteria

Exclusion criteria for the study included:

1. If the child with communication disorder is more than five years old.

3.5 Sampling Size and Technique

The study involved twelve (12) mothers who were sampled upon their visits to the Speech and Language Therapy (SLT) clinic with their children. Semi-structured interview study designs are

very meaningful despite involving small numbers ranging from eight (8) to (12) (DeJonckheere & Vaughn, 2019). The use of small numbers in qualitative research is to enable a more detailed investigation with each participant (Crouch & McKenzie, 2006; Robinson, 2014). Equally due to the outbreak of the COVID-19 pandemic, the numbers of mothers who visit the clinic have lessened. These mothers satisfied the inclusion criteria of the study and were interviewed by the researcher using the semi-structured interview guide. A convenience sampling technique was used in selecting participants for the study. Convenience sampling involves collecting data from a population that is close at hand and easily accessible to the researcher (Rahi, 2017).

3.6 Procedure for Data Collection

Mothers who had come to the clinic were spoken to, to ensure they were within the inclusion criteria of the study. If a mother was, the researcher then gave a brief overview about the research and asked mothers if they were interested in participating in the study. If a mother was, they were then given a Participant Information Sheet (Appendix A) which explained the nature of the research to them. The researcher then answered any questions mothers may have had, after which they were given a Consent form (Appendix B) to sign. Each mother was then sent to a private room, where the interview was conducted. The researcher was with the participants in the private room to ask parents the questions while recording. All interviews were conducted using English. Recording the interview made it easier for the researcher to transcribe responses.

3.7 Interview Guide

The data for the study was collected using in-depth individual interview guide. A first interview guide was prepared by the researcher. The guide was assessed by supervisors and student and

changes were made as required. The final interview guide used for the study can be found at the Appendix C. Each interview guide lasted about 15 minutes each. There was a pilot study which involved three participants. The aim was to ascertain how well the interview guide suited the purpose of the study as well as how it can elicit the needed information from participants.

The main study involved twelve mothers of children with communication disorders who were interviewed by the researcher. The audio recordings were saved with the corresponding unique identification number on the signed consent form and the response sheet. The saved file captured the participant's number example [participant one (P1)] and also the number of children the mother has example [first time mother] for a mother who may have had just a child. Data was transcribed verbatim into a response sheet. All data were collated and analyzed thematically.

3.7 Data Handling

Data was audio recorded, transcribed and organized into themes on a personal computer in an encrypted file and backed up on a weekly basis. All electronic files are password protected. Only the researcher and the research supervisors had access to the data. All hard copies of data are being kept under lock and key. Unique identification codes were used on the consent form, response sheets and used to name audio recordings.

3.8 Data Analysis

Thematic analysis was used. Thematic analysis is a commonly used method for identifying and analyzing patterns in qualitative data (Braun & Clarke, 2013). Braun and Clarke (2006) outlined six (6) phases in thematic analysis, which was used in the analysis of the data. The stages of thematic analysis used in this study were: (1) Familiarization and data immersion, by repeated

reading and re-reading; (2) Coding by generating succinct labels for important structures of the data which are of relevance to the research question guiding the analysis; (3) Searching for themes by reflecting and reviewing significant, rational patterns in the data, then collating those relevant to the research questions; (4) Reviewing themes and ensuring that the themes correspond with the coded and complete data-set; (5) Defining and naming themes by writing a detailed analysis of each theme and formulating informative names for each theme and; (6) Writing up through telling a coherent story with the data in relation to existing literature by merging the analytic narrative and data extracts.

3.9 Trustworthiness

Trustworthiness is important in a qualitative data to ensure its authenticity. To ensure trustworthiness, four procedures (credibility, transferability, dependability and confirmability) must be taken into consideration. Trustworthiness in this study was ensured by checking data repeatedly and using peer review and consensus during creation of themes to minimize bias and maximize transparency of coding decisions. Peer review means to subject the research work to the scrutiny of other experts in the field to check its validity and evaluate its suitability for publication. In the case of this survey, the work was given to colleagues and senior colleagues of the researcher to read through and find loop holes which could be addressed.

3.10 Ethics

Ethical approval was sought from the Ethics and Protocol of the School of Biomedical and Allied Health Sciences (SBAHS) of the University of Ghana. This was done by writing a proposal to SBAHS, which was then approved, and permission was thus granted for this study to be conducted. Permission was also sought from the Head of the Speech and Language Therapy Clinic to carry

out the study. The head of the clinic informed all mothers about the research. She also expressed her agreement to the collection of data from the clinic. She then encouraged them that it was within their will to participate. The researcher also briefed mothers about the details of study. Mothers who were interested were given the participation information sheets and consent forms to then sign before being interviewed for the study.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the findings from the study. The demographic characteristics of the participants are presented first. After that, findings on the knowledge of communication milestones are presented. Next, the sources of knowledge on communication development milestones and disorders are presented. Lastly, findings on the participants' engagements in simulation strategies are presented.

4.2 Demographics of Participants

This theme provides the general background of participants involved in the study. It includes the following sub-themes: ages of the participants (mothers and their children), educational status of mothers, occupation of respondents, number of children, visits to the speech and language therapist and geographical location of participants. A total of twelve mothers consented to partake in the study.

Table 2: Demographics of Participants

Participants	Age Range (years)	Education	Occupation	No. Of child(ren)	No. of child(ren) with comm. Disorders	Birth position of child(ren) with comm. Disorders	Age of child(ren) with comm. disorders	Visits to the SLT	Geographic Location of Participants
1	36 - 40	Secondary	Seamstress	3	1	3 rd child	3 years	2 nd time	Gbawe
2	26 – 30	Tertiary	Salon Manageress	2	1	2 nd child	2 years	2 nd time	Abokobi
3	31 – 35	Tertiary	Nurse	3	1	2 nd child	3 years	4 th time	Ofankor
4	31 – 35	Tertiary	Nurse	1	1	1 st child	2.3 years	3 rd time	Korle- Bu nurses’ quarters
5	36 – 40	Primary	Trader	3	1	3 rd child	2 years	1 st time	Adenta
6	31 – 35	Tertiary	Unemployed	1	1	1 st child	2 years	2 nd time	North Kaneshie
7	26 – 30	Primary	Hair stylist	2	1	2 nd child	3 years	4 th time	Lakeside
8	36 – 40	Tertiary	Unemployed	1	1	1 st child	2 years	1 st time	Ofankor
9	36 – 40	Secondary	Prison officer	3	1	3 rd child	3 years	1 st time	Akuse
10	41 – 45	Primary	Hair stylist	3	1	3 rd child	4 years	1 st time	Osu
11	36 – 40	Tertiary	Entrepreneur	2	1	1 st child	3 years	2 nd time	Madina
12	20 – 25	Secondary	Unemployed	1	1	1 st child	5 years	1 st time	Ashaiman

Source: Fieldwork (2020)

4.2.1 Age Distribution of Participants

The study involved twelve mothers of children with communication disorders. The children involved were between the ages zero (0) and five (5) years old. The ages of mothers were categorized into selected ranges. The age ranges were: (18-25), (26-30), (31-35), (36-40), (41-45), (46 and above). The age categorizations were considered best for the study. This avoids the uncomfortable state that comes with people having to provide their specific ages in a study. There are mothers below age eighteen (18) in Ghana, however, this age was considered more appropriate as it is considered the legal age for adulthood in the country per the constitution. The data showed that mothers who took part in the study ranged from age eighteen (18) to forty-five (45) years. Five (5) mothers were between the range 36-40. Three (3) mothers aged between 31-35, two (2) mothers were between 26-30 and the age ranges 18-25 and 41-45 had a mother each. These mothers had twelve (12) children with communication disorders. This means each mother had only one child with a communication disorder. The children were between two (2) and five (5) years of age. Five (5) of these children were two (2) years old. Another five (5) of these children were also at age three (3) and the ages four (4) years and five (5) years had one child each.

4.2.2 Educational Status of Respondents

This sub-theme sought to give a breakdown of mothers' educational background. All twelve (12) mothers who took part in the study were literates. Three mothers had basic level of education. Another set of three mothers had secondary level of education while six of these mothers have had tertiary education.

4.2.3 Occupation of Respondents

Out of the twelve respondents, nine of them were employed whiles three of them reported that they were unemployed. Out of the nine mothers, six were self-employed. They mentioned occupations like Entrepreneurs, Trading, Hair stylists and Seamstress as their fields of work. The other three mothers worked with the government service. Two out of the three were nurses and the other one, a prison officer.

4.2.4 Number of Children

Mothers of children with communication disorders reported having at least a child. Four (4) mothers had a (1) child, three (3) mothers reported having two (2) children and five (5) mothers had three (3) children. Each mother however had only a child with a communication difficulty. These children with communication disorder had varying birth positions amongst mothers' children. Five (5) of these children were first-borns of their mothers, three (3) of them were second-born and four (4) of them were third-born of their mothers.

4.2.5 Visits to a Speech and Language Therapist

This sub-theme is to show if mothers have already visited a speech and language therapy for services. The reason is that it is more likely that as a mother visits a speech and language therapist continuously, she is most likely to receive knowledge on communication milestones. All respondents were first engaged by the researcher before meeting the speech and language therapist on the day of data collection. Out of the twelve (12) mothers, five (5) were coming to meet the speech and language therapist for the first time. Four (4) of these mothers had only met the therapist once, and they were coming for their second visit. One (1) mother has met the therapist twice and was on her third visit whiles two mothers were meeting the therapist for the fourth time.

4.2.6 Geographic Location of Participants

This sub-theme points out the distance mothers have to cover to access therapeutic services. Since speech and language therapy is a new field, it is centralized in the capital. People travel from distant places to access services. Eleven mothers reported staying in the capital. They came from places like Ofankor, Adenta, Osu, Madina, Abokobi and other places which are further away from Korle-Bu Teaching Hospital but have no option since they find no services around their place of residence. Those who reported knowing places nearer to them than Korle-Bu Teaching hospital, report that these places are private facilities and they cannot afford the costs. Only one mother came from another region, Eastern Region to seek SLT services in Accra.

4.3 Knowledge of Communication Milestones

This theme discusses the knowledge shared by participants concerning communication milestones children must acquire as they grow in their early ages specifically zero to five years. This knowledge is not strictly pertained to their children with communication milestones. Some of the questions required that respondents share general knowledge of communication milestones. The knowledge shared by these participants were gathered and grouped based on the realizations made. These led to sub-themes grouped out of the main theme. The sub-themes generated includes knowledge of early communication milestones (0-2) years, knowledge of late communication milestones (3-5) years, identification of communication disorders and access to speech and language therapy services.

4.3.1 Knowledge of Early communication milestones (0-2) years

This sub-section the knowledge mothers of children with communication disorders have concerning early communication milestones. The ages of consideration here were children less than a year old, a year old and two years old. The observation was that per the interviews, mothers seemed to have more knowledge of these milestones compared to ages three, four and five. Some of this knowledge shared by these mothers are found in the narratives below:

'Mostly when they are fresh from three months going, they cry when in need and turn to face a particular direction when they hear a sound' [Participant 2; second time mother]

'He should start babbling from four months. They probably start speaking by age one.'
[Participant 4, first time Mother]

'The child communicates by crying that is to say he is hungry' [Participant 5, third time mother]

Mothers therefore believed that newborns who have not yet turned age one cry to make requests or when in need of something such as food, have their diapers changed and others.

Other mothers also discussed other means of communicative behaviours they expect from babies below age one. Some of these behaviours were more related to the baby's receptive language development and expressive language, which is non-verbal due to baby's inability to speak at this age. According to one of the respondents, she expects to see that the child turns when their names are mentioned.

'Usually, these periods the child would already be bearing a name so when I call her, she is supposed to respond by turning since she cannot talk. Also, if I am in possession of food

and she wants to eat, she needs to raise her hand or do something to show that she is interested in the food.’ [Participant 9, third time mother]

Most mothers involved in the study indicated that they expected their babies to produce their first word at age one. They also believed these should be followed by other one-word utterances which will be used to express themselves. The following narrative from the transcripts tells what mothers have in mind concerning the communication milestones of a year-old child.

‘he or she should be able to say basic words like mummy and daddy. Also, she should be able to understand when you say come’ [Participant 1, third time mother]

‘he should be able to say mummy and daddy. Also, when talking to him, he should be able to say and understand stop. And when giving something to him, he should be able to say I don’t want it’ [Participant 5, third time mother]

Some section of these mothers believed that by eight or nine months, a child must utter their first word. For some mothers, children at age have different communication skills. They tried to explain that some of these children are likely to have delays while others may not, or likely to even develop faster than the required milestones. They believe that whether a child will produce his first word at age one, before or after depends on a number of factors.

‘some children talk at an early stage and others don’t. when my son turned one, he did not show any sign of talking until he turned a year and half before saying mummy and daddy and calling his sister’ [Participant 10, third time mother]

‘I had a son before having a daughter. For my son, his speech and walking delayed. He started walking after age one and his speech delayed till a year and eight months. For the

girl, before she could even walk properly, she was talking. So it's different with every child'
[Participant 7, second time mother]

The last age of focus within this sub-theme is age two. Most of the respondents explained that at age two, they expect that children generally should be talking. They should be able to hold mini conversations, answering to usual daily salutations and also should be able to request for all their immediate needs when necessary.

These are some of the expectations mothers expressed concerning a two year old child.

'He should be able to talk or imitate you if you make sounds that carry meaning or understanding' *[Participant 8, first time mother]*

'By then she should be able to be sent on errands inside the house and also must be able to feed herself. She should be able to feed herself. She should be able to respond when called upon and also has to know how to pronounce her mum and dad's name' *[Participant 9, third time mother]*

'the child should be able to respond to how are you and other petty things. The child before this was able to communicate with me as at that time and could eat by herself.' *[Participant 1, third time mother]*

'at age two, he should be able to say it when he wants to urinate, when he needs something, he should be able to tell you, as well as when something is bothering him' *[Participant 2, second time mother]*

4.3.2 Knowledge of Late Communication Milestone (3-5) years

This sub-theme unveils an interesting pattern in knowledge of mothers of communication milestones. Almost all mothers could not state categorically the communication skills they expect to see in a child at these stages of development. Most of the inputs made were geared towards general communication, stating that all their expectations at these stages is for the child to talk and be able to say everything. Some even added the need for the child to be schooling at this stage. Some fraction of these mothers also focused on motor milestones related skills.

For a child at age three, here are some of the inputs mothers made.

'at age three, since the child is already grown, he should be able to be sent on errands to bring things to you' [Participant 2, second time mother]

'he or she should have started learning by then' [Participant 1 third time mother]

These inputs from mothers showed that generally as the child begins talking right from the onset, mothers do not really concern themselves with the specifics of what to expect communication-wise at the older ages. They attain satisfaction by the fact that the child is able to express him or herself.

Another major observation is that, most of the mothers repeated the same milestones they expected to see at age four for age five as well. Below are some examples from the narratives.

'interviewer: let us have a discussion on the language skills you expect from a child when he or she is four years old?'

'P.6: by then he will be going to class one so he should be talking properly...'

'interviewer: what about when he or she is five years old?'

'P.6: the same thing as age four'.

[Participant 6, first time mother]

Most mothers even upon realizing the trend of questions seeking to know their knowledge on communication milestones at various ages simply put together ages four and five in their response.

Some of such inputs are as follows:

'at age four and even five, the child should be able to say and hear everything. He is growing more and more so he should be able to say everything. He should be able to communicate and express himself to everyone.' [Participant 5, third time mother]

'by age four and even five, he should be done with preschool and ready for primary school so you expect that his developmental stage for speech should have completed' (Participant 8, first time mother)

'at age four, he is grown, so even in your absence in the house, he should be able to serve himself and also tell you what he wants and also dislikes even same for age five too' [Participant 9, third time mother]

4.3.3 Identification of communication disorders

This sub-theme explores how mothers of children with communication disorders were able to tell that their children had a disorder in their communication development. Some mothers were able to detect this at a very age, before their children turned a year old. Other mothers were able to tell in the first and second years of their children's development.

'from six months going, I noticed she was not reacting to sounds when we started attending weighing, I complained about that and I was told there is no problem and that it's normal

because some children have delayed speech so I should exercise patience. I waited until a year and still there was no improvement so I had to take a step' [Participant 2, second time mother]

'I realized he had a problem when he was four months and it doesn't pertain to only the communication difficulty but also a problem with walking' [Participant 5, third time mother]

In some cases, mothers seemed to be very much conscious about observing their children due to other factors at play such as delays in motor development. This makes it easier for them to identify communication difficulty with their children at an early age. From the narrative below, we see the inputs made by one of these mothers.

'Growing up, he delayed in some milestones such as crawling, sitting and walking but was able to call mum, grand-mum and others. At this age, he is supposed to be constructing sentences but I realized that he is unable to do so' [Participant 12, first time mother]

Other mothers also identified their children's communication disorder at early ages between one and two years of age.

'I think I noticed when he was two years because he wasn't communicating and he cried for everything he needed. It depended on me to decipher what he needed' [Participant 3, third time mother]

'when he turned one year six months, I realized he could only say "bye-bye" with the action and only say "take" when he is giving you something. When he was thirsty, he usually went to the fridge himself to point at it or pick water himself if it is at his level' [Participant 4, first time mother]

'Just as I said, he started saying mummy, daddy, water and others at one year six months. Since then he's been unable to say anything aside that. Just the same words until three years. I noticed that he sometimes makes an effort to talk or say something but is unable to say it until you pay particular attention to him before you realize what he needs or wants to say. When he turned four years then he spoke once a while meanwhile at this stage he is supposed to be talking fluently. But now he has improved. He is able to watch cartoons and sing along with them, repeat whatever they say and also play' [Participant 10, third time mother]

One respondent indicated that she had no idea her child had a communication difficulty. The following narrative are her inputs made to this discourse.

'I didn't know my child has a communication difficulty. It was a friend who spoke to him and he didn't respond so he told me this is something of concern so should be taken to the hospital' [Participant 8, first time mother]

A group of mothers indicated that they were able to identify that their children had a communication disorder by comparing them to their peers in the family or society. Some also compared their development with development patterns of their older siblings in cases where mother had more than a child and child with communication difficulty happens not to be the first child.

'when he was two years old, I have a cousin whose child is just two weeks older than him but can speak and pronounce names. But my child could only say "mama" and "dada", that was when I realized something was wrong' [Participant 6, first time mother]

'we have information on how a child is expected to behave and besides this isn't my first child so when we noticed the delay was too much then we realized there was a problem'
[Participant 7, second time mother]

4.3.4 Access to speech and language therapy services

This sub-theme focuses on how mothers were able to locate the SLT clinic and services as the field is new in the country and still growing. For almost all mothers, they gained information about the clinic through referrals from doctors at the data collection site: Korle-Bu Teaching Hospital or from other hospitals.

'We spoke to a doctor then he asked us to do audiology to see if he has a problem with his ears. He then underwent the test and we were told his hearing was perfect so was asked to come and see the speech therapist' [Participant 3, third time mother]

'when he turned one, I realized he had delayed in talking although we thought the herbal medicine would cure the other problems. So when I consulted Princess Marie Louis Children's Hospital, I informed him that he can't talk neither can he walk but when placed down, he turns to check his surroundings. We were then told to go for a brain check. The result came out that he was epileptic in his brain. She also underwent audiology as ordered and also came out that he was deaf or couldn't hear. I was given a particular medicine to administer to him. In a month's time, I came back for another check. I was initially told to administer it for three months but I was curious to know the outcome. When I saw the doctor, he questioned me on why I had reported before the three months given and I told him I was anxious. After that, I was informed that everything is fine and he needs to undergo a speech therapy' [Participant 5, third time mother]

'I work at the ENT department so normally when the kids come here and need therapy, they normally bring them here so when I realized that my child was not speaking, I thought of bringing him here' [Participant 4, first time mother]

4.4 Sources of Knowledge on Communication Milestones

This theme, sources of knowledge on communication milestones, represented the various avenues mothers of children with communication disorders gain access to information on communication milestones. It also points out other avenues where mothers said they would like information to be made available for them to get access to. The theme is divided into two sub-themes: where mothers gather information on communication milestones and where mothers want information on communication milestones to be made available.

4.4.1 Where mothers gather information on communication milestones

This sub-theme unearths the various avenues mothers of children with communication disorders get access to information on communication milestones. The avenues mothers talked about ranged from personal experiences, reading from books and online sources on the internet and health professionals. The narrative below shared by one mother, describes the sources where these mothers basically depend on for communication milestones.

'Through studying, we basically read a lot because of him. We watch YouTube videos as well as read online. We also have a family member who is a nurse and a doctor friend so they educate us a lot.' [Participant 11, second time mother]

A major source of knowledge on communication milestones according to the respondents were their experience. Mothers reported that they are able to gather knowledge of communication

milestones from observing children of other family members as well as neighbours in the community. For non-first-time mothers, their older children have served as case studies for them to have adequate knowledge on early communication development in children. Below are some of the inputs made by mothers involved in the study on the theme:

'I have experience in motherhood so I know how children behave at times so when I noticed his behaviour then I concluded he had a problem' [Participant 5, third time mother]

'my experience as a mother and also my sister's children as well as mine' (Participant 9, third time mother]

'I study my children. It is my experience as a mother that equipped me with this information' [Participant 10, third time mother]

'when you are living with children, you are able to know all these things. It is sometimes even surprising to even hear a child say some things' [Participant 12, first time mother]

Other respondents also indicated that they read extensively on communication milestones. Some did read them from books, others read from internet sources as well as watch YouTube videos. For some mothers, their quest to read and watch videos was due to their child's condition. There was a desire to know more concerning their child.

'I read a book on children's milestones' [Participant 3, third time mother]

'I sometimes searched on the internet when I realized my child wasn't talking and also learnt some things when I came here first. At first, I went to Children's hospital and they said it could be the ear so we had an audiology test and everything was okay. [Participant 6, first time mother]

'I read on such information from the internet' [Participant 8, first time mother]

A few of these mothers gained such knowledge from the health professional either directly or indirectly. These are the inputs from such mothers as to how the health professionals, speech and language therapists imparted their knowledge of communication milestones.

'I got knowledge of communication milestones from an SLT friend who educates us on his social media status updates.' [Participant 4, first time mother]

'I sometimes searched on the internet when I realized my child wasn't talking and also learnt some things when I came here first. At first, I went to Children's hospital and they said it could be the ear so we had an audiology test and everything was okay.' [Participant 6, first time mother]

4.4.2 Where mothers want information on communication milestones to be made available

This sub-theme discusses where mothers of children with communication disorders would want to have access to information on communication milestones. Most mothers did mention that communication milestone should be made available at the antenatal clinics. For some mothers, they never received any information from their antenatal clinics on communication milestones. Some mothers did mention that they did but was not adequate. Mothers however believed that the antenatal clinics was the best place to provide such concrete information on early communication development. Here are some of the narratives in which mothers shared their thoughts.

'it should be available at antenatal since we attend that for a year and half. It will be best to be taught over there on how to interact with your child. Antenatal stage is best especially from seven month onwards.' [Participant 6, first time mother]

'I think it should be at the child welfare clinic, antenatal clinic, and postnatal clinic.'
[Participant 4, first time mother]

'maybe during antenatal. Unfortunately, I couldn't go for antenatal so I don't know whether it is taught there or not...' [Participant 8, First time mother]

One respondent did mention that there was some knowledge of communication milestones made available to mothers when they went for child care, especially when they begin going for the baby's weight to be checked in the very early years of the child.

'it should be taught at antenatal by the nurses but instead it is written in the weighing book provided. The question is how many mothers will have the time to read or even research to know that something is wrong. As such should be included in the topics treated during antenatal and also during weighing, they should teach us and question us on the child's communication as to how he behaves and every other thing pertaining to that.' [Participant 9, third time mother]

Some mothers shared that public education would help mothers in this regard. The sharing of this information at various gatherings like religious gatherings, social gatherings and other community programs will help mothers to keep up with knowledge on early communication development.

'it should be made available at social gatherings and even churches. Mostly when you go to hospital, you go there for information so it should be easily accessible there too. The media should also play a role.' [Participant 3, third time mother]

Mothers also did believe that a better place to access knowledge of communication milestones is the social media space. This space will make such information readily available at anytime for

anyone who wants to access them. The media space includes the internet, social media platforms and even advertisements using visuals to make comprehension of the concept easier.

'mothers do not have enough time on their hands so it will be best if visuals are used to educate us since we do not even have time to listen to speeches. And the probability of forgetting is high. These visuals can be shown on television and it will help a lot.'

[Participant 7, second time mother]

'Social media and internet will be best places to make such information available. I was taught some communication milestones and it is even in the weighing books. You are taught things the child should be capable of doing and the particular time it should happen'

[Participant 12, first time mother]

4.5 Knowledge of Stimulation Strategies

This theme discusses what mothers of children with communication disorders know concerning activities they can engage in with their children to help facilitate their early communication development. Mothers reported that they gained such knowledge on their visits to the Speech and Language Therapists. Some mothers did know about these activities, and some do engage their children in these but do not have in-depth knowledge of its contribution to early language development. Others also read about them from different sources like books and the internet. Mothers also shared their observations and thoughts concerning these activities. The theme is divided into two sub-themes. These are: activities mothers engage in with their children and observations made by mothers on stimulation strategies.

4.5.1 Activities Mothers engage in with their children

This sub-theme discusses the activities mothers engage in with their children to help facilitate their early speech and language development. Mothers mentioned a number of activities they engaged in with their children. Some mothers indicated the need to create a playful environment, take turns when playing with these children and engaging these children in brief and simple conversations.

The following narratives include some of the inputs mothers made on engaging their children in language stimulating activities.

'Have a playful environment and be saying things that you want him to say. And also, when you instruct him to do something and he does not act accordingly, you pick up the thing with him. An example is his shoe, so you should be engaging him.' [Participant 4, first time mother]

'playing and using different types of kid's equipment like Lego blocks and colours. I normally have plenty cartoons on my phone so when they are saying "A, B, C, D" and the colours, I interact with him. I try to pronounce the words to him and he does likewise but does not come out clearly.' [Participant 6, first time mother]

'Taking turns in doing something. I have audio recordings on my phone so I usually play it to him and record it so that he can be listening to it from time to time. Also, I teach him and record it so that he can be listening to it from time to time. Also, I have recordings of colours which he watches and gets to know what is being spoken of. I do all these because he is a visual learner' [Participant 11, second time mother]

Some mothers however did indicate that they do have very busy schedules. For these mothers, they are aware of these activities that do help in facilitating early language development but the

difficulty is that they have very little time to engage their children. These are the inputs from these mothers.

'we engage them in playing, conversations and reading. Sometimes due to our busy schedules when the child comes to us to play with, we tell him to go and watch television, but we need to engage them.' [Participant 3, third time mother]

'yes, I do know a lot of activities but the problem is time. Having a child with such an issue requires time. You need to stay with the child often in order to help him. You need to teach him how to communicate with you and all but not just send him to school.' [Participant 7, second time mother]

'it all has to do with having time for your child to engage in these activities. But due to money issues, we all go to work and when left in the care of someone else, the person would not have all the time for the child, so the child will lack so many things' [Participant 9, third time mother]

4.5.2 Observations made by mothers on stimulation strategies

This sub-theme discussed the observations and opinions of mothers on the outcomes of their engagement with their children in these activities. Most mothers did report that they do see some improvements despite the slow nature of these progresses made in their children's communication development. These improvements were associated with their engagement with their children in these activities that facilitate children's language development.

'when he started having difficulty in speech, we were advised to engage him in these activities, it is helping' [Participant 3, third time mother]

'it has been helpful because when he sees these, he tells you to read and is able to identify what it is but just can't talk properly. Also, at the antenatal stage, they have to check the tongue tie. Mine wasn't checked and I realized it when he was a year and eight months and that was when we went to the hospital for it to be cut. This should be checked immediately the child is born so that the mother takes the necessary steps.' [Participant 6, first time mother]

he is improving. Now when he needs something and he asks for it, we tell him that he knows where it is so he should go for it and he does that' [Participant 11, second time mother]

One respondent however indicated that she has different opinions on the outcomes of engaging her child in various activities aimed at facilitating his speech. She mentions that despite engaging her child in these activities, she has not made any positive observation in relation to his communication development.

'that is what I have been informed concerning engaging him but I normally do all the activities mentioned by the speech and language therapist and I don't get any feedback as expected' [Participant 4, first time mother]

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

The study aimed to explore the knowledge mothers of children with communication disorders have concerning communication milestones. The results in the previous section showed what mothers know concerning communication milestones, the various sources from which each mother gets information on communication milestones and the different ways through which they engage their children to help facilitate their communication development.

5.2 Knowledge of communication disorders among the mothers

The first research question examined; What knowledge do mothers of children with communication disorders have regarding typical communication development within the first five years of life? Communication milestones unfold the required stages a child must go through in their early language development. Mothers of children with communication milestones did share their knowledge on communication milestones.

The findings showed that the mothers of children with communication disorders proved to have some knowledge on communication milestones. Although these mothers could not identify precisely all the milestones there are for each age, they mentioned considerably a number of skills to expect at each stage in a child's development. In line with the evidence-based communication model, the current study shows that generally, the mothers had more knowledge of very early communication milestones between the ages zero and two years compared to the latter ages of three to five years.

The mothers' high knowledge of early communication milestones could be attributed to two possible reasons. First of them is that mothers knowledge of communication development are mostly peaked at the ages of their children (Tamis-Lemonda et al., 2002). Secondly, it could also be that at the major focus of mothers are for their children to be able to talk (Stephens et al., 2015). Once these children are talking, mothers do not see the need to take detailed consideration of the milestones expected. Drawing on the social representation theory, the content of communication representations of the mothers focuses on the children's ability to talk and no other thing else.

The overreliance on the children's ability to talk as dominating in the content of communication representations among the mothers implies that once a child is interacting with parents and talking effectively per the expectations of their expectations, the mothers do not look for any new knowledge on communication development. Thus, there is no need to take critical concern if the child has understanding of "wh-questions", making three to four-word sentences, reporting on past events or telling stories in plots and many more. These are more complex and require that mothers have a good understanding of communication milestones to be able to make such detailed observations compared to simple milestones expected at the early ages like crying, uttering one-word phrases and turning to sounds and name. Communication milestones are made up of both receptive language skills and expressive language skills. The participants were able to mention these milestones however most of their focus was on expressive language skills.

From the evidence-based communication milestones model, the mothers were able to indicate certain milestones a child should acquire at a particular age. For ages below one year old, mothers indicated that some communication behaviours with such children are crying for food or to have a diaper change, pointing at things and trying to reach out for things they want as a form of request. They also mentioned that children at this stage turn to sounds. These are very much in line with

the framework of (Dosman et al., 2012), indicating clearly that mothers have a fair knowledge of communication milestones of neonates till they turn a year old. At age one, mothers indicated that a child should at least said his or her first word by now.

Mothers in the current study added that mostly these first words are names of persons in immediate environment example mummy or daddy. They mentioned that at this stage despite child's attempt towards speech production, the words may not be clear or intelligible. They also expect that the child should be able to turn to his or her name as a sign of response when called. The mothers also mentioned that the one-year-old should be able to follow simple one stage commands like "come" and "stop". At age two, mothers mentioned that a child should be able to engage in mini-conversations, form two-word sentences, imitate sounds and words and also have some clarity of expression when it comes to speech.

At age three, some mothers did mention that they expect the child to make longer sentences, the speech should be clearer and have knowledge of colours and letters of alphabet. Aside these inputs, mothers shifted most of their focus to things like schooling, running of errands and a usual general statement which occurred among almost all mothers that the child should be able to say "everything". At ages four and five, mothers maintained that the child now must say everything, take care of himself or herself by self-feeding and socialization at school. This showed that mothers lacked the specifics of what language skills are expected of children at this stage. It also shows that once the child is talking to an extent where mothers find satisfactory, they shift their goals to other aspects of the child's life. These aspects are schooling, self-care, ability to run errands for parents and many others.

However, most mothers were able to tell accurately that their children had communication disorders at a very early age. This is not surprising as mothers in the study have equally shown fair

knowledge of communication milestones from the neonate stage till the child is two years of age. This shows that if mothers have sound knowledge of communication milestones, it will help them in the early identification of communication disorders among their children. Their reports of their children encountering a communication difficulty was confirmed by the speech therapist. Generally it has been noted that there are no significant differences between parental reports and direct assessments by the therapist in the diagnosing of communication disorders (Nordahl-Hansen et al., 2014).

The participants in the study were able to tell that their children had a communication disorder based on a number of factors. Firstly, they observed an excessive delay in the production of their first word. Parents always look up to the day their child will say their first word with some level of keenness (Tamis-Lemonda et al., 2002). This makes it easier for them to notice a delay in that regard. Secondly, for some of these children, they showed delays in other aspects of development such as gross and fine motor skills. This made parents pay much attention to the total development of child in all aspects of motor, communication, cognitive and socio-emotional. Once, some aspects of these areas begin to develop, parents become more anxious pending the other aspects to also develop. Like in the study, one mother whose child encountered a global developmental delay indicated that once her child began walking, they kept watching out for his speech, and seeing no progress, they visited the speech therapy clinic at Korle-Bu Teaching Hospital.

Lastly some mothers reported that they were able to identify their children's communication disorder due to the incidents leading to the disorder. The child had fallen at home, and then parents realize a sudden regression in child's abilities including speech. This makes identification of communication disorder less cumbersome for mothers and even the underlying cause. Mothers also indicated that a child's first word may be as early as the eighth month or latest by a year. This

is one area in which mothers themselves provided the range between which they expect a child to produce their first word. They even went ahead to mention that if there is an excessive delay for a child to produce his or her first word, it is likely that there is a possible disorder (Begum & Kalam, 2012).

5.3 Sources of information on communication disorders among the mothers

The second research question focused on where do mothers of children with communication disorders get information about early speech and language development. Where mothers gain access to information on childhood communication development is very necessary. Clinicians will have to rely on the firsthand information given by mothers before assessing the child (Bornstein & Cote, 2004). This means that mothers' information can influence clinicians' assessment. As such, it is necessary to ensure mothers access information from verified sources on communication development as their knowledge will influence their observations about their children's communication development.

The findings showed that the mothers got access to communication milestones from friends, family, health professionals, books and the internet (Williams et al., 2014). Mothers also mentioned getting knowledge of communication milestones from experience. This experience came from their observation of their older children as well as children of siblings and neighbours. For most mothers, the observations made is what has equipped them with knowledge of communication development in children.

Drawing on the sources of representations, the sources of knowledge on communication disorders fall cut across scientific sources (i.e. from health professionals and books), interpersonal sources (from family and friends), media sources (i.e. internet), common sense (observations of their

environment) and embodied sources (i.e. their personal experience). These sources suggest that the mothers seek information from diverse and eclectic sources in making of communication development milestones and disorders of their children. A fundamental assumption of the social representation theory is that when individuals draw knowledge from eclectic sources, they are likely to engage in practices that may be counterproductive to each other (Moscovici, 2008).

According to Huang et al., (2005) experienced mothers are most likely to have more knowledge of communication milestones than first-time mothers. Other mothers also said by reading from books and the internet, they gained access to knowledge on communication milestones. Mothers have been found to search through the internet for knowledge on pediatric development (Bernhardt & Felter, 2004) including communication. For some mothers the desire to read from various sources on communication milestones began when they realized their children had some communication difficulties.

Some mothers indicated that they gained knowledge of communication milestones from the antenatal clinics however it was not adequate. The major focus of these antenatal sessions focused more on gross and fine motor skills. Some mothers unearthed that there was information on communication milestones in their postnatal books, however, because this is not echoed to them, most mothers have no idea on the presence of such. Mothers mentioned that they would prefer that knowledge of communication milestones be made available at the antenatal and postnatal clinics. They also indicated that they would prefer that teaching sessions on communication milestones would be very intentional and feedback required of them by the nurses.

The mothers also expressed the need to make communication milestones available via media platforms like adverts as well as social media in the form of visuals so mothers are able to easily grasp such knowledge. Some mothers mentioned that using public health outreaches at social

gatherings and even religious gatherings will enable mothers get access to such knowledge easily. It will also equip other fecund mothers with knowledge of communication milestones for future purposes.

5.4 Simulation strategies or activities used by the mothers

The last research question of the study focused on what stimulation strategies or activities do mothers of children with communication disorders engage in with their children and how effective do they find these activities? Mothers of children with communication disorders indicated that first of all, they are aware of activities in which they can engage in with children to facilitate their language development. Some of the activities these mothers mentioned are describing their actions when in an activity with their children, creating a playful environment and reading to their children. Other activities include singing and using motherese (a baby-friendly voice with high pitch) to engage their children (Huang et al., 2005; Williams et al., 2014). Drawing on the social representation theory, the functions of knowledge suggest that the mothers engage in simulation strategies that fits their socioeconomic opportunities and sociocultural obligations.

Although mothers have knowledge on the positive impacts of stimulation activities, most of these mothers indicated that for the lack of time due to busy schedules at work, they are unable to make time to engage their children (Safwat & Sheikany, 2014). These children are therefore left in the care of older siblings if any, or house helps. Some of these children are even left alone with no one to engage in any activities with. For most of these mothers they reported noting down some improvements in their children's language skills due to engaging in various activities with them, however, some mothers also reported not noting down any difference in their children's language abilities and therefore do not associate positive outcomes with stimulation activities.

CHAPTER SIX

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

6.1 Introduction

This chapter is a summary of all findings, recommendations and the limitations associated with this study.

6.2 Conclusion

This study explored the views and perspectives of some mothers of children with communication disorders on communication milestones. Three main objectives were addressed; (i) the knowledge these mothers have on communication milestones, (ii) where these mothers get such knowledge from, and (iii) the strategies and activities mothers use in engaging their children to help facilitate their language. The study employed the use of in-depth interviews, involving twelve mothers of children with communication disorders. The recordings of the interviews were transcribed and data analyzed thematically.

The findings showed that mothers have fair knowledge of communication milestones between ages zero to two years but know very little concerning communication milestones between ages three to five years. These mothers mentioned that most of their knowledge of communication milestones came from their experience. They observe their own children as well as that of other family members especially siblings. More often than not mothers go to the extent of comparing the development process of their children to that of other family members or even neighbours. Mothers agree that it is beneficial to have knowledge of communication milestones. To them, this equips them with the knowledge of what to expect in the child's communication at each and every stage. Based on that, mothers mentioned that it will be very helpful to have knowledge of communication milestones provided at the antenatal and postnatal clinics, child welfare clinics,

the speech and language therapy clinics as well as through public accessible media platforms like the internet and television advertisements.

Mothers also expressed the need to engage these children in various activities which helps in facilitating their language abilities. There are some factors that influence the ability of mothers to engage these children. One major factor these mothers mentioned was the lack of time due to busy schedules. Other factors include the slow nature of progress and to some mothers they saw no progress at all.

Conclusively, the findings show that mothers lack knowledge of communication milestones. The few they shared in relation to communication development came from their experience and personal efforts made towards searching from various sources like the internet and books.

Mothers need a detailed framework and knowledge of communication milestones that spells out the exact milestones they are to look out for at each stage of the child's development to avoid them from omitting some of these milestones while they focus on the ones they know. This will enable mothers to have an exact information on communication milestones. There is a need to ensure health facilities especially child welfare clinics, antenatal and postnatal clinics have exact information on communication milestones to teach these mothers. There is also the need to encourage mothers to make time to engage their children in activities that will help facilitate their early language skills.

6.3 Recommendation

In this section, the implications of the findings from the study are discussed, within the context of how this study contributes to knowledge of mothers of communication milestones, and how the findings open avenues for further research.

6.3.1 Recommendations for mothers' knowledge of communication milestones

With the findings from this study, the following recommendations are made for improving mothers' knowledge of communication milestones:

- (i) Firstly, the study has proven that mothers depend on their experience from the development of other children to inform their knowledge of communication milestones. It is therefore important that the needed for health professionals especially antenatal nurses and midwives who are the most likely to attend to mothers first during the pregnancy stages to educate mothers on early typical communication milestones to expect from their children and the consequences of any observed delays in this regard. Along such lines means that these nurses as well must be well equipped with knowledge of communication milestones in order for them to be able to transfer that knowledge to mothers.
- (ii) It is also very important for speech and language therapists to take adequate time to educate mothers who visit the clinic on communication milestones. Per the findings of the study, some mothers had already visited the speech and language therapy clinic more than once and even twice in some instances, yet they did not have any concrete knowledge of communication milestones. Speech and language therapists must design a concrete framework to give to mothers who visit the clinic to serve as a point of reference wherever they find themselves. Speech and language therapists may also consider educating health professionals from the child welfare, antenatal and postnatal clinics on communication milestones. As the establishment of multidisciplinary teams

gain grounds in the Ghanaian medical landscape, it will be effective if speech and language therapist can partner with antenatal nurses and midwives in educating mothers on communication milestones.

6.3.2 Recommendations for Future Research

This study is the first to explore the knowledge of mothers of children with communication disorders on communication milestones. More studies are needed to broaden understanding within the Ghanaian context to improve the knowledge base of mothers on communication development and encourage mothers to seek the right services when they realize their children are showing signs of any difficulty with their communication development. The following recommendations are made for future research:

- (i) Future studies should focus on actively recruiting fathers for their views on communication milestones, where they gain such information and especially activities in which they engage their children as the cultural landscape does not really encourage play activities between fathers and children.
- (ii) Future studies should also focus on a similar study using a larger sample which will be more representative of the population as well as considering specific group of mothers of children with communication disorders, example first-time mothers of children with communication disorders. In fact, since there is no study even on mothers in general, it will be suitable for a study to be conducted on mothers who do not have children with any communication disorders.

6.4 Limitations

The study is a qualitative enquiry with a narrow sample hence the findings cannot be generalized to represent the knowledge of all mothers with children who have communication disorders.

The study also targeted mothers in general without considering the role of experience in mothers' knowledge. It will be suitable to have studies that will focus either on mothers who have more than a child or strictly first-time mothers strictly to have a fair representation of knowledge of communication milestones among these specific groups.

Lastly, the researcher is inexperienced in formulating interview surveys and therefore the survey questions were unable to capture rich data. The research is inexperienced in analysis of qualitative data as well.

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APPENDICES

APPENDIX A: PARTICIPANT INFORMATION FORM

Title of research: Knowledge of Mothers on Communication Milestones

Principal Investigator: Desmond Nii Lante Lamptey

Department of Audiology, Speech and Language Therapy

Master of Science in Speech and Language Therapy

Contact: 054 775 8950

E-mail: lamptedydesmond258@gmail.com/ dnllamptey005@st.ug.edu.gh

General Information about Research

I am a graduate student of the Department of Audiology, Speech and Language Therapy, School of Biomedical and Allied Health Sciences, University of Ghana. In partial fulfillment of the requirements to obtain a Master of Science degree in Speech and Language Therapy, I am undertaking a research on the topic “Maternal Knowledge on Communication Milestones” under the supervision of Dr. Dzifa Attah of the Department of Psychiatry, University of Ghana Medical

School and Dr. Collins Agyemang Badu of the psychology department. The purpose of the study is to assess the knowledge of mothers on communication milestones.

Your involvement, cooperation and commitment as a participant in this research are of utmost importance to the researcher. This participant information sheet seeks to provide detailed information about the research in order to provide grounds for you to make a voluntary and informed decision before participating in the research.

Explanation of procedure

The study will employ a structured questionnaire to collect personal information about you and your knowledge of typical communication milestones. Your answers based on questions of communication milestones will then be assessed, computed and analyzed to arise at a final conclusion.

Possible Risks and Discomforts

There are no risks for participation in this study. All you need is to fill out the questionnaires. Steps will also be taken to ensure that no personal information will be shared with a third party

Voluntary Participation and Right to Leave the Research

Participation in this study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without any jeopardy to you whatsoever.

Contacts for Additional Information

For any information, clarification or questions about the study, please contact the principal investigator, Desmond Nii Lante Lamptey on 0547758950.

Confidentiality

Your real name or any other data that can be used to identify you will not be used at any point in time during the data collection. You will be given a code as identification. All information provided will remain confidential and will only be reported as group data with no identifying information. All data, including health records and test results, will be kept secured and only those directly involved with the study will have access to them.

Possible Benefits

Participating in the study provides you with the awareness of early communication development and its impact on child development.

Your rights as a Participant and complaints

This research has been reviewed and approved by the Ethical and Protocol Review Committee of the Department of Audiology, Speech and Language Therapy of the School of Biomedical and Allied Health Sciences, College of Health Sciences, University of Ghana. This committee has reviewed, evaluated and decided on the scientific and ethical merits of research protocols that are consistent with best practices to ensure that your rights as a participant are strictly protected. However, any questions regarding any rights issues in this research should be directed to the Ethical and Protocol Review Committee of the Department of Audiology, Speech and Language Therapy of the School of Biomedical and Allied Health Sciences, College of Health Sciences, University of Ghana.

APPENDIX B: INFORMED CONSENT FORM

The document describing the benefits, risks and procedures for the research: “Maternal Knowledge of Communication Milestones” has been read and / or explained to me with clarity. I have been given an opportunity to ask any questions about the research and answered to my satisfaction. I agree to participate as a volunteer.

Date

Signature or thumb print of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer agreed to take part in the research.

Date

Signature or thumb print of volunteer

I certify that nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Date

Signature or thumb print of Witness

APPENDIX C: INTERVIEW GUIDE

PERSONAL INFORMATION

Mother's contact: _____ Residence: _____

Mother's Age:

18 – 25 26 – 30 31- 35 36 – 40 41 – 45 46+

Maternal education level:

No education Preschool education Basic education

Secondary education Tertiary education

- Mother's occupation: _____
- Number of children: _____
- Number of children with communication difficulty: _____
- Birth position of child(ren) with communication difficulty: _____
- Child (ren)'s age: _____

- Have you seen a Speech and Language Therapist: Yes No
- If yes, how many times: _____

KNOWLEDGE OF COMMUNICATION MILESTONES

Q1. Tell me some communication behaviours you expect a baby to use in expressing their needs before they turn age one?

Q2. Tell me about a child's language skills when he/she is one year old?

Q3. Let us talk about a child's language skills when he/she is two years old?

Q4. Tell me what you know about a child's language skills when he/she is three years old?

Q5. Let us have a discussion on the language skills you expect from a child when he/she is four years old?

Q6. Tell me what you know about a child's language skills when he/she is five years old?

Q7. At what age do you expect a child to say his or her first word?

Q8. How did you know that your child has a communication difficulty?

Q9. How did you find out about the speech and language therapy clinic?

SOURCE OF MATERNAL KNOWLEDGE OF COMMUNICATION MILESTONES

Q10. How did you get to know about children's early language development?

Q11. Let us discuss the benefits of having more information on children's early language development?

Q12. Tell me about the places suitable to have such information provided/ made available to mothers?

STIMULATION STRATEGIES USED BY MOTHERS

Q13. Tell me about some activities you engage in with your child to help develop his or her language skills?

Q14. Tell me about your observations made from these activities?

Q15. Are there any questions you would want to ask me in relation to this topic?

Q16. How do you feel being interviewed about this topic?