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KNOWLEDGE LEVELS OF PRE-SCHOOL TEACHERS ON AUTISM SPECTRUM DISORDER (ASD) IN SELECTED SCHOOLS IN ADENTAN AND MADINA MUNICIPALITIES

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A DISSERTATION SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF SCIENCE IN SPEECH AND LANGUAGE THERAPY DEGREE.

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DECLARATION

I **GIFTY AYOKA** hereby declare that this dissertation which is being submitted in fulfillment of the requirements for the Master degree in Speech and Language Therapy is the result of my own research performed under supervision, and that except where otherwise other sources are acknowledged and duly referenced, this work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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 supervisors as subsequent authors.

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DEDICATION

This dissertation is dedicated to my two sons Skyler, whose diagnosis of Autism Spectrum Disorder (ASD) sent me on this journey and Jeremiah my personal prophet.

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I would like to thank the Almighty God for seeing me through two years of my study. It's been a journey of pure grace and mercy from God. I would like to acknowledge with much appreciation the crucial role of the Alexis Miranda Foundation whose financial assistance saw me through this course. My profound appreciation also goes to my supervisors Dr. George Akilig-pare (Principal Supervisor) and Ms. Nana Akua Victoria Owusu (Secondary Supervisor). I would also like to thank Vera Kyei-Fordjour, who inspired me to go back to school in the midst of the most difficult period in my life and also helped me in diverse ways before and during this course.

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ABSTRACT

Background: Autism Spectrum Disorder (ASD) has acquired prominence in recent times as an area of concern across the world. However, in African countries like Ghana, a lack of data on incidence and prevalence rates is compounded by the low levels of ASD knowledge among parents and vital categories of professionals such as teachers and nurses.

Aim: To identify the knowledge levels of ASD among pre-school teachers in the Adentan and Madina Municipalities.

Methods: Semi-structured qualitative interviewing was employed.

Results: Majority of the respondents had low to no knowledge about ASD characteristics. Also, most of the respondents lacked knowledge on ASD specific organizations and intervention approaches to ASD. Again, on Inclusion Education for children with ASD, a section of the teachers supported the idea whiles another half-suggested children with ASD should be sent to special schools because they lacked the capacity to teach them.

Conclusion: There is a lack of knowledge among preschool teachers on ASD and therefore there is the need to train teachers to improve their knowledge. Teachers, however, expressed a willingness and motivation to be trained to better prepare them for an Inclusive setting.

Keywords: Autism, Autism Spectrum Disorder, Pre-school Teacher, Inclusive Education.

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LIST OF ABBREVIATIONS

ASD	Autism Spectrum Disorder
ASD-SSP	Autism Spectrum Disorder-School Support Program
DSM	Diagnostic and Statistical Manual
EDUTEA	Educacio Inclusiva I Trastorn A L'espectre
IE	Inclusive Education
IQ	Intelligent Quotient
KG	Kindergarten
UNESCO	United Nations Educational, Scientific and Cultural Organisation

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CHAPTER ONE

INTRODUCTION

1.0 Background

The Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social skills, repetitive behavior and non-verbal communication (DSM5). Also, according to MacNeil, Lopes, and Minnes (2009), Autism Spectrum Disorder co-occurs with conditions such as epilepsy, mental illness or intellectual disability. Autism Spectrum Disorder is caused by different combinations of genetic, biological, environmental, and developmental factors (Elsabbagh et al., 2012). Since 1997, autism has become the only disability that has quintupled in numbers (42,517 in 1997 to 224,565 in 2006) (Loiacono & Valenti, 2010) globally.

This trend has led to an increase in research findings leading to increased knowledge levels of ASD (Elsabbagh et al., 2012). The increase in knowledge levels of ASD cannot be generalized as Africa as a whole and Ghana in particular still lags behind in knowledge levels of ASD. Globally, many charitable organizations, especially in the United Kingdom (UK) and the USA, have championed the cause of raising ASD awareness among the populace. Autism awareness campaigns such as World Autism Awareness Day have become institutionalized.

Although in the past, some characteristics of ASD was difficult to understand, there have been significant breakthroughs in areas such as establishing genetic causes, Abrahams and Geschwind (2008), biological causes Geier, Kern, and Geier (2010), environmental causes Bilder, Pinborough-Zimmerman, Miller, and McMahon (2009) factors associated with autism. These groundbreaking research findings go to demystify myths such as the Refrigerator Mother Theory and childhood vaccination as the causes of ASD (Wing, 1997).

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Persons with ASD face difficulties in many areas of their lives. Children with ASD are less likely to perform well in school and only about an estimated 15% of adults with ASD are in full-time employment (Dillenburger, Jordan, McKerr, Devine, & Keenan, 2013). The incidence of ASD has led to studies of the awareness levels of certain segments of the population on the condition. According to Heidgerken, Geffken, Modi, and Frakey (2005), the knowledge levels of various health and allied health professionals, as well as teachers on a measure assessing diagnostic criteria, cause, treatment, and prognosis of ASD, was inadequate (Stone & Rosenbaum, 1988). Bakare and Munir (2011) also found that awareness levels of ASD among healthcare workers were low in Nigeria and other African countries.

1.1 Incidence and prevalence of ASD

Recent research findings when compared to an epidemiological survey conducted in the 1960s, together with a host of new information that has become available, points to a higher prevalence of ASD than previously thought (Fombonne, 2009). The increased prevalence levels can be attributed largely to the widening of diagnostic criteria and the acceptance of the description of autism as a spectrum of impairments (National Academies of Sciences & Medicine, 2015).

This was necessitated by the nature of the display of different symptoms by each individual on the autism spectrum, making the characteristics often found in a person with ASD peculiar to them. In other words, symptoms vary widely among individuals, and one manifestation of ASD might be different from the next, though they are both on the spectrum.

Baxter et al. (2015) report that globally one in one hundred and thirty-two children have ASD and according to the Centers for Disease Control, in the United States of America (USA) the prevalence rate of Autism is about 1 in 59 children (Baio et al., 2018).

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In the USA for instance, the increased cases of ASD has been based on four types of data sources: epidemiologic studies, special education "child counts", administrative data on developmental services and national survey based on parental reports (National Academies of Sciences & Medicine, 2015). The prevalence of ASD is high in developed countries but little is known about prevalence levels in low and middle-income countries (Ruparelia et al., 2016). There is currently scanty data to support the prevalence rate of ASD in Africa and earlier research by (Ametepee & Chitiyo, 2009) suggest that ASD often affects people from rich backgrounds. This could possibly mean that the upper class in society often has the resources to seek help. Sharpe and Baker (2007) affirm this in their work where they found out that the high cost of ASD related services hinders low-income families from accessing services. However, with the high prevalence rate of ASD in other countries especially in the USA, the story is unlikely to be different in Ghana.

1.2 Statement of the problem

Although not enough literature exists in this area, there have been previous attempts to determine the knowledge levels of teachers and other educational professionals about ASD. Stone and Rosenbaum (1988), found that teachers held incorrect information about the cognitive abilities of students with ASD as compared with the views of persons well vexed in ASD. There is, therefore, the need to prepare professionals and other staff who work with children to support children with ASD. This is because the implications of unprepared and untrained staff working with special needs children could be vital not only in terms of the developmental prospects of the children concerned but also the financial, social and psychological well-being of families. Issues bordering on abuse could also arise if preschool teachers are not trained to work with children on

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the autism spectrum. Thus, the absence of information on the awareness levels on ASD of pre-school teachers is a significant problem.

1.3 Significance of the study

The study will help to ascertain the knowledge gap of ASD amongst preschool teachers. This will yield information that could lead to a change in the curricula of preschool teacher training to include ASD. This information will also indicate areas where immediate attention should be focused on in terms of knowledge on ASD in educational settings. Thus, it will also serve as a guide not only for the Ministry of Education but also for all persons engaged in preschool education.

1.4 Research Questions

- What do preschool teachers know about ASD?
- Are preschool teachers open to the idea of Inclusion Education for children with ASD?
- Should ASD training be part of the teacher training curriculum?

1.5 Aims of the study

The fundamental aim of the study is to understand the knowledge levels of preschool teachers in ASD in the Adentan and Madina municipalities.

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1.6 Objectives of the Study

- To understand the experiences and challenges of pre-school teachers in their interactions with children with ASD.
- To make recommendations on how knowledge of ASD and information can be propagated in educational institutions, especially among pre-school teachers and other staff who interact with children or work in a caregiving capacity.
- To ascertain the knowledge levels of ASD of pre-school teachers.

1.7 Conclusions

This chapter gives a preview of what the study is about and the research questions it seeks to answer. It describes the definition of ASD, prevalence and incidence, research questions and objectives.

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CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses the published information on the subject. This literature is reviewed in relation to the research questions of the study.

2.1 Teachers and ASD

Although limited research exists in this area, attempts have been made to determine the knowledge levels of teachers and other professionals about ASD. It was found out that teachers held inaccurate information regarding the cognitive abilities of children with autism compared with persons more knowledgeable with autism (Stone & Rosenbaum, 1988). This trend is likely to affect the teaching or instructing styles of teachers in the classroom; students can be underrated or overrated affecting their overall learning outcomes. Also, teachers are more likely to feel inadequate leading to increased stress levels in the classroom. Studies have shown that special education teachers and school psychologists hold higher levels of expertise, training, and knowledge with regards to ASD as compared to general educators' knowledge levels (Segall & Campbell, 2012). The reason can be ascribed to the fact that special needs teachers and psychologists who work in the school environment are more likely to meet children on the autism spectrum than general education teachers. What is not known is how they acquired this level of expertise; whether through personal development, self –study or through training.

It is worth noting that, teachers are not the only group of professionals who have incorrect or inaccurate information about autism. A study of autism knowledge among healthcare professionals in Pakistan revealed healthcare professionals held outmoded views about autism

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with most inaccuracies bothering around social, emotional, cognitive and general features (Imran et al., 2011). Most people often associate physical deformities with autism and are generally unaware that autism is a communication disability. Autism Spectrum Disorder manifests differently at different stages in life and so characteristics will manifest differently for every individual. However the characteristics of ASD can be more or less evident at some ages than others and as such, it is important for professionals such as pre-school teachers to understand this pattern (Le Couteur, 2003). It is imperative for pre-school teachers and other professionals working with children to be well-versed in the features of autism vis a vis normal social, behavioral and language development. If special needs educators and teachers in mainstream schools lack the required training to work with children with ASD, then it is not likely that the learning outcomes of these children will improve (Loiacono & Valenti, 2010). Early detection of ASD is important because it leads to early intervention which leads to better outcomes. If the preschool teacher's general knowledge level of ASD is increased, it will positively influence their relationship with preschoolers. Liu et al. (2016) found that there is a knowledge gap of ASD amongst preschool teachers in China. It has also been observed that preschool teachers who had knowledge of ASD were more receptive of children with ASD (Engstrand & Roll-Pettersson, 2014).

2.2 Early Diagnosis

In several countries, attempts are being made to diagnose ASD at a young age with the introduction of tools such as The Modified Checklist for Autism Toddlers-Revised (M-CHAT-R) The M-CHAT-R enables healthcare practitioners such as pediatricians to diagnose ASD as early as eighteen months(Robins et al., 2014). Studies done by Bello-Mojeed, Bakare, and Munir

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(2014) suggest that children in Africa are more likely to receive a late diagnosis of ASD than those in the western world due to lack of formalized screening measures and diagnostic tools. Most parents are usually alarmed by the time the child is 18 months when they begin to suspect that there is a problem with their child, however, they usually delay in obtaining an expert opinion. Studies suggest that families wait over a year to receive ASD diagnosis (Mandell, Novak, & Zubritsky, 2005). The concerns of parents have usually been underrated and usually regarded as parental anxiety. Research work in the past indicates that parents were the first to be suspicious that there was a problem with their child. Other parents also report that a health worker was the first to raise concern with their child, while still another category of parents say that it was a school staff who raised concerns about their child (English & Essex, 2001)). These reports by parents reinforce the need to train professionals such as pre-school teachers to improve their knowledge of ASD. In Ghana, teachers are one of the earliest contacts for children apart from parents and caregivers. This is because children can start preschool as early as when they are three months old. The nature of employment laws is such that mothers are usually mandated to go back to their places of employment by the time their children are three months old (Lindberg, 1996) leaving children mostly in the care of preschools. The story is no different in most part of the world. In countries such as Sweden, most children attend pre-school before the age of three and as such pre-school teachers have the tendency to identify any atypical development in a child (Nygren et al., 2012). Studies by Westman Andersson, Miniscalco, Johansson, and Gillberg (2013) found out that assessment done in pre-schools yielded the same results as observation done in a clinical setting. This goes to show the importance of the preschool teacher on the roadmap in the diagnosis of ASD and the need to obtain information from multidisciplinary sources (Charman & Baird, 2002).

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The Bureau of National Affairs report states that an increasing section of the labor market comes from mothers with toddlers and infants(Cohen & Mrtek, 1994). As stated earlier, these children are often left in the care of pre-school teachers hence the need to train them on features of ASD to help confirm or allay the concerns of parents.

According to W. Lian, Ho, Yeo, and Ho (2003), in countries such as Singapore, children start preschool between six to eighteen months. The responsibility for early identification of atypical childhood development vis a vis typical development has, therefore, become the responsibility of early childhood educators. W. Lian et al. (2003) further state that referrals in Singapore occurred after five years often precipitated by an abysmal performance in school or fear of the child not getting placement in mainstream schools. The child's cognitive abilities are early triggers whiles social and behavioral problems are frequently glossed over with the belief that they will disappear as the child grows (W. B. Lian et al., 2008). There is a general belief amongst parents that some children are late starters whiles others will outgrow their behavior issues. Early diagnosis of ASD leads to early intervention and often leads to better outcomes. In their research, Bryson, Rogers, and Fombonne (2003) found that early diagnosis leads to changes in the quality of intervention and it also influences the quality of parent-child interaction. This is because parents are usually desperate to see results hence their willingness to follow through with interventions or therapies. Also, Goin-Kochel, Mackintosh, and Myers (2006) concluded that children who had early diagnosis had parents with higher levels of education and income. This statement is extensively true as Sharpe and Baker (2007) have established that the financial burden associated with ASD is overwhelming and low-income earners are unable to pay for services.

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2.3 Teaching Training and ASD Curricula

It is important to equip teacher trainees with ASD knowledge to make them better prepared to teach children with ASD in an inclusive classroom setting. A well knowledgeable and well trained mainstream teacher is likely to fall short when the same skills are applied to children on the autism spectrum (Helps, Newsom-Davis, & Callias, 1999). Thus, ASD should be part of the teacher training curricula to make teachers comfortable in the instruction of children with ASD in an inclusive classroom setting. According to Leblanc, Richardson, and Burns (2009) in the Canadian province of Ontario, a training package for teacher trainees called the School Support Program, Autism Spectrum Disorder (SSP-ASD) program is offered to trainee teachers to equip them to work in an autism centered inclusive classroom setting. Leblanc et al. (2009) further assert that the SSP-ASD program seeks to increase the knowledge levels of trainee teachers with regard to characteristics of ASD and also enhance the competence of effective management of behaviors associated with ASD. Teacher trainees who were taken through the SSP-ASD training program reported feeling confident to work with children with ASD when they graduate (Leblanc et al., 2009). Teacher trainee programs such as SSP-ASD are important because in the research carried out by Loiacono and Valenti (2010) teachers were more likely to avoid children with ASD and on the other hand are more likely to work with typical children.

According to Morales-Hidalgo, Hernández-Martínez, Voltas, and Canals (2017) the development of an ASD screening tool in Spain, *Educacio Inclusive I Transform A L'espectre De L'autisme* (EDUTEA) for teachers goes to show the importance of inculcating ASD training in teacher training curricula. They further state that the EDUTEA is an essential instrument for teachers and other school professionals to help in the gathering of important data in a school environment to make appropriate referrals. The EDUTEA which was developed in Spain was to improve the rate

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and detection of ASD (Morales-Hidalgo et al., 2017). Teachers report about a child's growth (both physical and mental) are important because it makes it easier to compare children's development amongst their peers.

2.4 ASD and Inclusive Education (IE) in Ghana; Teacher perception and attitudes towards disabilities.

All over the world, various governments have put measures in place to protect persons with disability. Most of these measures are geared towards inclusion employment Waddington (1996) and inclusive education of persons with disabilities (Daniel & King, 1997). Also under international law, the United Nations Convention on the Rights of Persons with Disabilities (CRPD) was birthed in 2008 to ensure the rights of persons with disabilities are protected worldwide. The purpose of the CRPD is to promote the agenda of persons with disabilities, protecting them and ensuring their overall dignity is respected (CRPD, 2007). Ghana ratified the CRPD on 31st July 2012 making Ghana liable to the protection of the rights of persons with disabilities (Mfaofo-M'Carthy & Grishow, 2017). Also, studies by Fernandez, Rutka, and Aldersey (2017) have found that most countries in Africa have policies on disability with a significant number of them having ratified the CRPD. The CRPD was a postscript to United Nations Educational, Scientific and Cultural Organization (UNESCO) 1994 Salamanca World Conference on Special Needs Education. The concept of IE was birthed at this conference. UNESCO advocates that schools should embrace all children regardless of their abilities and disabilities (UNESCO, 1994). Inclusive Education is an approach to education where persons with and without disabilities learn together in the same classroom and also interact socially in the same environment. Since Ghana was a participant at the Salamanca conference, the Ministry of

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Education (MOE) and the Ghana Education Service (GES) incorporated these declarations into its Education Strategic Plan 2003-2015. However, Autism Spectrum Disorder (ASD) has not received as much attention as physical disabilities. In Ghana parents of children with ASD have often been turned away in their attempt to access mainstream education. Mainstream schools are reluctant to enroll persons with disabilities for fear of destroying the image of the school through poor academic performance. Teachers reported feeling confident to teach children with disabilities in mainstream schools after receiving the necessary training (Avramidis & Norwich, 2002). Further studies by Campbell, Gilmore, and Cuskelly (2003) shows that an improvement of teacher-trainee knowledge on one form of disability reduced their stereotypical views on disability in general. This could mean that they begin to see the abilities of such children rather just seeing their disabilities which often leads to just a show of sympathy. According to J. Agbenyega (2007), factors that hinder the practice of IE in Ghana includes beliefs and notions about disability, ethnicity, and teachers not trained in such areas. Also, J. S. Agbenyega (2011) asserts that teachers believed that including persons with disabilities in mainstream schools will affect the academic performance of their peers without disabilities. This notion held by teachers is a recipe for stigmatization of persons with disabilities.

J. Agbenyega (2007) further asserts that the government is faced with several difficulties in their bid to practice IE. According to Fernandez et al. (2017), these difficulties include structural barriers, insufficient facilities for assessment and the lack of in-service training of mainstream teachers on disabilities. Ghana already has a high attrition rate of teachers and the introduction of IE without adequately training teachers to teach children with disabilities could further aggravate the attrition rate of teachers, (Kuyini & Mangope, 2011). This has led to parents sending their children to special needs schools (Anthony, 2010). Universal Inclusive Education is a possible

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objective the Ghana Education Service can achieve when teachers are well trained and the right logistics are provided to create the requisite inclusive classroom setting.

2.5 Financial implication

There are huge financial implications associated with the diagnosis of ASD for the individual, the family, and the entire community. There is an unknown cost component in any cost-benefit analysis of ASD, that is, the cost of not obtaining a timely diagnosis. It has been difficult to quantify these costs because of the challenges in collecting the accurate data needed for such studies (Peacock, Amendah, Ouyang, & Grosse, 2012). Parents and caregivers often take time off work; make multiple trips to the clinic or assessments centers before finally a diagnosis is given. The cost implication of these multiple trips and failure to go to work is often ignored. In countries such as Australia, the cost analysis of ASD comprises of loss of productivity, support cost, educational cost (additional and specialist staff) and medical cost (Horlin, Falkmer, Parsons, Albrecht, & Falkmer, 2014). A delay in diagnosis often leads to increased cost to families whiles on the other hand early diagnosis and intervention leads to improved outcomes and reduces long-term cost to the individual, family, and society as a whole (Horlin et al., 2014). Studies of the benefits of receiving an early diagnosis and the financial impact on families are limited (Shattuck & Grosse, 2007).

Another financial impact of ASD are the challenges that arise due to changes in parental employment schedule. For example, on average, mothers of children with ASD earn 35% less than mothers of children with other forms of disabilities and 56% less than mothers of children with no form of disability (Cidav, Marcus, & Mandell, 2012). This is partly because such mothers on average have to make the highest decreases in their working hours to take care of

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their children on the autism spectrum or to attend therapy sessions with them. The financial implication of caring for children with disabilities, the economic cost borne by families constitute between 5-12% of a family's income (Cidav et al., 2012). The major component of this cost includes indirect cost ranging from reduced working hours, limited productivity and leisure time (Anderson, Dumont, Jacobs, & Azzaria, 2007). Thus, caring for a child with ASD or any form of disability changes your routine especially with regards to employment and the amount of time parents and caregivers have for recreation.

Educational services are also one of the biggest cost components of ASD due to most individuals on the spectrum requiring special education services (Chambers, Shkolnik, & Perez, 2003). Individuals on the autism spectrum often require special services ranging from speech therapy, behavior therapy, sensory integration therapy and a modified diet (Green et al., 2006). In Ghana, most of these services are in low supply and even where they are available they are likely to be expensive. Parents report spending between eighty Ghana cedis and One hundred and eighty Ghana cedis (fifty-seven dollars to one hundred and twenty-nine dollars) on autism-related services and medication as of 2010 (Anthony, 2010).

The cost of supporting an individual with ASD without intellectual disability is one million, four hundred thousand dollars (1,400,000) in the USA and nine hundred and twenty thousand pounds(920,000) in the United Kingdom (Buescher, Cidav, Knapp, & Mandell, 2014). The demands of taking care of children with special needs in general and ASD, in particular, are overwhelming especially in Africa and Ghana in particular where there is hardly any form of financial and welfare support from the government. In China, for example, the average loss of annual income associated with having a child with ASD was $7,226.00 (Ou et al., 2015) and since the standard of living keeps increasing, it is likely this figure has increased .Parents and

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caregivers often need to spend more time doing therapy with children diagnosed with ASD and eventually have to reduce their working hours. This notion is supported by work done by Zablotsky, Kalb, Freedman, Vasa, and Stuart (2014), they found out that 24% families with special needs children cut down on their work hours or some stopped working completely. The financial burden of having a child with ASD has prevented most families from seeking early intervention and placed others under severe financial constraints.

2.6 Early intervention

Studies carried out in the past found out that children with ASD made only negligible improvements in therapies (DeMyer, Hingtgen, & Jackson, 1981). This could be partly because of limited research and the fact that ASD was still complex and scientists were still at the initial stage of research. However, in the mid-1980's, studies began to show significant gains in some early intervention programs (Dawson & Osterling, 1997). Karanth and Chandhok (2013) have discovered that that early intervention aids in enrollment and retention of a substantial number of children with ASD in mainstream schools. This is mostly because the children on the autism spectrum would have improved by the time they enroll in school. In situations where children are not diagnosed early, children on the autism spectrum end up in special schools due to their complex educational needs. Also, the unavailability of resources in the community has resulted in the pre-schoolers missing out on proven interventions during the most critical pre-school years (Eapen, Črnčec, & Walter, 2013). According to Peters-Scheffer, Didden, Korzilius, and Matson (2012), early intervention could also improve cognitive, adaptive and social functioning and a reduction in autism severity. Moreover, Chasson, Harris, and Neely (2007) suggest that early intervention of ASD saves money in the long run as the child will need less special needs

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services. This is because a child on the autism spectrum usually will need a multidimensional mode of care, ranging from speech therapy, occupational therapy, behavior management and others, but as these interventions are put in place early, the child improves and gradually becomes less dependent on their caregivers and ultimately there is less demand for special needs services.

2.7 Autism Spectrum Disorder and Stigmatization

Parents of children with ASD and children with ASD are often stigmatized. There have been diverse studies on the conceptualization of stigmatization by researchers to dissect the multifaceted impact of stigma on an individual's wellbeing (Kurzban & Leary, 2001). Autism Spectrum Disorder behaviors lead to both parental stresses of raising a child with ASD and stigmatization (Kinnear, Link, Ballan, & Fischbach, 2016). Kurzban and Leary (2001) further assert that, stigmatization is to undervalue a person's identity by reason of not fulfilling certain standards and who eventually come to be excluded from the social setting of a community. Parents of children with ASD often internalize such attitudes leading to withdrawal from the society. Kurzban and Leary (2001) add that parents of children with ASD often encounter two forms of stigmatization, courtesy stigmatization, and affiliate stigmatization. Affiliate stigmatization according to Mak and Cheung (2012) is the psychological trauma and burden families of persons with disability experience daily. Hinshaw (2005) describes courtesy stigmatization also known as a stigma by association as when family members of persons with disability are shunned in society due to their association with a person society stigmatizes. This often leads to isolation and reduced support for such persons. Persons with ASD face both forms of stigmatization in Ghana (Ruparelia et al., 2016). In Ghana, due to low knowledge levels of

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ASD, persons with ASD and another form of disabilities are often seen as outcasts and been possessed by evil spirits (Anthony, 2010) and (Bello-Mojeed et al., 2014). These views and notions held by society have the tendency to increase the stress levels of parents.

2.8 Parental stress and ASD

Families with a child with ASD are often prone to stressors from within the family system and from outside sources in their attempt to access social and educational services for the child. Stressors are stimulants which cause anxiety or nervousness and in this instance ASD diagnosis and severity are stressors. Benson and Karlof (2009) suggest that stress proliferation (the tendency of stimulants that trigger stress to keep adding more stress triggers) is one of the major causes of depression amongst caregivers. That is, parents and caregivers experience an expansion of stressors, which leads to more stress which was non-existent from the beginning (Benson & Karlof, 2009). Other factors that cause stress in caring for a child with ASD are inadequate support from healthcare providers, the fact that ASD is a lifelong condition and stigmatization from the family and society as a whole (Twoy, Connolly, & Novak, 2007). Also, parents of children with ASD were found to be considerably more stressed than parents of children without a psychological disorder (Rao & Beidel, 2009). These parents and caregivers, as a result, need social support to help them cope. According to Twoy et al. (2007), this can be done by equipping parents with ASD intervention strategies so as to build their confidence level in dealing with ASD related stressful situations.

2.9 ASD Deficits and Interventions in Mainstream Schools

Mainstream schools present the ideal environment for providing ASD interventions as children spend most of their day in school. This presents teachers with an opportunity to provide a

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thorough, all-embracing intervention that concentrates on improving the communication and social skills of children on the autism spectrum.

The symptoms of ASD according to McPartland, Reichow, and Volkmar (2012) are social deficits, communication deficits (both verbal and non-verbal) and repetitive behaviors. Persons with ASD may have difficulties in communicating their needs in a suitable way and sometimes play with a toy inconsistent with their developmental age, Terpstra, Higgins, and Pierce (2002).They may also struggle with interpreting other people's emotions Jones et al. (2011), be overly aggressive and display severe behavior challenges (Loy, Merry, Hetrick, & Stasiak, 2012). A delay or a lack of intervention in these aforementioned areas of difficulty will limit the educational success or progress of children on the autism spectrum. This is because they will find it difficult displaying appropriate socially acceptable behavior in the school environment. In the USA for example, according to L. Koegel, Matos-Freden, Lang, and Koegel (2012), it is required by law to provide researched based interventions in the Least Restrictive Environment (LRE) in an inclusive classroom setting. The child must not feel any form of isolation in an inclusive classroom setting. This further calls for teachers to be well versed in ASD symptoms and severity to enable them to come up with the appropriate intervention plans for each individual with ASD (L. Koegel et al., 2012).

2.10 Communication Deficits and Intervention

Communication is connected to different facets of education and one's overall development. Children on the autism spectrum display varying levels of communication deficits, whiles some are verbal but lack functional communication, others are non-verbal or mostly fixated on a particular topic (L. Koegel et al., 2012). According to Weitz, Dexter, Moore, Glennen, and

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DeCoste (1997), 61% of children with ASD lacked or had very little functional communication. Also, a study by Dominick, Davis, Lainhart, Tager-Flusberg, and Folstein (2007) links a lack of functional communication to aggressive behaviors in children with ASD making it difficult for teachers and other school staff to work with them.

A child with severe communication deficits as a result of ASD will benefit immensely from the Picture Exchange Communication system (PECS) and Pivotal Response Training (PRT).

Picture Exchange Communication System involves using a picture to communicate by handing over a picture or symbol to one's communication partner to make known their intentions (Sulzer-Azaroff, Hoffman, Horton, Bondy, & Frost, 2009). According to R. L. Koegel and Koegel (2006), Pivotal Response Training (PRT) is also another research-based intervention that can help a child with communication deficits. Pivotal Response Training aims at encouraging the child to use words to communicate. If for example the child wants juice and is unable to say it, the therapist models it and says juice and from then if a child is still not able to say it then the therapist provides verbal approximation by saying "ju'' as a prompt. These verbal prompts are withdrawn as time goes on. It is important to provide communication interventions for children on the autism spectrum to make it easier for them to survive in the school environment and also lessen their behavior issues.

2.10.1 Challenging Behavior Intervention

Challenging behavior is inappropriate behavior which puts the person at risk and that of others around him. Challenging Behavior may be a limitation to achieving academic success, hinder social interaction and can be injurious to one's self and to others (O'Reilly, Murray, Lancioni, Sigafoos, & Lacey, 2003). This is because teachers will be unable to teach them for fear of getting injured and their peers are likely to avoid them for the same reasons. It has been found

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out by Mahan and Matson (2011) that children with ASD display more aggressive behavior than their typical peers. Behavior management according to Conroy, Dunlap, Clarke, and Alter (2005) usually starts with identifying what triggers the aversive behavior and the circumstances under which it occurs so as to establish a baseline to plan an intervention. This makes it easier to target specific behaviors for intervention. An evaluation of three models of behavior intervention by Machalicek, O'Reilly, Beretvas, Sigafoos, and Lancioni (2007) has been proved to work in a school setting amongst which are differential reinforcement, modified instruction schedules and teaching communication to replace challenging behavior. Napolitano, Smith, Zarcone, Goodkin, and McAdam (2010) describe differential reinforcement as rewarding the preferred behavior and withholding the reward when the child puts up challenging behavior. As the child begins to establish a correlation between the reward and preferred behavior, the challenging behavior dwindles with time. Modified instructional schedules, on the other hand, are used when the child uses challenging behavior to escape a difficult task or for a task, they lack the required skill to complete(L. Koegel et al., 2012). Janney, Snell, and Elliott (2000) suggest that simplifying the task, shortening the task and providing additional information has the tendency to avert challenging behavior. Another way of averting challenging behavior for children with severe communication deficits is by teaching communication in place of challenging behavior. This is known as Functional Communication Training(FCT) (Carr & Durand, 1985). Carr and Durand (1985) identify four steps of FCT namely; determine the communication aim by evaluating the behavior, teach the desired behavior to replace challenging behavior, rewarding the replacement behavior and finally withholding reinforcement following challenging behavior.

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2.11 Conclusion

As the literature suggests, the heavy burden of ASD on families and children makes early intervention very important. However, without adequately trained and knowledgeable pre-school teachers, early intervention is undermined. Since the literature also shows that relatively wealthier and more educated parents improve the chances that ASD may be diagnosed early, income and education gaps may leave some children and families more exposed to the burden of ASD than others. The vulnerabilities already associated with poverty would mean that ASD may well push some families to the brink. Thus, all these factors make it important to investigate the knowledge levels of ASD among pre-school teachers and to take appropriate action to build their capacity. This is because, they constitute a very vital avenue not only for contributing to early diagnosis, care, and management but especially early intervention will make care and management financially sustainable for lower-income families in the long run.

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CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter centers on the techniques which were used in the collection and analysis of data to achieve the research objectives. The chapter also sheds light on the research and provides extensive information with regards to the population, population size, description of the study area, sampling frame, sampling techniques and where data was derived from. Also, this chapter discusses how data was analyzed, ethical issues, validity, and reliability.

3.1 Research Design

A research design sets out the guidelines for the compilation and analysis of data (Bryman, 2016). It seeks to establish a link between the objectives of the study and the methods employed in the compilation of relevant data to arrive at the results. Qualitative research involves looking thoroughly at non-numerical data with the aim of answering the "why" and "how" of a phenomenon (Savin-Baden & Major, 2013).

3.2 Profile of the Study Area

The La Nkwantanang- Madina Municipal Assembly and Adenta Municipal Assembly are neighboring areas. The total area of the Madina Municipality is 70.887 square kilometers. The Adenta Municipal Assembly, on the other hand, is one of sixteen districts situated in the Greater Accra Region. The total area of the district is 92.84 square kilometers. The 2010 census carried out by the Ghana Statistical Service listed the population of La Nkwantanang- Madina Municipal Assembly 111,926. Females accounted for 51.5% and Males made up of 48.5%. The Adenta

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Municipal Assembly, on the other hand, was listed in the census as having a population of 78,215. Males accounted for 50.3% whiles females accounted for 49.7%.

3.3 Study population

According to Waples and Gaggiotti (2006), a population is "an aggregate about which we want to draw inference by sampling". The population in this research comprises of pre-school teachers from both private and public schools in the La Nkwantanang- Madina Municipal Assembly and the Adenta Municipal Assembly.

3.4 Sampling

The sampling of a study can have an overwhelming impact on the outcome of a study. In research, it is not feasible to study the entire population. Subsequently, researchers make use of sampling as a way of finding a prototypical group of cases that exhibit features of the entire population. Thus, sampling is a statistical way of obtaining data that represents a group of the target population for studying. Hence, for this study, the purposive sampling technique was employed for obtaining the sample.

3.4.1 Purposive Sampling

The qualitative design of the research led to the use of the purposive sampling technique. Purposive sampling amounts to selecting respondent well informed on the topic and who will subsequently lead to answering the research questions. Thus, the researcher sets out to find answers to the research questions and uses his sound judgment to find the respondents with the needed information. According to (Tongco, 2007) purposive sampling is a sampling method in which the researcher intentionally chooses respondents based on their knowledge of a particular

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subject. Tongco further describes it as a non-random method which does not need any latent theories or a specific number of respondents. The onus lies on the researcher to decide on what information to seek and who is ready to avail themselves to provide such information. Therefore, it can be said that purposive sampling is convenient and versatile. Letters were sent to ten public schools and ten private school requesting one pre-school teacher per school to be made available for the study. The researcher wanted a sample of ten. This number was chosen both to find a middle point between interviewing a representative number but also keeping to time and budget constraints especially in terms of travel and transcription of data. Subsequently, ten teachers were randomly approached and their consent sought for an interview. All the first ten approached agreed to be interviewed.

3.4.2 Respondents

The purposive sampling yielded ten respondents which comprised five government pre-school teachers and five private pre-school teachers.

All the respondents taught in classes in which the maximum age was six years. Pre-school teachers are predominantly females and as such all respondents were females. Ten respondents were chosen in all. This number was chosen to give the researcher and respondent enough time to engage in an in-depth study rather than a hasty one which a larger number of respondents would have occasioned, given the tight timespan of the project.

3.5 Data

The study depended on both primary and secondary sources of data. Data obtained from the respondents during the interview coupled with firsthand observation is termed as a primary

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source. Secondary sources of data include information found in books, academic journals, newspaper reports, and archives.

3.5.1 Primary Sources

Empirical data was collected on the knowledge levels of pre-school teachers on ASD, this was obtained directly from respondents through face to face interviews. According to Taylor, Bogdan, and DeVault (2015) primary data sources are gathered through personal interactions with respondents. Respondents provided data on interview questions such as their knowledge of ASD, inclusion education, early intervention, knowledge on ASD organizations and knowledge on ASD interventions.

3.5.2 Secondary Data

The secondary data was obtained from sources such as articles, and surveys conducted mostly across the USA and Europe by academics.

3.5.3 Method of Data Collection

An interview guide was drafted. It also had questions which aimed at probing the wider subject matter of the study that is the views of pre-school teachers on ASD, inclusive education for children with ASD and their awareness levels of the existence of ASD interventions and organization. According to Turner III (2010), interviews are a renowned way of gathering in-depth information from respondents. Turner III (2010) further states that interviews provide the researcher an avenue to obtain a variety of data for analysis. According to (Yin, 2011), the main technique employed in interviews is the use of a conversational format which gives the researcher an opportunity to gather comprehensive information which relates to the respondent's experiences and perspective of a particular topic. A semi-structured interview approach was used which allowed the researcher to ask follow-up questions based on the feedback from the

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respondents. Van Teijlingen (2014) explains that a semi-structured interview is governed by the use of broader topics and the deduction of questions based on the relevant scientific literature. Thus, respondents were asked questions using an interviewed guide and follow up questions were asked when it deemed fit. The interview was recorded electronically and transcribed into text.

3.6 Data Analysis

The data were analyzed thematically using the recurring themes from the responses of the respondents. The themes were then elucidated based on the relevant literature. Nowell, Norris, White, and Moules (2017) describe thematic analysis as a qualitative research method for ascertaining, analyzing, and detailing patterns found in the data and classifying these patterns by their features, level of relevance and their basis for inclusion. In this research, transcripts of each interview were analyzed, responses which were alike were organized under the same themes. These themes were further scrutinized and reorganized.

3.7 Validity and Reliability

The integrity of the researcher and the research process is known as validity. Validity determines whether the researcher measured what was set out to be measured and how accurate the research results are. In this work, the researcher ensured validity by using the views of the respondents exactly as it was expressed. Reliability, on the other hand, is the ability to replicate a study using the same methodology that is, the data sources, data collection method, the process of analyzing the data and the propositions of the study (Golafshani, 2003). The researcher went through the standard research process with professionalism,that is the sampling,interviewing,transcription and analysis.This was done to ensure the research can be replicated using the same steps or modalities.Thus, if this can be done, then the research tool is said to be reliable. The researcher

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has disclosed all biases encountered in this research as well as adhered to the research process objectively. Golafshani (2003) further asserts that, validity and reliability in the frame of qualitative research results in credibility, transferability, trustworthiness. Bryman (2016) also suggests that the underlying aim of a qualitative research is to conduct it in the natural environment of respondents and presenting the views of respondents without any form of additions and subtractions.

3.8 Ethical Considerations

Ethical approval was obtained from the Ethics and Protocol Review Committee of the School of Biomedical and Allied Health and permission was sought from the heads of the schools that took part in the study. Informed consent was obtained from all ten pre-school teachers prior to the interview. In line with ethical protocol, all information obtained from participants was treated as confidential. The aim of the study was fully explained to the pre-school teachers and they were fully made aware that their refusal to participate would not be detrimental to their work or affect their status in the school. The participants were also made aware granting interviews can be stressful and time-consuming and were subsequently refreshed with a drink and a hand sanitizer after the interview. It was further explained to respondents that participation was voluntary and withdrawal from it could be undertaken at any time.

3.9 Limitations

The research was limited to ten pre-school teachers making it difficult to generalize the results.

Secondly, the research was only confined to two municipalities due to cost and time constraints.

Also, all two municipalities chosen for this study are situated in an urban area, which is a limitation given that rural teachers' exclusion affects generalizability.

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3.10 Conclusion

This chapter entailed the methodological approach employed in this study. The research design was first discussed, followed by a profile of the study area and description of the sampling technique. In addition, the data collection sources, the process of analyzing the data and validity, reliability and limitations of the study were all discussed.

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CHAPTER FOUR

RESULTS

4.0 Introduction

In this chapter, the results of the study are presented according to the emerging themes from the interviews.

4.1 Low Knowledge Levels of Teachers Regarding Autism Spectrum Disorder Characteristics

All the ten preschool teachers interviewed believed they had some knowledge about ASD. Some of the teachers described it as a brain defect.

"I know they are among the special children. I've heard that it affects part of their brain. And parts of their brain it affects controls how they behave. That's what I've heard about autism". **Gov 3, LN5 School (Appendix III)**

The respondents went further to describe autism as having physical disabilities and fine motor skills difficulty. This notion was held by respondents who claimed to have ever taught a child with ASD or encountered one elsewhere.

"I know it is about those children who are handicapped in a certain way that they cannot do certain things on their own. There was one in my former school when I was at Cape Coast. She was very young so they brought her to KG1. But when she came, hers was a little serious. Her mother said she was feeling shy so she kept her inside. So, it was friends who advised her to bring her to school. So, at that time, they said we should add them to the mainstream. So, she

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was the only one there. She couldn't do anything. When she came, the handkerchief was around her neck and the hands were very flexible. She couldn't control the hands. So that was when I saw a real one. When I was leaving the school, she was in class three. Formerly her mouth was watery. By the time she got to class three she was able to handle the pencil and scribble". **Gov4, LN6 School (Appendix IV)**

Another teacher who also claims to have encountered a child with autism described autism as having physical challenges combined with communication difficulties.

"I know that they are special children. They can't talk. They can make noise but they can't talk like the way we talk. And some that I know they can't even stand and they can't even hold things" **Pri4, HI School (Appendix IX).**

"There's one in my church. She can't walk. She is always on the mat. She cannot do things on her own. Even the sitting on the mat she will have to lie. The limbs are very weak". **Gov4, LN6 School (Appendix IV).**

There were other responses that described ASD as having speech difficulties. For the teachers who had supposedly encountered a child with ASD, the interviewer pressed for the distinctive feature that made her convinced the child had ASD and this was mostly attributed to a physical feature.

"Because of her special problem, she didn't have speech. She also had a wide-open cavity in her mouth which I think affected her speech". **Gov5 FA School (Appendix V).**

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The above description of ASD best fits cleft palate. A cleft palate is a split in the roof of the mouth. These are conditions with different underlying causes, one a neurodevelopmental disorder and the other a birth defect of the mouth.

Other responses described the characteristics of ASD as having low IQ and difficulty with hearing.

"I know its children who have a mental disorder and they also have a problem with communicating. Their IQ is very low. They always want to do what they want to do. Understanding is very difficult for them". **Pri 1, VPI School (Appendix VI)**

"I know that it is a form of disability found in kids which affects their speech and hearing. They also need special attention in class as compared to the other kids". **Gov 5 FA School (Appendix V)**

4.2 Responses on Inclusion Education of Children with ASD

While in one breath, some respondents advanced the argument that Inclusive Education will help children on the autism spectrum, another breath these same respondents suggested that these children could also be aggressive sometimes so instead they be sent to special schools.

"Sometimes I think it does some good especially when the teacher has a little knowledge about autism and how to handle a child with autism. And other times it's not so comfortable because we have some of these autism children who are aggressive. Therefore, I'll have to find means so that the child will not bully the other kids not because he wants to but he doesn't see things as the others see". **Pri 3, HI School (Appendix VIII).**

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There was, however, respondents who were solely in favor of IE with the explanation that it will help children with ASD to improve and not feel neglected and detached from society.

"When they include children with autism in the mainstream school, they will not feel bad. They may not think that they are different from the other schools. We will view them as one and we will show them the same love we show the other children. This will also help them to take part in any activity that is going on in the school. And it will also help them to pick up in areas they are not conversant with because they will learn from their peers". **Gov 3, R1&2 (Appendix III)**

There were other respondents who were in favor of Inclusive Education for children with ASD but only in instances where it is not severe. They recommend special schools for children with severe forms of ASD.

"For me, I think that normally if you isolate certain conditions the children become isolated. And growing up they think they have a special case, so special that society does not allow them to integrate. So, for me, if they bring them to the mainstream and they get special teachers for them so that we are together, it's better. They can even pick one out of two things from their age mates. Because as tiny as they are, they understand themselves better more than an adult explaining it to them. So, they even imitate their peers. Depending on the severity of the case they can be integrated. If it is severe then they will need a special attention but only in instances where the condition is not severe" **Gov 2 LN7 School (Appendix II)**

Furthermore, some of the respondents outrightly suggested children on the autism spectrum should be sent to special schools because of the nature of their behavior.

"Handling them is very difficult. So, I don't know. Because I have not been trained to handle children with such difficulty so it will be very difficult for me to handle. The easiest thing is

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they should take the child to the appropriate school. That would be the easiest way. **Gov 1, WE School (Appendix I)**

"Based on the condition of the child, if the child cannot communicate and will need one-to-one care, then I will recommend they take her to the special school". **Gov5 FA School (Appendix)**

4.3 ASD and Teacher Education

The respondents were of the view that ASD should be part of their teacher training curriculum as part of capacity building for IE.

"It should be part of the training just as they teach us other disabilities. For those of us who are already teaching, workshops should be organized for us".**Gov 1 WE School (Appendix):**

Other respondents held similar views on including ASD in teacher training curriculum.

"Yes, from the training college. Now that the system has been there already, they can have the workshops for us to come. But they should begin at the training college so that it will be part of the system" **Gov 2 LN7 School (Appendix).**

"I think first of all it should start from the training college. They have to train the teachers to adapt to teaching both the special and normal children. I believe that students in the training college should be trained in that aspect". **Pri 2 TTT School (Appendix)**

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The respondents were also of the view that since they were already in the system, periodic workshops should be organized for them to acquaint themselves with the characteristics of ASD.

"I feel that now that we are including them in the mainstream, every school should make it a point to train their teachers on the subject. Maybe through a workshop or inviting a team to go through with them" **Pri 3 HI School (Appendix).**

Also, the respondents felt the need to train them because it will enhance their relationship with children on the autism spectrum and also enable them to to see their abilities and not their disabilities.

"If you have the knowledge to do your work, I think you will do it better. If you are being trained to handle a child with special needs, I think you will do it better. Other than not been trained, whereby you will have nothing but sympathy for the child". **Gov 2 LN7 School (Appendix II)**

4.4 Delayed Child Development and Early Intervention

The respondents generally said if they suspected a child had ASD or is delayed they will advise parents to seek medical advice first rather than to wait and see if the child will improve.

"You should report. It is better to report for the medical advice to be sought than to wait until five. How about if you wait up till five and it gets worse, a whole year keeping a condition can be worse. So, the moment you realize there's something like that if you go to the medical people and they ask you to wait that is better. But you a lay person, how sure are you that what you suspected is even true?" **Gov2 LN7 School, (Appendix II)**

Also, some of the reasons they gave for advising parents to seek early intervention was because they thought the child will lag behind their peers if they waited a little bit longer.

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"I think I will advise the parents to go for a checkup and confirm or otherwise if the child's condition is normal. I know that the more you wait, the more the child lags behind her peers so it is better they seek early attention". **Gov4, LN6 School (Appendix IV).**

The respondents also said they will recommend parent seek early intervention because they believe the condition may be difficult to be rectified if they delay in seeking help.

"They should seek for medical help to know if it can be solved before the child grows up. It may be difficult to correct it if the child grows to 5 years". **Gov5 FA School (Appendix V)**

''Yes, I will be worried. I think the earlier you are able to diagnose, something might help. If you can get an early help, it could help in some way than waiting till the child grows before".**Pri 3 LP School (Appendix VIII)**

Another respondent was of a similar view of seeking early medical attention.

"There is a saying that charity begins at home. I think parents should assist and then teachers should also do that. In my perspective, I don't think a child should wait for five years before that child can have access to a doctor. The first time you suspect a child is different from his peers; you have to encourage the parents to seek help from the hospital". **Pri 2 TOT School, (Appendix VII**)

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4.5 Teachers' Responses to Pathways of Early Intervention

Teachers are often torn between reporting to the head of the school or to parents if they suspected a child has a disability. Some of the respondents said their first point of call will be the parents if they suspected a child has a disability.

"We call the parents and then we discuss it with them. Some of the parents know it and some also don't know. Because most of the children their real parents are not here. They are here with their Grandparents, aunties, and others. Their guidance may not know the real behavior of some the children. So, when it happens like that, we contact the parents and the guardian". **Gov4, LN6 School (Appendix IV)**

"First I will discuss with the parents. And if it is still not working then I will see the head of the department. And we normally do appraisal so if you have a problem with a child you come up with it and then we solve it" **Pri 1 VPI School (Appendix VI)**

The teachers added that parents often do not take such observations of their children in good faith.

"Some with much disappointment and those that are normally disappointed meaning they know the child had a problem but they don't want to accept it. So when a second opinion comes then they begin to be aware there's a problem then they end up been disappointed. But those who have no idea, they usually express their anger making you feel you are the one saying it". **Pri 3 HI School, (Appendix VIII)**

Some of the respondents said they felt comfortable to report to the head of the school or in some cases a special education teacher.

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"We have a special education teacher in the school. So when you have any problem you consult her. So she will be the best person to know what to do. I have heard sometimes she directs the parents to the right places. Sometimes she comes round to do inspection". **Gov 3, R1&2 School (Appendix III)**

"The first point of call is my head of department. She will forward it to the parents and if the need be, to invite the parents then we do". **Pri 3 LP School (Appendix VIII)**

"You talk to the administrator or head of the school. Yes. And they will take from there whether to talk to parents". **Pri 4 HI School (Appendix IX)**

4.6 Perceptions and Attitudes of Teachers towards Special Needs Children

The respondents had varying perceptions about disabilities in general including ASD. They mainly described teaching children with special needs as challenging and needing a lot of patience.

"A child who has a special need will not be able to stay up with the class. So that child, you have to have time for the child. He really would not go as you want but with time he will pick up. And with the autism child, this one in my class, he often sang songs in class when lessons are going on which makes disturbs the class. As a teacher you cannot control him but if he has a teacher around the teacher can control him and have specific time for different activities for him to keep him occupied ".**Pri 5 AS School, (Appendix X)**

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"The challenges are that one they won't even pay attention. They are difficult to control. And they need special attention. If you don't pay special attention to their special needs you won't get it". **Gov 2 LN7 School (Appendix II)**.

Also, the respondents were of the view that teaching them could be stressful as they were not sure if they understood what was being taught or not.

"It is all about the teaching and the behavior. When you teach they don't get it. You will teach one on one but still, there will be no improvement". **Pri 1 VPI School (Appendix VI)**

"It is very difficult. You wouldn't know if the child understands what you are teaching them". **Pri 4 HI School (Appendix IX)**

Respondents were also of the view that children with ASD in particular often disrupted the class. "Some of the challenges are that a child with Autism will leave the class and you chase the child back to the classroom. Sometimes the child comes and doesn't want to enter the class. These were some of the challenges I faced". **Gov 1 WE School (Appendix I)**

"When you have such a child in your class and you are teaching, you can't pay attention to that child at the same time the rest of the children. So that will be a challenge. In a situation like that if I have an assistant, I will assign her to the class and I will handle the child with autism. So that we will include the child in the teaching process". **Gov 3, R1&2 School, (Appendix III)**

One respondent said she did not see teaching children with disability as being difficult.

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“ Personally it didn't stress me, because I realized there was a difference between them. This was a child who was not developing the normal way so obviously, I am not expecting the child to do things like the normal child. So, I was just moving at her own pace. What she could do was what I did with her. The only time we had a little challenge was when I tried to let her use the washroom by herself. I kept doing that with her until I left the school”.**Pri 3 HI School (Appendix VIII)**

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CHAPTER FIVE

DISCUSSION

5.0 Introduction

This chapter analyzes and describes the significance of the findings of the study in light of what is already known about the subject as reflected in the literature. The analysis also takes into consideration the objectives and research questions of the study.

5.1 Low Knowledge Levels of ASD Characteristics

It emerged that pre-school teachers from both government and private schools had low to non-existent knowledge of ASD. This is similar to what was found out by Stone and Rosenbaum (1988) and Helps et al. (1999) who found out teachers held outdated beliefs about autism. The description of ASD by some respondents as a brain defect that came with speech difficulties was the least bad response. Overall, most descriptions of ASD associated it with physical disabilities like weak limbs and hearing impairments which is in contrast to the genetic origin of ASD,(Abrahams & Geschwind, 2008). The description of ASD as having weak limbs and drooling of saliva best describes cerebral palsy which is an entirely different condition. Another characteristic feature which stood out during the interviews was the description of ASD as referring to children exhibiting low IQs. Children with ASD cannot be assessed in the same way as typical children, but this is often the case due to lack of awareness. Children on the autism spectrum learn differently. The low to non-existent knowledge about ASD is likely to impact the teaching styles of teachers, leading to high-stress levels in the classroom (Leblanc et al., 2009). This could also put pressure on parents as they are generally at the receiving end of the repercussions of the low levels of knowledge amongst preschool teachers on disabilities. As

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found in this study, teachers are likely to advise parents to send their children to special schools when they are unable to cope with the child's condition.

"Based on the condition of the child, if the child cannot communicate and will need one-to-one care, then I will recommend they take her to the special school". **Gov 5 FA School (Appendix V)**

The implication of teachers' low knowledge levels regarding ASD is therefore bound to affect their receptiveness towards IE.

5.2 Inclusion education (IE) of children with ASD to include or not to include

The teachers basically were of the view that they lacked the necessary knowledge and resources to teach children on the autism spectrum. In public schools, large class sizes could mean teachers will be unable to teach a child with special needs in an inclusive setting. According to Helps et al. (1999), teachers were likely to fail if they applied the same teaching skills for typical children to teach children on the autism spectrum. Only one teacher fully subscribed to IE without conditions; most others made it conditional i.e. the severity of the child's condition. The respondents cited lack of knowledge, coupled with the high student to teacher ratio, as reasons for not supporting IE. Most public schools visited had a minimum of sixty pupils and a maximum of eighty pupils per class being handled by one teacher aided by an assistant. The private schools were better in terms of student to teacher ratio. Although Ghana has ratified the United Nations convention on IE education, it is clear that it is only at the policy level and has not been fully implemented in most of the schools. This lack of acceptance by respondents of IE shows that IE has not fully been implemented partly due to lack of government commitment and logistics. The respondents were quick to add that, training them on ASD will make them

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receptive and comfortable in teaching children on the autism spectrum. The teachers also lacked knowledge on the types of interventions for ASD, which could further affect their capacity to teach children with ASD even in cases where they agreed to accept them in mainstream schools. This is because there are interventions that work best in the school environment for the management of communication deficits and behavior challenges associated with ASD and a lack of knowledge, in this sense a lack of awareness of these standard interventions, will be detrimental to the progress of children on the spectrum in an inclusive setting.

5.3 Autism Spectrum Disorder should be part of Teacher Training to make us better Prepared

The teachers cited lack of knowledge of ASD as one of the major barriers to embracing IE of children with ASD. This situation stems from inadequate teacher preparation from the teacher training colleges on ASD associated with a lack of in-service training for teachers already on the field, hindering IE of children with ASD. In countries like Canada, training on ASD is part of pre-service teacher training courses and Leblanc et al. (2009) posits that it improved the teachers knowledge and made them more willing to teach children on the autism spectrum. These types of preparatory courses make teachers better prepared to teach children in an inclusive classroom setting and Ghana can also incorporate this in teacher training curricula which already includes disability studies. Most of the respondents also mentioned periodic workshops on ASD as a means to increase their knowledge of ASD. This will lead to a high retention rate of children with ASD in mainstream schools. Including children with ASD and other disabilities in mainstream schools will lead to a demystification of myths surrounding disabilities in general J. Agbenyega (2007) and a reduction in stigmatization.

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5.4 It is Advisable to Seek Early Intervention if a Child is Delayed in Development

The respondents were of the general view that seeking early intervention was the key to preventing a degeneration of the condition. The respondents posited that if they suspected a child had ASD or was not developing typically, they will advise the parents or caregivers to seek medical help for appropriate diagnosis. This, they said, was likely to increase the child's chances of recovery or improvement. These accounts were in line with findings in the literature; early intervention has been proven to yield better outcomes and also lessen the financial burden of parents as it eventually leads to reductions or elimination of expenditure on special education (Chasson et al., 2007).

This is because the child is likely to have lower behavioral challenges and more likely to experience lower communication deficits (verbal or non-verbal) by the time they enroll in school. This further reinforces the importance of teacher knowledge levels of ASD being increased to enable them to offer the right recommendations for parents and caregivers to seek early advice. Instead of making an improvement in the child's education, lessening, a badly educated teacher on ASD is likely to cause extensive life-changing havoc with poor advice. Early intervention also has the tendency to increase the child's chances of being retained in mainstream school. Parents who usually report late for intervention have often previously been advised to "wait and see" by family and friends. In other instances, parents are advised to seek spiritual intervention and it is only when these interventions fail before they seek medical help by which time the condition has deteriorated. This places teachers in the best position to give parents information on seeking help for their children. What is missing is the lack of knowledge on ASD organizations that can be recommended to parents to seek intervention or advice. The

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teachers generally were not familiar with ASD organizations which is similar to what Liu et al. (2016) found out in China.

The cost of providing special needs services can be overwhelming especially in Ghana where government support can be difficult to access in instances where they exist. The low level of government financial support often increases parental stress and in extreme cases, the children are often abandoned or sent on the streets to beg for alms. Therefore, deeper and more extensive capacity building of teachers and the resultant increase in the quality of their advice may turn out to be a revolutionary social intervention and cost-saving measure due to its contribution to early intervention.

5.5 The First Point of Call if a Teacher Suspects a Child has a Disability

The respondents were torn between telling the parents and telling the head of school whiles some said they will hold back from saying anything at all to parents. The respondents said in the past insults have been rained on them by parents for suggesting a child has a disability and this has influenced the decision to either be quiet about it or report to the head of school. This situation must be viewed within the context of prevailing Ghanaian culture, whereby parents are often in denial of their child's condition partly because of the stigma attached to disability in the country and most part of Africa. In another breath, parents are often in denial because accepting their child has a disability will often lead to their withdrawal from mainstream school. A person with a disability is often seen as a social outcast and regarded as possessed by evil spirits (Anthony, 2010). However, a teacher's observation of a child is often accurate as they are in the best position to compare them with their peers, especially where their capacity is enhanced to that effect. Moreover, capacity building should not stop at core knowledge on ASD alone but also on

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counseling techniques, which would enable teachers to convey ASD information in a manner parents would not violently resist. Teachers should also be trained on how to liaise with agencies like the Social Welfare Department, which also has the knowhow on how to transfer sensitive information to parents and has the child's interests at heart.

5.6 Teacher Perception and Attitudes towards Children with ASD and Special Needs

Mainstream teachers have preconceived views of children with special needs or disabilities. Children with special needs are often seen by teachers as having low IQs and hence will never be able to grasp anything taught in class. As one respondent puts it;

"It is all about the teaching and the behavior. When you teach they don't get it. You will teach one on one but still, there will be no improvement". **Pri 1 VPI School (Appendix VI)**

What is lacking is the varying of teaching styles to suit each individual with some form of disability. The general assumption is that, children with disabilities have low IQs and as such cannot be taught in mainstream schools. According to Helps et al. (1999), a well knowledgeable mainstream teacher is likely to fall short if the same skills are applied to neurotypical children. Therein lies the conclusion that ASD children have low IQ because wrong parametres are mainly employed in measuring them. Teachers need to acquaint themselves with the learning styles of each individual and teach them to suit their special needs. Every individual learns differently including children with special needs and thus teaching approaches require a degree of diversity and individualization. The application of wrong methods of teaching can be likened to the child not receiving any form of intervention at all.

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CHAPTER SIX

CONCLUSION, RECOMMENDATION AND LIMITATION

6.0 Introduction

This research was aimed at establishing the knowledge levels of pre-school teachers on ASD in the Madina and Adentan municipalities. The pre-school teachers were interviewed on knowledge of ASD, IE for children with ASD, knowledge of ASD organizations and interventions and their attitudes to disabilities in general. Towards answering the research questions and meeting the objectives of the study, a qualitative design was employed. This involved the use of an interview guide to conduct semi-structured one on one interviews with 10 respondents. The interviews were transcribed into text and the findings were analyzed thematically.

6.1 Conclusions

The findings from the study showed that preschool teachers from both public and private schools lacked knowledge about the characteristics of ASD. The study also revealed that the teachers were mostly not adequately trained for IE and hence this accounted for their reluctance to teach children on theautism spectrum in particular and children with special needs in general. In addition, the study revealed that the teachers were aware of their own lack of knowledge on ASD and this synchronizes with a desire to improve their knowledge of ASD. Finally, the study revealed teachers had a preconceived notion about children with disabilities. They mostly thought children with disabilities have low IQs and hence were not teachable.

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6.2 Recommendations

In view of the findings, the following are recommended for stakeholders in the educational sector:

1. ASD training should be included in teacher training programs as part of disability studies. This will equip teachers with the right knowledge to first instruct children on the autism spectrum in an inclusive setting and also help in the early detection of ASD. The provision of Autism-specific teacher training is gradually burgeoning (European Diploma in Autism is an example) (Helps et al., 1999; Jordan, 2008).
2. Periodic workshops should be organized for teachers already in the field to increase their confidence and competence on ASD. These workshops will be an avenue for teachers to witness first-hand how children on the autism spectrum are likely to respond to different teaching styles. This will be done through roleplay by participants at these workshops.
3. Teachers should also be trained on how to approach parents whose children are suspected of having ASD or have already been diagnosed as parent-teacher relationship must continue to exist. Teachers can take the initiative to introduce such parents at Parent Teacher Association (PTA) meetings to enable parents with children on the autism spectrum in the various schools to start a support group.
4. A screening toolkit should be developed for teachers to help in the detection of red flags of ASD which can eventually lead to timely diagnosis and intervention and ultimately lead to improved outcomes. The screening tool kit should take into consideration the busy schedule of teachers to make it concise.

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6.3 Limitations

The sample size of ten was small and this means circumspection should be exercised not to generalize the results. Thus, the results cannot be representative of the entire pre-school teacher force in Ghana. However, the study is novel in this area and could serve as a guide and indication of the current level of knowledge of pre-school teachers and their attitudes towards IE.

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TRANSCRIPTION OF INTERVIEWS

APPENDIX I

Gov1 WE School

Researcher: Please i want to know, how old are you?

Respondent: I'm 65.

Researcher: Can you briefly describe your educational background?

Respondent: From the scratch?

Researcher: Not from the scratch but from may be from training college.

Respondent: After training college, I went to UCC to do diploma in basic education.

Researcher: So have you always taught pre-school children since you started?

Respondent: No. I started in the primary school. But later on I had arthritis and it affected my right shoulder. So that's why I was brought to the KG. Because in the primary the writing was too much and I couldn't bear the pain so that's why I was brought here.

Researcher: And I also want to know how long you have been in the teaching field.

Respondent: for 23 years.

Researcher: Since you started teaching, have you heard about autism?

Respondent: Yes, of late. Because I can remember that when I was at Pantang, a child was in my class whose behavior was unusual. So, I then asked, what is wrong? Because the way the other children were behaving, she wasn't behaving that way. Certain times you ask her to sit down and she refused to sit down, certain times she will not like to talk to anybody in the classroom. So, I went and asked and they told me that the child had autism.

Researcher: Do you know some of the characteristics of autism?

Respondent: Sometimes they become moody, they don't play with other children, they are always isolating themselves from the other children. That is what I have observed from that child in my class.

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Researcher: The other thing I would like to ask is, during your training did they ever teach you anything about autism or how to relate with children with autism?

Respondent: No.

Researcher: But was there an aspect of your training that dealt with special needs children?

Respondent: Yes.

Researcher: What kind of special needs or was it just general?

Respondent: It was general. Like those who have eye problem, ear problem. So they told us when a child is always complaining that I cannot see from the board, you better bring the child to the front. And some of them too they have hearing problem, you talk and they will not hear. So as the teacher, you have to ask the child or call the parents and find out what is wrong with the child.

Researcher: So, if you find out that there's a child in your class who is not behaving like his peers like you described, who do you report to? How do you think you will handle such a situation?

Respondent: Such things , in my situation, I reported the matter to the Head Teacher. So we called the girl's mother. We discussed and then she told us that's the condition of the child. So the head advised her to take her to the autism school. Because her case was too severe and we could not handle it, so they removed the child from my class.

Researcher: Do you know of any interventions you will recommend for parents with children with autism?

Respondent: No

researcher: Do you know any organizations that work with children with autism?

respondent: No

researcher: What will make you comfortable to accept a child with autism in your classroom?

Respondent: Handling them is very difficult, so i don't know. Because I've not been trained to handle children with such difficulty, so it will be very difficult for me to handle.

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Researcher: since you talked about the difficulty, what will make it easier for you.

Respondent: The easier thing is they should take the child to the appropriate school. That would be the easiest way.

Researcher: If a child is under three and you feel they are not developing as they should or you suspect they have autism, would you tell the parents to wait since the child is still young or you will tell the parents to seek early intervention?

Respondent: I have about three of them in my class and they are under 4yrs. I give them special teaching. I have grouped them together. So, when I give those who can write work, I go back and give them drawing book and I ask them to scribble.

Researcher: What will be their difficulty?

Respondent: Because they are young, they are not up to the school growing age they cannot hold the pencil, they cannot write. So certain times if you force them you will see they will start crying. So, the best thing is you ask them to do whatever. Certain times I give them toys from the cupboard so that they will use it to build, group colors. Whatever they want to use those things for then they will be doing it.

Researcher: If you suspect that a child in your class had autism who would you report to?

Respondent: I will report to the Head Teacher.

Researcher: Would you also inform the parents?

Respondent: Yes, we called the parents and the mother came. So, when the mother came, we sat down with her and told her the way the child was behaving. So, the Head Teacher told her that because of the child's disability, she cannot cope with the children and we don't have the experience to teach the child to be able to also write. So, she was asked to send the child to an autism center at Dzorwulu.

Researcher: Have you ever encountered a parent who came and knows that their child had a difficulty and suggested ways to handle the child?

Respondent: No, I haven't had such an encounter.

Researcher: What are some of the challenges you have faced with special children in general and autism in particular?

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Respondent: Some of the challenges are that a child with autism will leave the class and you chase the child back to the classroom. Sometimes the child comes and doesn't want to enter the class. These were some of the challenges I faced.

Researcher: Are you open to the idea of been trained so that you can handle a child with autism in your class?

Respondent: Oh yes, I will accept if they train me.

Researcher: How do you think they can improve the knowledge of teachers on autism?

Respondent: It should be part of the training just as they teach us other disabilities. For those of us who are already teaching, workshops should be organized for us.

Researcher: Apart from your class, do you suspect any child with autism in the other classes? And how are they been handled?

Respondent: There's a child here, I don't really know whether it's autism or a different thing. But that child certain times he comes to school any time he wants, he leaves the class any time he wants and he writes any time he wants. But I can't point what exactly is wrong with that child. He is in KG 2.

Researcher: Did you speak with the parents?

Respondent: we have been inviting the mother always.

Researcher: What does she say? Is she a single mother?

Respondent: She is a single mother and you can see that things are not going on well so we couldn't do anything. So, the child is still here.

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APPENDIX II

GOV2 LN7 School

Researcher: Madam please I would like to find out how old are you?

Respondent: I'm 50.

Researcher: Please can you tell me about your educational background from the highest level

Respondent: it's degree.

Researcher: Please degree in what?

Respondent: Early childhood

Researcher: Please where did you obtain your degree?

Respondent: Winneba distance learning.

Researcher: can you share with me how you came to be a teacher for preschool children.

Respondent: I was just transferred from a higher level. I was teaching class five and when I got transferred to the new school, there was no class for me. So, I had to be with the kids.

Researcher: Oh, I see. So please how long have you been a teacher?

Respondent: It's about 25 yrs.

Researcher: So how long have you been teaching children?

Respondent: That's in the last 25 yrs.

Researcher: That's interesting to know

Researcher: I want to find out from you what you know about autism.

Respondent: I know autism is a kind of disability

Researcher: do you know some of the characteristics of autism, are you aware of any?

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Respondent: They are unstable. Their retentive memory is quite low. Apart from the retentive memory, I think their IQ is also low. They have low IQ.

Researcher: I would like to find out; in your training was there any aspect that they trained you in autism?

Respondent: No there wasn't any.

Researcher: Were there other disabilities taught? Were there other disabilities that came up?

Respondent: Yes. Hearing impairment and sight.

Researcher: So, I would like to find out from you if a child is not developing like his peers, who do you usually report to?

Respondent: You invite the parents.

Researcher: Usually when you invite the parents, how do they receive it?

Respondent: Sometimes the parents are even aware. They might be aware. But sometimes too they are surprised by your observation.

Researcher: Can you suggest any intervention that you will recommend to the parents?

Respondent: Usually you may not even realize its autism. So, the only advice is that they should seek medical attention.

Researcher: Also, are you familiar with any organization that works with children with autism?

Respondent: I know one in town but I've forgotten the name.

Researcher: Please I would like to find out what is your view on inclusion education for children with autism in mainstream school, what is your view about it?

Respondent: it's good. For me, I think that normally if you isolate certain conditions the children become isolated. And growing up they think they have a special case, so special that society doesn't allow them to integrate. So, for me, if they bring them to the mainstream and they get special teachers for them so that we are together, it's better. They can even pick one or two things

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from their age mates. Because as tiny as they are they understand themselves better more than an adult explaining it to them. So they even imitate their peers. Depending on the severity of the case they can be integrated. If it's severe then they will need a special attention.

Researcher: If you suspect that a child under three has autism, would you recommend they seek intervention or you think it is more realistic to wait for the child to get to five since the child is still young?

Respondent: No. You should report. It is better to report for the medical advice to be done than to wait until five. How about if you wait up till five and it gets worse. A whole year keeping a condition can be worse. So the moment you realize there's something like that if you go to the medical people and they ask you to wait that's better. But you a lay person how sure are you that what you suspected is even true?

Researcher: Have you ever encountered a child with autism in your class.

Respondent: No

Researcher: Do you have parents who have children with special needs telling you how you should handle their kids?

Respondent: Yes, especially with sight. You have parents telling you how to handle the kids

Researcher: What are some of the challenges you know about teaching children with autism or special needs children?

Respondent: The challenges are that one they won't even pay attention. They are difficult to control. And they need special attention. If you don't pay special attention to their special needs you won't get it.

Researcher: Are you open to the idea of been trained in autism so that you can teach a child with autism in your class?

Respondent: Yes.

Researcher: How do you think it will help you as a teacher?

Respondent: If you have knowledge to do your work, I think you will do it better. If you are been trained to handle a child with special needs, I think you will do it better. Other than not been trained, whereby you will have nothing but sympathy for the child.

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Researcher: Generally, how do you think that we can improve the knowledge about autism?

Respondent: By training. Through in-service training and workshops.

Researcher: do you also think it should be part of the teacher training curriculum?

Respondent: Yes, from the training college. Now that the system has been there already, they can have the workshops for us to come. But they should begin from the training college so that it will be part of the system

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APPENDIX III

GOV3, R1&2

Researcher: Please how old are you?

Respondent: I'm 35.

Researcher: Can you tell me about your educational background, from the highest level?

Respondent: Degree.

Researcher: what did you study?

Respondent: Bachelor in Basic Education

Researcher: Was it in a special area or it was general?

Respondent: It wasn't in a special area.

Researcher: So how did you come to teach in the preschool, have you always taught pre-school children?

Respondent: When I came out around 2008, I was posted to the Eastern Region. My first station I was in the primary, but when I got pregnant, they sent me to pre-school. That's how I got to the preschool. In my period of teaching, I developed the love for children although I've not been to a special pre-school, I'm able to teach them.

Researcher: Where did obtain your degree?

Respondent: Winneba.

Researcher: What do you know about autism? Do you know anything about autism?

Respondent: I know they are among the special children. I've heard that it affects part of their brain. And parts of their brain it affects controls how they behave. That's what I've heard about autism

Researcher: Do you know some of the characteristics that they would usually present?

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Respondent: They don't behave normal like the normal children. You have to have time for them and exercise patience. Sometimes they will behave strangely. They don't sit well and the talking too doesn't come well. So, if you have such a child in your class, I suggest you pay special attention to them so that they take part in the learning process.

Researcher: So, if you realize there's a child in your class who is not behaving like his peers, who do you normally report to?

Respondent: We have a special education teacher in the school. So, when you have any problem you consult her. So, she will be the best person to know what to do. I've heard sometimes she directs the parents to the right places. Sometimes she comes around to do inspection.

Researcher: If you suspect a child has autism, do you know any intervention to suggest to parents? Do you know any interventions for autism?

Respondent: The parents should exercise patience and there should be attention on the child all the time.

Researcher: Do you know of any organization that works with children with autism? Do you know any of them?

Respondent: No, I don't

Researcher: What is your view on inclusive education for children with autism? What do you think about them being in mainstream school?

Respondent: When they include children with autism in the mainstream school, they won't feel bad. They may not think that they are different from the other schools. We will view them as one and we will show them the same love we show the other children. This will also help them to take part in any activity that is going on in the school. And it will also help them to pick up in areas they are not conversant with. Because they will learn from their peers

Researcher: So, in this class, if you suspect that a child under three has autism, would you recommend they seek intervention or you think it is more realistic to wait for the child to get five since the child is still young.

Respondent: I wouldn't wait. I will recommend to the parents that they seek solution to it. So they should send the child to the right hospital. So that those who have a lot of knowledge about

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it will treat it

Researcher: Do you know some places that you will recommend to parents so that they can go?

Respondent: I don't know of any special place. I've heard about a hospital around Abokobi Pantang area from a doctor who came to have a talk here in the school.

Researcher: Have you ever encountered a parent with a child with autism?

Respondent: No.

Researcher: How about a child with any disability, do you have a parent telling you about how you should take care of their special needs child?

Respondent: No.

Researcher: What are some of the challenges faced teaching children with autism in particular or special needs children in general

Respondent: When you have such a child in your class and you are teaching, you can't pay attention to that child at the same time the rest of the children. So that will be a challenge. In a situation like that if I have an assistant, I will assign her to the class and I will handle the child with autism. So that we will include the child in the teaching process.

Researcher: Are you open to the idea of teaching a child with autism in your classroom?

Respondent: Yes. Because teaching is a profession and as I have taken it as a profession, I have to accept all children as been equal. I don't have to be partial. So, if a child comes and they have autism characteristics, I will not shun the parents away but I will rather accept the child and later advise them to seek treatment

Researcher: So, are you open to the idea of been trained in autism?

Respondent: Yes. Since the children come from individual homes most of them will have different characteristics so if I'm able to know, I can help if the need arises.

Researcher: How do you think we can improve the knowledge of teachers on autism?

Respondent: They should have workshop once a while or if termly, and not just the autism, other disabilities as well.

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Researcher: When you were in the training school, were taught about autism? What other disabilities were you taught?

Respondent: Learning impaired and visual impaired

Researcher: Throughout your career, have you encountered a child with autism in your classroom?

Respondent: No.

Researcher: Do you know of other teachers who have encountered children with autism in their classroom?

Respondent: No.

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APPENDIX IV

Gov4, LN6 School

Researcher: Please I want to know, how old are?

Respondent: 51 years

Researcher: Can you briefly describe your educational background. The highest level?

Respondent: Degree.

Researcher: Degree in?

Respondent: Basic Education

Researcher: Have you always taught pre-school?

Respondent: No

Researcher: How did you come to teach in pre-school?

Respondent: As for we teachers when we come out, we are assigned to any class. I've taught in class1 for six years and class four for about eight years and other class. Three years ago, when I was posted here this is the class I had.

Researcher: Please can you tell me what you know about autism?

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Researcher: I know it's about those children who are handicapped in a certain way that they cannot do certain things on their own. There was one in my former school when I was at Cape Coast. She was very young so they brought her to KG1. But when she came hers was a little serious. Her mother said she was feeling shy so she kept her in the inside. So, it was friends who advised her to bring her to school. So, at that time, they said we should add them to the mainstream. So, she was the only one there. She couldn't do anything. When she came, the handkerchief was around her neck and the hands were very flexible. She couldn't control the hands. So that was when I saw a real one. When I was leaving the school, she was in class three. Formerly her mouth was watery. By the time she got class three, she was able to handle the pencil and scribble.

Researcher: Would you be able to tell what some of the characteristics of children with autism show?

Respondent: There's one in my church. She can't walk. She is always on the mat. She cannot do things on her own. Even the sitting on the mat she will have to lie. The limbs are very weak.

Researcher: In your training to be a teacher, was there an aspect that they taught you about autism?

Respondent: No

Researcher: What about disability in general?

Respondent: For disability, we learnt it.

Researcher: which type of disabilities came up?

Respondent: Hearing, speech and learning disability

Researcher: Those are the ones that they taught you?

Respondent: yes.

Researcher: If you suspect that a child is not developing like his peers, who do you usually report to?

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Respondent: We call the parents and then we discuss it with them. Some of the parents know it and some also don't know. Because most of the children their real parents are not here. They are here with their Grandparents, aunties and others. Their guidance may not know the real behavior of some the children. So, when it happens like that, we contact the parents and the guardian.

Researcher: What is their reaction, how do they react?

Respondent: They take it. There was a particular child who falls sick as a result of blood loss. When the parent came here and I made a few recommendations, he took it and thanked me.

Researcher: If you suspect that a child under three has autism, would you recommend they seek intervention or you think it is more realistic to wait for the child to get to five since the child is still young.

Respondent: I think I will advise the parents to go for checkup and confirm or otherwise if the child's condition is normal. I know that the more you wait, the more the child lags behind her peers so it's better they seek early attention.

Researcher: Do you know some places that you would recommend for parents so that they can go?

Respondent: I don't know of any special place. I've about a hospital around Abokobi Pantang area from a doctor who came to have a talk here in the school.

Researcher: Have you ever encountered a parent with a child with autism?

Respondent: No.

Researcher: How about a child with any disability, do you have a parent telling you about how you should take care of their special need child?

Respondent: No.

Researcher: What are some of the challenges faced teaching children with autism in particular or special needs children in general

Respondent: when you have such a child in your class and you are teaching, you can't pay attention to that child at the same time the rest of the children. So that one will be a challenge. In a situation like that if I have an assistance, I will assign her to the class and I will handle the child

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with autism. So that we will include the child in the teaching process.

Researcher: are you open to the idea of teaching a child with autism in your classroom?

Respondent: yes. Because teaching is a profession and as I have taken it as a profession, I have to accept all children as been equal. I don't have to be partial. So, if a child comes and they have autism characteristics, I will not shun the parents away but i will rather accept the child and later advise them to seek treatment

Researcher: So are you open to the idea of been trained on autism?

Respondent: Yes. Since the children come from individual homes most of them will have different characteristics so if I'm able to know, I can help if the need arises.

Researcher: How do you think we can improve the knowledge of teachers on autism?

Respondent: They should have workshop once a while or if termly. And not just the autism, other disability as well.

Researcher: When you were in the training school, were taught about autism? What other disability were you taught?

Respondent: Learning impaired and visual impaired

Researcher: Throughout your career, have you encountered a child with autism in your classroom?

Respondent: No.

Researcher: Do you know of other teachers who have encountered children with autism in their classroom?

Respondent: No.

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APPENDIX V

Gov5 FA School

Researcher: Hello madam please how old are you?

Respondent: 35 years

Researcher: Can you briefly tell me about your educational background from the highest level

Respondent: From secondary school, I went to teacher training college, PWTC at Aburi. Later they posted me here and I continued at University of Cape Coast.

Researcher: Then I will ask you, as part of your training, were u ever trained on autism?

Respondent: I don't really remember

Researcher: But were you trained on other disabilities?

Respondent: Yes.

Researcher: What kind of disabilities?

Respondent: The Downs syndromes.

Researcher: Do you remember any other disabilities they taught you apart from these ones?

Respondent: No, those are the ones I remember.

Researcher: How did you become a pre-school teacher?

Respondent: It's through the training from the training college. From there you can be posted to any level in the basic cycle. You are equipped from the training college to teach in any level.

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Researcher: Have you always been teaching pre-school since you completed from the training college?

Respondent: No.

Researcher: Ok. How long have you been teaching in pre-school?

Respondent: I taught for four years and stopped. I continued teaching two years ago. So in all it's been six years.

Researcher: Can you share with me what you know about autism?

Respondent: I know that it's a form of disability found in kids which affects their speech and hearing. They also need special attention in class as compared to the other kids.

Researcher: If in your class a child is not developing typically like his peers, who do you usually report to?

Respondent: We have special officers who are into such kids. So, they come around to check for those kids.

Researcher: How are they called?

Respondent: We call them Special Education teachers.

Researcher: How often do they come?

Respondent: Once a while.

Researcher: Is it once a term, once a month?

Respondent: We have an office for that. So, she goes around the schools.

Researcher: So how often do you see him here?

Respondent: It's been a while

Researcher: Over a year?

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Respondent: yes, over a year

Researcher: So, you wait till they come?

Respondent: Yes. Apart from that I know of a special school that they encourage parents to take their kids there? But apart from that if the child can cope with the normal kids, we just leave them.

Respondent: There is a girl here who used to be quiet and isolated herself from her friends when she came? But with time and encouragement she can now communicate with her friends.

Researcher: If the special education inspector is not around who else do you report your observations about a particular child who seems to delay in development or has a form of disability to?

Respondent: They are the people, so you have to wait for them ?

Researcher: Do you know of any interventions that you will recommend for parents of children with autism?

Respondent: We advise them to take them to the clinic to seek for help.

Researcher: Are you familiar with any organizations that work with children with autism?

Respondent: No.

Researcher: What is your view on inclusion education for children with autism? Do you think they must be put children with special needs schools or in mainstream schools?

Respondent: If they can cope. The girl I spoke earlier about as an example, she developed her speech through the interactions she had with the other kids in the school.

Researcher: If a child has autism and they brought her to your class, would you be comfortable to teach that child?

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Respondent: Of course. Because we have been trained in that aspect from the college. So we don't isolate them.

Researcher: Have you ever encountered a child with autism throughout your career?

Respondent: Yes. Sometimes. An example is the girl I spoke earlier about

Researcher: You think she has autism?

Respondent: Yes.

Researcher: What characteristics did she present?

Respondent: She used to defend herself when she didn't understand the other kids.

Researcher: what other characteristics did she display that made you think that she has autism?

Respondent: she was quiet in class. She felt shy.

Researcher: What made you certain that she had autism?

Respondent: Because of her special problem, she didn't have speech. She also had a wide open cavity in her mouth which I think affected her speech.

Researcher: If you suspect that a child under 3 years has autism, usually will you recommend they seek intervention or you think that you will wait till five years when you can be sure?

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Respondent: They should seek for medical help so to know if it can be solved before the child grows up. It may be difficult to correct it if the child grows to five years?

Researcher: In your career have you ever encountered a parent who has a child with Autism, and do they tell you how to treat their child in class?

Respondent: No.

Researcher: What were some of the challenges you faced in teaching the child you described as having autism or any challenges you have had in teaching a special needs child?

Respondent: You have to be extra patient.

Researcher: Does it take more energy, more effort than teaching a typical child?

Respondent: Yes

Researcher: how many teachers are you in a class?

Respondent: One.

Researcher: If you have two kids with autism in a class, do you think you can teach them?

Respondent: No

Researcher: What do you think they can do to make you more comfortable to teach two kids with autism in a class?

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Respondent: They should bring more aids.

Researcher: How about staffing, do you think you alone can handle it?

Respondent: No. I think it will be difficult, more than one autism child.

Researcher: So, based on what would you say a child does not qualify for mainstream school?

Respondent: Based on the condition of the child. If the child cannot communicate and will need one-to-one care, then I will recommend they take her to the special school.

Researcher: Are you open to the idea of been trained on autism to help you manage children on the autism spectrum?

Respondent: Yes. I think it should be done for everyone including parents.

Researcher: How do you think teachers can improve their knowledge on autism?

Respondent: More workshop for that topic to be treated.

Researcher: What about those in the college?

Respondent: It should be included in their syllabus to be taught.

Researcher: When you suspected this child had autism, did you discuss it with any teacher?

Respondent: I consulted my Headmistress.

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Researcher: What did she think?

Respondent: She encouraged me.

Researcher: Did she also think the child had autism?

Respondent: She said the child had special needs.

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APPENDIX VI

PRI1 VPI School

Researcher: Please how old are you?

Respondent: 48 years.

Researcher: Can you describe your educational background, from the highest?

Respondent: I went to Takoradi poly, I did accounting and later I decided to come to the educational field so at the moment I'm doing Sandwich program, Early Childhood at UCC.

It is a three-year diploma course before you do a two-year degree.

Researcher: So far how many semesters have you done?

Respondent: Two and I'm in my second year.

Researcher: Since you started has there been any lectures on special needs or disability?

Respondent: No but we'll do it this semester

Researcher: do you know if as part of the disability course they will be teaching you something about autism?

Respondent: Definitely. I think they will teach.

Researcher: You don't that for a fact?

Respondent: Yes, but there will be a disability aspect.

Researcher: so far have you had any encounter with disability training?

Respondent: No

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Researcher: How did you come to be a pre-school teacher, have you always taught in pre-school?

Respondent: I have always been in preschool for almost 20 years.

Researcher: What do you know about autism?

Respondent: I know it is children who have mental disorder and they also have problem with communicating. Their IQ is very low. They always want to do what they want to do. Understanding is very difficult for them.

Researcher: Have you ever encountered a child who fits into how you have described autism?

Respondent: There was this boy, I don't know whether he had that problem or not. But he looked a bit different from the children. Later I encouraged the mother to take him to the special school because when you are teaching, he will be doing his own thing, he won't concentrate. He won't write and he was lagging behind as well.

Researcher: When you told the mother, how was her reaction?

Respondent: She said no. And that If we didn't take time she was going to report. But later she agreed and took the child to the special school.

Researcher: All the trainings that you had to be a pre-school teacher, was there an aspect that they mentioned autism?

Respondent: No

Researcher: If in your class you realize a child is not developing like his peers in the class who do you usually report to or discuss with?

Respondent: First I will discuss with the parents and if it is still not working then I will see the head of department. And we normally do appraisal so if you have a problem with a child you come up with it and then we solve it.

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Researcher: Can you suggest some interventions that you'll recommend for parents who have children with autism?

Respondent: I'll ask the parents to first take the child to the hospital to go through all the processes and see if he's having it or not.

Researcher: Do you think it is easy to tell a parent?

Respondent: It is not easy at all.

Researcher: Usually what is the first reaction that you receive?

Respondent: How do you know? What shows?

Researcher: When they ask that, what do you tell them to convince them or do you bring in another teacher?

Respondent: No, you have to solve it. If it is becoming too difficult you take the person to the head or the counselor.

Researcher: And usually the counselor will say what you said exactly to the parents?

Respondent: He will take time to listen to your view and examine the child too.

Researcher: Do you know of any organizations that work with children with autism?

Respondent: A lot

Researcher: Do you know if they work with children with autism or it's a special school?

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Respondent: I know it's a special school.

Researcher: What is your view on inclusion education?

Respondent: If they include them it is fine but there are disadvantage and advantage to it. The advantage is that if they mingle with them it will be of a help. The disadvantage is that it will be time-consuming and costly since you will need a special teacher for them.

Researcher: Do you think you can handle a child with autism?

Respondent: Yes.

Researcher: As it is now or you feel that you have to be trained?

Respondent: A little training.

Researcher: What was difficult with the child that you encountered? How did you come to the conclusion that this child must go to the special school?

Respondent: He often had mood swings. He also didn't know how to use the washroom.

Researcher: In your view, what will make you refer to a child to a special needs school?

Respondent: Based on the teaching of the child cannot progress in their learning then I will refer that child.

Researcher: If you suspect a child under three in your class who is not developing like his peers or you suspect he has autism, would you usually say let's wait until he is five and be sure or you will recommend to the parents to seek early intervention?

Respondent: No, you have to tell the parents you are studying the child so they should also do same and see. So, if both parties come to a similar conclusion then you know that the child has a problem.

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Researcher: Have you ever had a parent who will come and say my child has autism so this is how you should handle him. Do parents tell you that?

Respondent: No, it is difficult. At times when you are even telling the parents, they will deny and say it is not like that in the house. It's not all parents who will tell you.

Researcher: So, what are some of the challenges you feel you faced with children with autism over the years of teaching?

Respondent: It's all about the teaching and the behavior when you teach, they don't get it. You will teach one on one but still, there will be no improvement.

Researcher: Are you open to the idea of been trained to be able to handle children with autism in your classroom?

Respondent: Yes. But when you mingle with them then you to have about three to four teachers in the class, you will still need special trained teachers in the class.

Researcher: So even if they trained you, you feel they should increase the number of staffing in the class?

Respondent: Depending on the number of children in the classroom.

Researcher: Have you observed any child in this school who you feel that is not developing as his peers or you feel there's something wrong?

Respondent: No.

Researcher: But if it is not in your class will you tell the teacher to also observe the child.

Respondent: Yes

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APPENDIX VII

PRI2 TTT School

Researcher: How old are you?

Respondent: I'm 40yrs.

Researcher: Can you tell me about your educational background.

Respondent: I first did my three-year post-secondary at the Kibi training college. And then I pursued at tertiary institution at UPS, a degree program in business administration.

Researcher: May I ask you why you chose that course and not anything related to pre-school since now you are a pre-school teacher?

Respondent: Well initially I said I went to Kibi training college and from there I pursued a course in administration. Actually, I wanted to do Basic Education in UCC but I considered the distance so I chose to do the business administration.

Researcher: During your training at Kibi college were you taught anything about how to teach in pre-school? How did you get in the preschool teaching, was it part of the training?

Respondent: Basically I will say yes. We are trained to help all the children, irrespective of their age. So, after training college, I was posted to Somanya and taught primary three and later moved to primary four. So, when I came to TTT School, I was placed in pre-school.

Researcher: What do you know about Autism?

Respondent: I don't know much but I know it's the children who have defect in their brain. And due to that it has effect on their speech and movement.

Researcher: As you have described it, have you ever encountered a child who has autism throughout your career?

Respondent: Yes, I have about nine years ago. There was a child in my class and had that deformity. And I treated him as the normal child. He was so dear to me. And because of his deformity, he was lagging behind in class and therefore had to help him.

Researcher: Were there any behaviors that he put up?

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Respondent: He was quite ok but at times he will be sleeping a lot in the class and he often spilled the food he ate on himself.

Researcher: During your training to be a teacher, was there an aspect of your training that taught you about autism?

Respondent: No

Researcher: But were you taught special education and disability?

Respondent: No. But as said earlier, they trained us to adapt to any situation concerning children whether they are a special need or a typical child.

Researcher: Was there a time where they taught u about disability in one of your courses?

Respondent: No.

Researcher: If a child is not developing typically like his peers in the class, who do you usually report to?

Respondent: I think in every institution there is a head and I have been the coordinator, I don't have to take the law into my hands. So first of all, I have to inform the Head Teacher and together we invite the parents of that child and then discuss about the child.

Researcher: Is it easy talking to parents about their child? How do they usually take it?

Respondent: It is not easy. Because they always assume that their child is ok. About my nine years encounter, the child's parents, the mom, was in the fire service. I invited the mom and I talked to her. She said her son was ok and he was going to pick up. So, in fact, it is not easy to talk to them. Every parent wouldn't love to have people pointing fingers at their ward saying they are deformed and the like. It's quite challenging.

Researcher: Can you on your own suggest some interventions that work for children with autism that you can recommend to parents?

Respondent: I think the best option is to send the child to a special school because we the teachers are not trained to take care of special kids. So, I believe that a child should be sent to the appropriate place to have that care.

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Researcher: Do you know of any organizations that work with children with autism?

Respondent: No.

Researcher: What is your view on inclusive education; to include children with autism in the mainstream?

Respondent: I think first of all it should start with the training college. They have to train the teachers to adapt to teaching both the special and normal children. I believe that students in the training college should be trained on that aspect.

Researcher: If you suspect a child under 3 years is not developing like his peers, will you recommend they seek intervention. Or do you think it is more realistic to wait a little longer to be really sure before seeking intervention since the child is still young?

Respondent: There's a saying that charity begins at home. I think parents should assist and then teachers should also do that. In my perspective, I don't think a child should wait for five years before that child can have access to a doctor. The first time you suspect a child is different from his peers, you have to encourage the parents to seek help from the hospital.

Researcher: Have you ever encountered a parent with a child with autism, telling you how to handle their kids in the classroom?

Respondent: No. I don't think some of the parents even have the idea of how to train the children themselves. I confronted a parent who had their child repeated in kindergarten because the child was not making the normal progress and the parent said the child was ok. I told her to send the child to a special school but she refused.

Researcher: In your encounter with a child with special needs, what were some of your challenges?

Respondent: It was quite challenging teaching someone who was not that fast in learning. Because you have to have all the time on him and then leave the others too. That is why I mentioned earlier that teachers should be trained to handle special kids to help teaching and learning effectively.

Researcher: Are the special needs kids bullied by the other kids?

Respondent: I haven't witnessed anything of that sort. They play together.

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Researcher: Are you open to the idea of been trained in autism so that you can manage children with autism?

Respondent: Yes

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APPENDIX VIII

PRI3 HI School

Researcher: Hello please how old are you?

Respondent: I'm 31yrs.

Researcher: Can you briefly tell me about your educational background.

Respondent: I did Montessori course and I have a certificate in Basic Education, at the Ghana Montessori training. I also had a tertiary certificate at VAD which is a GES accredited.

Researcher: Can you tell me how you came to be a pre-school teacher?

Respondent: I've always had the passion in teaching but what made me divert totally was when I got married and started having my own children. So, I decided to follow my passion.

Researcher: please how long have you been teaching?

Respondent: I've been teaching for 8 years

Researcher: Have you always taught in pre-school?

Respondent: Yes.

Researcher: I want to know, what do you know about autism?

Respondent: I don't know too much but I know it is a brain disorder that makes it difficult for children to communicate and interact like a typical child will do.

Researcher: If I may ask during your training to be a teacher, was there an aspect of your training that taught you about autism?

Respondent: No I have never been trained but personally I have the interest to be trained.

Researcher: If a child is not developing typically like his peers in the class, who do you usually report to?

Respondent: The first point of call is my head of department. She will forward it to the parents

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and if there is the need be to invite the parents then we do.

Researcher: How easy or difficult is it to tell a parent that you feel that their child is not developing typically like the typical child?

Respondent: Talking from a parent point of view and as a teacher too, it is never easy. First of all you are looking for a situation where it won't go overboard. Some might not even take it lightly, as though you are sidelining the child.

Researcher: Usually what is the reaction of the parents when you try to draw their attention to their child not developing typically?

Respondent: What makes you think so, that's the first question they ask

Researcher: Is it with joy or anger?

Respondent: Some with much disappointment. And those are normally disappointed meaning they know the child had a problem but they don't want to accept it. So, when a second opinion comes then they begin to be aware there's a problem then they end up been disappointed. But those who have no idea, they usually express their anger making you feel you are the one saying it.

Researcher: Can you suggest some interventions you would recommend for parents with children with autism?

Respondent: For the interventions, I will first recommend the speech therapist too help the child have a mode of communication.

Researcher: Are you familiar with any organizations that deal with children with autism?

Respondent: I only know of Dzowulu Mental School and I recently noticed one around a Foster school.

Researcher: What do you think about inclusive education for children with autism?

Respondent: Sometimes I think it does some good especially when the teacher has a little knowledge about autism and how to handle a child with autism. And other times it's not so

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comfortable because we have some of these autism children who are aggressive and therefore, I'll have to find means so that child won't bully the other kids not because he wants to but he doesn't see things as the other ones see.

Researcher: So you said yes and no based on its severity?

Respondent: Yes when it's severe I think they should be sent to the special schools

Researcher: If you suspect that a child under three is not developing typically would you wait till they reach five years to see if the child would develop or would you recommend to parents to seek for intervention at age three? What would you do, will you be worried?

Respondent: Yes, I will be worried. I think the earlier you are able to diagnose, something might help. If you can seek an early help, it could help in some way than waiting till the child grows before.

Researcher: Have you had the experience of suspecting a child under three to have autism?

Respondent: Yes. She was in my class.

Researcher: How did you handle it?

Respondent: It wasn't easy. This was about five years ago. I have my mother as an inspiration. She taught in the mental school, so sometimes I take the inspiration from her. But this child was aggressive. So most of the time she was sitting right beside me and as time went on I realized she was getting better. You could control her but the speech couldn't come at all.

Researcher: What would you say were some of the characteristics?

Respondent: If it's a sound she learnt she will keep repeating it over and over. She slapped her hands most of the time. The way she responded to things was not like the normal child. She was always anxious. Unfortunately, the parents didn't mention anything about her case to the school. So, it was left to me to manage her anyway until I left the school.

Researcher: So, in the end, how did you manage her? Did she stay in the mainstream?

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Respondent: She stayed in mainstream until I left the school. I just know that I wasn't giving her the normal work. I have her things that would entice her, like coloring. So, all her work were coloring. We kept doing that repeatedly and it got to a time I realized she could color within the margin of the picture. So, I realised there was an improvement.

Researcher: Were the parents also telling you how to handle her? Were they giving you suggestions?

Respondent: They weren't giving me any suggestions. But as time went on, the mother rather came to say she has started seeing improvement in the kid. But since she didn't tell me anything, I also didn't go ahead in telling her this is what I suspected in the child.

Researcher: What stopped you?

Respondent: I couldn't gather the boldness.

Researcher: Did you discuss with anyone else about that child in the school?

Respondent: At the time I discussed with my supervisor and she also confirmed that the child had a special case.

Researcher: But the conclusion wasn't that you should tell the parents?

Respondent: No

Researcher: What were some of the challenges you faced with that child with autism and have you also had challenges teaching a child with special needs.

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Respondent: personally, it didn't stress me. Because i realized there was a difference between them. This was a child who was not developing the normal way so obviously, I'm not expecting the child to do things like the normal child. So, I was just moving at her own pace. What she could do was what I did with her.

The only time we had a little challenge was when I tried to let her use the washroom by herself. I kept doing that with her until I left the school

Researcher: Did you read anything about how to handle her or it just came naturally.

Respondent: Yes, it came naturally.

Researcher: Are you open to the idea of been trained on autism to help you manage children on the autism spectrum?

Respondent: Gladly

Researcher: Also, I would like to know, how do you think teachers can improve their knowledge on autism?

Respondent: I feel that now we are including them in the mainstream, every school should make it point to train their teachers on the subject. Maybe through workshop or inviting a team to go through with them

Researcher: What about those in the training colleges now. How do you think their knowledge too can be improved on autism?

Respondent: I think it should be an aspect of the study.

Researcher: If you were asked to pay and upgrade to get certified on ASD will you be willing to?

Respondent: If I can afford it I will.

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APPENDIX IX

PRI4 HI School

Researcher: Ok please I want to know, how old are you?

Respondent: I'm 30yrs.

Researcher: Can you tell me about your educational background. From the highest level

Respondent: I went to NTTC.

Researcher: Is it under GES?

Respondent: Yes, it's under GES

Researcher: How long have you been teaching?

Respondent: For 10 years.

Researcher: Can you tell me how you ended up in pre-school and not any other level?

Respondent: Actually, I love children and I always wanted to be a teacher. So, when I completed SHS I started teaching in the pre-school before even before going for the training.

Researcher: How long is the training?

Respondent: Its two months.

Researcher: Would you mind sharing with me what you know about Autism?

Respondent: I know that they are special children. They can't talk. They can make noise but they can't talk like the way we talk. And some that I know they can't even stand and they can't even hold things.

Researcher: During your training, was there an aspect about Autism? Did they train you on anything related to Autism?

Respondent: No

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Researcher: Was there an aspect about disability or special needs?

Respondent: Yeah.

Researcher: Ok what kinds of disability were you taught?

Respondent: Yes.

Researcher: What kind of special needs or was it just general? Was there anything related to hearing impairment?

Respondent: Yes. Some cannot hear.

Researcher: If you have a child in your class who is not developing like his peers, usually who do you report to?

Respondent: You talk to the administrator or head of the school.

Researcher: That's your first point of call?

Respondent: Yes. And they will take from there whether to talk to parents.

Researcher: Have you had the opportunity to talk to a parent about how their child was developing?

Respondent: Yes

Researcher: How was it? Can you share the experience of how you went about it?

Respondent: Ok. The parent herself made an earlier complaint about her child. So, I told her to wait for the child to get to three years, because I suspected it was the age. She was very worried but God willing when he was three, he was able to write as we wanted. Some too the speech. Her other complain was about the speech. So, I said sometimes if the child is young and you don't have other kids around to interact with them, then the speech can delay. Or when the parents don't communicate with them often so as they grow the speech comes.

Researcher: Has there ever been an instance of a parent getting angry for suggesting their child was not developing well?

Respondent: Not anger per say. But they will tell you what the child cannot do and an opinion

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will be given from you.

Researcher: Can you suggest interventions you will recommend for parents of children with autism?

Respondent: My suggestion will be that the children should be given special attention or care?

Researcher: Are you familiar with any of the organizations that work with children with autism?

Respondent: No.

Researcher: What is your view on Inclusion education for children with Autism? Do you think they should be put in regular schools?

Respondent: Because they need special care, they should have a special school for them.

Researcher: If you suspect a child under three has Autism, will you recommend they seek intervention. Or you think it is more realistic to wait a little longer to be really sure before seeking intervention since the child is still young.

Respondent: No. You have to check immediately so that you know what it is, because it might not be what you were thinking.

Researcher: Have you ever encountered a child in your class with autism?

Respondent: Yes

Researcher: Do parents suggest ways to handle the kids or you come with your own style of teaching them?

Respondent: Yes. The parents told us how to handle the child. She didn't tell us everything though.

Researcher: Was it a child with autism.

Respondent: Yes.

Researcher: Would you tell me how it was, instructing a child with autism?

Respondent: It was a nice experience.

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Researcher: How?

Respondent: The child was lovely she smiles. When you give her food she eats.

Researcher: What are some of the characteristics that you observed that was different from the other kids?

Respondent: She can't talk; she can't sit like the way the other kids sat. She mostly laid on the floor.

Researcher: Would you tell me some of the challenges with teaching a child with autism or a child with special needs?

Respondent: It's very difficult. You wouldn't know if the child understands what you are teaching them.

Researcher: If they trained you on autism, would you be open to the idea of having a child with autism in your class?

Respondent: Yes

Researcher: In your view how do you think we can increase the knowledge of teachers on autism?

Respondent: If you don't have that heart you can't do it.

Researcher: But if you were trained.

Respondent: Sometimes you may be trained but it always falls on the passion. If you have the passion and you know what you are doing then it's the best

Researcher: Do you think it's a good idea if they made autism part of the teacher training curriculum or otherwise you think it will be imposing on people?

Respondent: It's good because you don't have any idea when you'll meet a child like that. So that it wouldn't be something new or odd to you and then you'll know how to handle such a child

Researcher: Apart from you having experience with a child with autism, do you know of any colleague who have had an experience with a child with autism. Or have you observed a child like that on the school compound?

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Respondent: No.

Researcher: Are you aware of any therapy that a child with autism can benefit from?

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APPENDIX X

PRI5 AS School

Researcher: Pleases how old are you?

Respondent: I'm 28

Researcher: Can you tell me about your educational background?

Respondent: After secondary School I did few courses. I went to the NNTTC, the children workers and some other one.

Researcher: So usually what do they teach you?

Respondent: They teach us everything about preschool.

Researcher: So, during the training were you at any point trained about autism?

Respondent: No. But at a point they taught us something about how handle special needs kids in general but not specifically autism.

Researcher: Were you taught on anything about disabilities?

Respondent: Yes.

Researcher: What kind of disabilities came up?

Respondent: Ok it was not really disabilities but like children who had problem in writing.

Researcher: I want to ask you, how did you become a preschool teacher? Have you always been a pre-school teacher.

Respondent: Where I took my course, we are trained to teach from crèche to class three.

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Researcher: What is your highest level of education?

Respondent: A secondary School.

Researcher: Can you tell me what you know about autism?

Respondent: I just don't know much

Researcher: I will ask again?

Researcher: If in your class a child is not developing typically like his peers, who do you usually report to?

Respondent: As a teacher you'll put few measures in place and if it's not working then you report to the directors.

Researcher: Is there a point where you had to call in parents to talk to them about something that you suspect about their children?

Respondent: Yes.

Researcher: How did you handle it and how did they respond? What condition was it? What did you suspect?

Respondent: There was this child in my class who always cried when it was time for writing. He rejected all the food they gave him and often slept in class. So, I had to find out what the problem could be. So, I asked the other teachers whether that's been the usual behavior and they affirmed. So, I had to call in the parents and ask them if that's how the child behaved in the house. But they said no. But they said he didn't sleep early. Often been watching cartoons and therefore he slept any time he was done.

Researcher: In all the years that you taught, have u ever had a child with autism in your class?

Respondent: Yes, and it's my first time.

Researcher: Can you tell me about how you handle him and what are some of the characteristics he possess?

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Respondent: So, this particular one I'm fortunate i have the child's assistance in the class. So, I sought information from him. I asked about what caused it and why it's like that. I have a friend with a child who has similar has similar behavior and therefore I wanted to know if it's the same. And then how I will know if a child has autism.

Researcher: What were some of his answers?

Respondent: So, he said when a child likes a particular toy and cannot do anything without it, there could be something wrong.

Researcher: Based on the child that's in your class, would you say that you know the characteristics of autism?

Respondent: Because this is my first time and the one in my class has really improved based on what I've been told I can't really tell. But there are other children who behave differently from the one in my class.

Researcher: This other one, is he in your school?

Respondent: Yes?

Researcher: What are some of the characteristics that he displays that made you think he has autism. What made you suspect?

Respondent: Number one he doesn't write. It is not everyone who likes writing but that particular child he doesn't write and he behaves differently. He is not social too.

Researcher: How different?

Respondent: He is not always close to his friends. When you see him you could see there's a problem. We have three here.

Researcher: Can you tell me in what aspect they are delayed?

Respondent: The other two are delayed in speech. And when we are teaching, they can't really follow what is been taught. They need a special explanation.

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Researcher: Do you know of any interventions that you'll suggest to a parent or a mother who reports that their child has autism?

Respondent: I'm not so good about that but I'm still learning, i still want to learn.

Respondent: Just like the one in my class has a teacher he is very good. Because you have to have time for them because of the way they behave. And when they have a teacher too it calms them most times. So, the other ones around, since their parents have associated their condition with superstition, they are not making progress like the one in my class. So I'll recommend that they have a teacher for them.

Researcher: Are you familiar with any organizations that works with children with autism?

Respondent: No

Researcher: I would like to ask you, what is your view on inclusive education for children with autism. Do you think they should be enrolled in mainstream school?

Respondent: Yes. I will always say yes because of the one in my class. Because I was told he couldn't speak at all and the improvement I came to meet and what I'm seeing now, it's good.

Researcher: So, you are thinking that the inclusion has helped compared if he was sent to a special school?

Respondent: Yes, it has helped.

Researcher: Compared to what they do at the special school?

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Respondent: I don't really know what they do at the special school. But i think the mainstream is good for them. They see other kids, they socialize, they learn.

Researcher: If you suspect a child under three has autism, usually will you recommend they seek intervention or you think it is more realistic to wait till they get to 5 years?

Respondent: They should seek advice. Because the advice will help you know how to handle the child

Researcher: So, since you have one autism child in your class, what are some the challenges you faced and also if you have had any special need child in your class what are some the challenges that you faced?

Respondent: A child who has a special need will not be able to stay up with the class. So that child, you have to have time for the child. He really wouldn't go as you want but with time he will pick up. And with the autism child, this one in my class, he often sang songs in class when lessons are going on which makes him disturbs the class. As a teacher you can't control him but if he as a teacher around the teacher can control him and have specific time for different activities for him to keep him occupied.

Researcher: Are you open to the idea of been trained on autism to help you manage a child with autism better?

Respondent: Yes, I really want to do it.

Researcher: Also, how would you suggest we increase the knowledge of pre-school teachers on autism?

Respondent: I think it should be added to the pre-school training.

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Researcher: So, if you think we trained preschool teachers on autism it will help you better manage children with autism in the classrooms.

Respondent: That is if the parents are comfortable to bring their children to the mainstream.

Researcher: And once teachers are trained you think it will increase your confidence level to instruct or teach a child with autism?

Respondent: Yes.

Researcher: Do you think including children in the mainstream will lead to bullying? Do you think they'll be bullied or laughed at?

Respondent: At the beginning they wouldn't understand but with time they will understand. Because the one in my class, they've been with him for some time so they are ok. But if it's a different group of children there might be instances of bullying or mockery.

Researcher: The way you sound, it means the one in your class have his peers understanding him now?

Respondent: Yes, they understand him and they flow with him. They know what he can do and he also knows his friends

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UNIVERSITY OF GHANA
SCHOOL OF BIOMEDICAL AND ALLIED HEALTH SCIENCES

30th January, 2018.

Ref. No.:.....

Ms. Gifty Ayoka
Dept. of Audiology, Speech and Language Therapy
SBAHS,
Korle-Bu.

Dear Ms. Gifty Ayoka,

ETHICS CLEARANCE

Ethics Identification Number: SBAHS – ASLT/10064204/SA/2017-2018.

Following a meeting of the Ethics and Protocol Review Committee of the School of Biomedical and Allied Health Sciences held on Tuesday 30th January, 2018. I write on behalf of the Committee to approve your research proposal as follows:

TITLE OF RESEARCH PROPOSAL: KNOWLEDGE LEVELS OF PRE-SCHOOL TEACHERS ON AUTISM SPECTRUM DISORDER (ASD) IN SELECTED SCHOOLS IN THE ADENTAN AND MADINA MUNICIPALITIES.

This approval requires that you submit three-monthly review reports of the protocol to the Committee and a final full review to the Committee on completion of the research. The Committee may observe the procedures and records of the research during and after implementation.

Please note that any significant modification of the research must be submitted to the Committee for review and approval before its implementation.

You are required to report all serious adverse events related to this research to the Committee within seven (7) days verbally and fourteen (14) days in writing.

As part of the review process, it is the Committee's duty to review the ethical aspects of any manuscript that may be produced from this research. You will therefore, be required to furnish the Committee with any manuscript for publication.

This reviewed report is valid till 31st. August, 2018.

Please always quote the ethical identification number in all future correspondence in relation to this protocol.

Thank you.

Yours sincerely,

Dr. S. D. Amanquah
(Chairman, Ethics and Protocol Review Committee)

Cc: Dean
Head, Dept. of Audiology, Speech and Language Therapy
School Officer

COLLEGE OF HEALTH SCIENCES
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APPENDIX XI

UNIVERSITY OF GHANA
DEPARTMENT OF AUDIOLOGY, SPEECH AND LANGUAGE THERAPY
SCHOOL OF BIOMEDICAL AND ALLIED HEALTH SCIENCES

Ref. No.:.....

May 1st, 2018

The Head
The Participating School
Accra

Dear Sir/Madam

PERMISSION TO CARRY OUT POSTGRADUATE RESEARCH STUDY AT THE FIRE ARMOUR PRIMARY SCHOOL

The Department of Audiology, Speech and Language Therapy of the University of Ghana School of Biomedical and Allied Health Sciences (SBAHS) presents its compliments to the Fire Armour Primary School.

Ms GIFTY AYOKA (10064204) is a 2nd year MSc Speech and Language Therapy student in the Department of Audiology, Speech and Language Therapy of the University of Ghana. She is conducting a research study on ***"knowledge levels of Preschool Teachers on Autism Spectrum Disorder (ASD)"*** under the supervision of Ms Nana Akua Owusu (Speech and Language Therapist) and Dr. Akanlig-Pare (Linguistics lecturer). The Fire Armour Primary School has been chosen as the study site and the SBAHS Ethics and Protocol Review Committee has reviewed and passed her research proposal as satisfying ethical requirements.

In this regard, the Department humbly requests your kind consideration to grant permission to **Ms GIFTY AYOKA** to carry out her research study at your Centre during the period 1st -31st May 2018 for the common good of the hospital and the University. Thank you.

Yours faithfully,

DR. S. ANIM-SAMPONG
(Ag. Head of Department)
cc: Dean SBAHS
Ms Nana Akua Owusu
Dr. Akanlig-Pare

DEPARTMENT OF AUDIOLOGY
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Appendix A

Interview Guide

1. How old are you?
2. Can you briefly describe your educational background?
3. Please share with me how you came to teach preschoolers?
4. Do you know anything about Autism Spectrum Disorder (ASD)?
5. How did you train to be a preschool teacher? Was there any aspect in your training about autism?
6. If a child is not developing like his or her peers, who do you usually report to?
7. Can you suggest some interventions you will recommend for parents of children with ASD?
8. Are you familiar with any of the organizations that work with children with ASD?
9. What is your view on inclusion education for children on the Autism spectrum?
10. If you suspect a child under 3 has ASD, usually will you recommend they seek intervention or you think it's realistic to wait till their 5 and over?
11. Do parents with children on the spectrum give you any suggestions on how you should handle their children or do you often no how to handle them?
12. Overall, what are your challenges with regards to ASD in particular and special needs children in general?
13. Are you open to the idea of being trained on autism to help you manage children on the autism spectrum better?