

Attitudes Towards Inclusion of Pupils with Autism Spectrum Disorder (ASD)

A Survey of Regular Primary School Teachers in Bangladesh

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**Attitudes Towards Inclusion of Pupils with
Autism Spectrum Disorder (ASD)**

*A Survey of Regular Primary School Teachers in
Bangladesh*

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Abstract

The purpose of the study is to investigate the attitudes of teachers towards inclusion of pupils with autism spectrum disorder (ASD) in regular classrooms. In addition, this study is also aiming to examine the relationship between teacher-related factors and teachers' attitudes towards inclusion of pupils with ASD in regular classrooms. This study is conducted in 30 regular primary schools in Dhaka City, Capital of Bangladesh. The participants included regular primary teachers who are currently working in regular primary schools. Out of the available teachers, ten teachers are selected from one school using random sampling.

As a part of data collection, a demographic questionnaire and a modified as well as translated version of TATIS (Teacher Attitudes toward Inclusion Scale) developed by Cullen et.al.(2010) are used for measuring teachers' attitudes towards inclusion of pupils with ASD in regular classrooms. The reliability and validity of TATIS are recalculated for applying this study in the context of Bangladesh. At first, pilot study is conducted in one regular primary school for determine the weakness of the questionnaires and also find out which data analysis techniques will be appropriate. Thereafter, main study is designed to use quantitative approach based on a survey design using questionnaire as the instrument. Ethical issues are cautiously followed throughout the process.

The descriptive and inferential statistics are used to analyze the collected data. The major findings of the study indicate that teachers' attitudes toward inclusion of pupils with ASD in regular classrooms are slightly positive. One interesting finding is that more than half of teachers are willing to make classroom modifications as well as inclusion model to meet the individual needs of students with ASD. In addition, nearly all teachers agree that the responsibility for teaching students with ASD should be shared between regular and special education teachers. On the other hand, the majority of the teachers are not supportive of meeting the needs of students with ASD in the regular classrooms; they are still in favor of the option of maintaining special classrooms for students with ASD. The results also indicate that a statistically significant correlation is highlighted between teachers' attitudes towards inclusion of pupils with ASD and the following teacher-related factors: gender, age, educational qualification, teaching experience, being personally acquainted with a person with ASD, adequate training and formal training on ASD. In addition, the summary of the

regression analysis suggests that about 21% of the variance on attitudes due to the variables like gender, age, educational qualification, adequate training and formal training on ASD. These variables contribute significantly to the prediction of teachers' attitudes towards inclusion of pupils with ASD in regular classrooms.

These findings from Bangladesh are quite similarity with the results of equivalent studies in other countries such as India, Malaysia, Kuwait, UK, New Zealand, Australia, Canada, and USA in primary and secondary schools but contradictory with a study based in France. In Bangladesh, it is noted that mainly insufficient knowledge and lack of training on inclusive education and ASD are consistently related to the negative attitudes towards inclusion of pupils with ASD in regular classrooms. Hopefully, the findings of this study have significant implications on how to increase positive attitudes of teachers towards inclusion of pupils with ASD in regular classrooms, not only in Bangladesh, but also in other develop and developing countries. Further studies and innovation projects are suggested in order to validate these findings in details as well as to promote inclusive education for students with different disabilities including ASD in the regular and secondary primary schools in Bangladesh.

Foreword

In Bangladesh, inclusive education is considered to be a far cry for pupils with ASD. It was a challenge to carry out this study to explore teachers' attitudes towards inclusion for pupils with ASD in the context of Bangladesh since teachers have mixed viewpoints with regards to the inclusion of pupils with ASD in regular classroom. It was made possible with support from various peoples including family members, friends, colleagues, teachers and others. Hopefully, in future; this study can make positive viewpoints of the teachers towards inclusion of pupils with autism in regular classrooms. I am truly confident that the findings of the study will serve as a guideline for making awareness how to promote inclusive education for pupils with ASD in regular classroom in Bangladesh.

First and foremost I thank *the Almighty Allah* for giving me the strength, health and courage to accomplish this work.

My sincere thanks go to *the University of Oslo* especially the Programme in *Masters of Philosophy of Special Needs Education* for giving opportunity to learn and gain knowledge in the field of *Special Needs Education* as well as a platform for self-development on a cross-cultural background.

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Thank you all!

Dedication

I would like to dedicate this thesis to

*My **father** whom I lost fourteen years ago;*

*My **mother** who makes me realize the importance of education;*

*My father-in law **Md. JainalAbedin Khan** who always focuses my attention into task;*

*My beloved husband **Md. Faisal Abedin Khan** who makes heaven for my life with his patience, understanding, and acceptance of my desire to attain the goals I set for myself.*

&

*My sweetheart (son) **Md. RafsanAbedin Khan Rami** who gives unlimited love during this journey;*

All my love!

Abbreviations

ANOVA-Analysis of Variance

APA-American Psychological Association

ASD-Autism Spectrum Disorders

ASDICM-Autism Spectrum Disorder Inclusive Collaboration Model

BANBEIS-Bangladesh Bureau of Educational Information and Statistics

CDC-Centers for Disease Control

CNAC-Centre for Neurodevelopment and Autism in Children

CRC-Convention on the Rights of the Child

CRPD-Convention on the Rights of Persons with Disabilities

CSID-Centre for Services and Information on Disability

DPE-Directorate of Primary Education

DSM-V-Diagnostic and Statistical Manual of Mental Disorders-Fifth Version

DSM-IV-TR- Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (Text Revision)

EFA-Education For All

GOB-Government of Bangladesh

IACAPAP-International Association for Child and Adolescent Psychiatry and Allied Professions

ICD-10-International Classification of Diseases-Tenth Version

ICF-CY-International Classification of Functioning, Disabilities and Health: Children and Youth Version

IDDC-International Disability and Development Consortium

IE-Inclusive Education

MDG-Millennium Development Goals

MoE-Ministry of Education

MoHFW-Ministry of Health and Family Welfare

MoPME-Ministry of Primary and Mass Education

MoSW-Ministry of Social welfare

MoWCA-Ministry of Women and Children Affairs

NESH-National Committee for Research Ethics in the Social Sciences and
Humanities

NSD-Norwegian Social Science Data Services

PDD-NOS- Pervasive Developmental Disorder - Not Otherwise Specified

SEN-Special Educational Needs

SPSS-Statistical Package for Social Sciences

TATIS-Teacher Attitude Toward Inclusion Scale

UN-United Nations

UNESCO-United Nations Educational, Scientific, and Cultural Organization

UNICEF-United Nations Children's Fund

WHO-World Health Organization

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1 Introduction

Education has been recognized as a key factor for inducing social change and promoting overall development throughout the world. On the grounds, the Government of Bangladesh (GOB) recognizes education as a means of reducing poverty and improving the quality of life for children. Like many other countries, Bangladesh is a signatory to many national and international declarations dedicated to education for all children in regular schools. However, the inclusion of pupils with ASD in regular primary schools is a very recent scenario within the education system in Bangladesh till now. At present, only a few schools have taken some initiatives to introduce inclusion for pupils with ASD in regular classrooms as well as very few researches has been done within schools in the context of Bangladesh related to examine teachers' attitude toward the inclusion of pupils with ASD in regular schools. In this regard, this study intends to examine the attitudes of teachers' towards the inclusion of pupils with ASD into the regular classroom in Bangladesh. In addition, the study is aiming to find out the relationship between teacher-related factors and teachers' attitudes towards inclusion. This study is conducted at the capital city of Bangladesh and involved teachers who are currently working in regular primary schools. Overall, this chapter introduces briefly background information, main goal of this study, specific research questions and the significance of this study as well.

1.1 Background Information

In Bangladesh, autism spectrum disorder as a neuro-developmental disability is still seen through the lens of misinformation. Prevalence by the type of disability reveals that the developmental disabilities including autism have been completely neglected. There is no reliable national level estimate of autism in Bangladesh to date. On account of, the situational analysis highlighted the need for research on the teachers' attitudes towards inclusion of pupils with ASD. Teachers are considered to be the "change makers" for any change of educational perspective (Ertmer, 2005). However, teachers need to have positive attitudes towards the inclusion of pupils with ASD in order for their inclusion to be successful (Byrne, 2013). According to Ahsan & Burnip (2007), most of the teachers in regular school in Bangladesh are used to conducting their classes with a 'homogenous' group of pupils. They suggested that teachers in Bangladesh are not willing to teach special educational needs

(SEN) children together with regular students. In this situation, teachers' attitudes have an impact on classroom activities which, in turn, have an effect on the successful implementation of a change in practice (Harding and Darling, 2003). For this reason, I have chosen to study on teachers' attitudes towards inclusion of pupils with autism in regular classroom in the context of Bangladesh.

1.1.1 Bangladesh-An Overview

Bangladesh is a developing country in South Asia which an independent nation through a short (9 months) but intense war of liberation in 1971. The country bordered by India to its west, north and east; Burma to its southeast and separated from Nepal and Bhutan by the Chicken's Neck corridor. To its south, it faces the Bay of Bengal. The separate nation proceeds through the mothers' Language Movement of 1952, when students and people rose as one and many of them laid down their lives on 21st February of the year to protect the dignity of the mother tongue, Bangla. In such a way, Bangla is established as the state language of Bangladesh. UNESCO has recently proclaimed the 21st February as the International Mother Language Day, in honour of the martyrs of Bangla language, which is observed globally every year in recognition of the native languages of peoples of the world. Bangladesh is a mono-linguistic country, where nearly 98 percent of the population speaks Bangla. At liberation in December 1971 the literacy rate was only 16.8 percent, and has been quite slow to grow, taking 20 years to rise to only 24.8 percent in 1991. In 2015, Bangladesh has a low literacy rate, estimated at 85.09% for males and 72.03 % for females, in total 78.56% (Adult and Youth Literacy, 1990-2015). However, focused initiatives taken during the decade of 1990s, following the World Declaration on Education for All, have resulted in remarkable progress in basic education, both in formal primary education (PE) and non-formal education (NFE). The Map of Bangladesh is presented in Appendix-I.

Bangladesh is the world's eighth-most populous country, with over 160 million people and among the most densely populated countries. About 89% of Bangladeshis are Muslims, followed by Hindus (8%), Buddhists (1%) and Christians (0.5%). It forms part of the ethno-linguistic region of Bengal, along with the neighbouring Indian states of West Bengal and Tripura. The country is overwhelmed by various issues encompassing the social, political and economic spheres (Rahman, Hamzah, Meerahand Rahman, 2010). However, education is widely considered a basic human right as well as a tool for socio-economic

development and poverty reduction in Bangladesh. As a result, the education system of Bangladesh is a continually undergoing reform. Bangladesh has always faced extensive poverty. The twin course of poverty and illiteracy or low level of education, each being the cause and effect of the other, and a large population with a slowly growing economy has further exacerbated the situation. These factors have tended to reinforce one another and served as hindrances to national development and progress. Accordingly, national development planning has identified and accorded highest priority to education and literacy as a major intervention strategy, both for human resources development and poverty reduction in order to raise the quality of life of the people.

1.1.2 Education System of Bangladesh

Education is now recognized as a basic human right for enhancing human efficiency and socio-economic development (UN, 1948). Equally important is the right of children not to be discriminated against as stated in article 2 of the convention of the rights of children, 1989 (UN, 1989). In addition, the need and significance of the education for all children has been emphasized on the common platform of the United Nations, through the medium of various Covenants and Treaties. It is also considered as an instrument of social change; hence education leads to empowerment which is very important for a country like Bangladesh. Recently, the Government of Bangladesh (GOB) operates many schools in the primary, secondary, and higher secondary levels. It also subsidizes parts of the funding for many private schools. In the tertiary education sector, the government also funds more than 15 state universities through the University Grants Commission. Bangladesh conforms fully to the Education for All (EFA) objectives, the Millennium Development Goals (MDG) and international declarations. Article 17 of the Bangladesh Constitution provides that all children between the ages of six and eighteen years receive secondary education free of charge.

The present education system of Bangladesh may be broadly divided into three major stages, viz. primary, secondary and tertiary education. Primary level institutions impart primary education basically. Junior secondary/secondary and higher secondary level institutions impart secondary education. Degree pass, degree honours, masters and other higher-level institutions or equivalent section of other related institutions impart tertiary education. The education system is operationally categorized into two streams: primary education (Grade I-V) managed by the Ministry of Primary and Mass Education (MoPME) and the other system

is the post-primary education which covers all other levels from junior secondary to higher education under the administration of the Ministry of Education (MoE). The post-primary stream of education is further classified into four types in terms of curriculum: general education, madrasah education, technical-vocational education and professional education (BANBEIS, 2014). The present Educational Structure of Bangladesh is presented in Appendix-II.

1.1.3 Focus on Pupils with Disabilities in Bangladesh

In article 1 of the Convention on the Rights of Persons with Disabilities (CRPD) defines persons with disabilities as “those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others”(CRPD, 2007). In addition, WHO (2006) issued the International Classification of Functioning, Disability and Health: Children and Youth Version (ICF-CY), which considers three components when conceptualizing disability:

- An impairment in body function or structure, such as a cataract, which prevents the passage of light and sensing of form, shape and size of visual stimuli;
- A limitation in activity, such as the inability to read printed text or move around;
- A restriction in participation, such as exclusion from school.

The disability may result from the interaction of attitudinal, institutional and environmental barriers in society with visual, hearing or speech impairments; other physical impairments such as loss of limbs, cerebral palsy, spina bifida, muscular dystrophy or traumatic spinal cord injury; and intellectual and neuro-developmental impairments including Down syndrome and ASD. Bangladesh was among the first countries to ratify and bring into force the two most significant global treaties that protect the rights of children with disabilities: the Convention on the Rights of the Child (CRC), in 1990, and the Convention on the Rights of Persons with Disabilities (CRPD), in 2007. In addition, like many other countries around the world, Bangladesh has agreed with several international declarations dedicated to education for all children in regular schools, including the Salamanca Statement and the Framework for Actions on Special Needs Education 1994: The Dakar Framework for Action 2000 and the UN

Convention on the Rights of Persons with Disabilities 2006. At the national level, the Government of Bangladesh (GOB) has enacted a number of policies to ensure the education of all students including those with disabilities. The key policies include Education Policy 2010 and Persons with Disability Welfare Act 2001. The Education Policy 2010 articulated that in order to establish equity in education for all learners, facilities need to be provided for all children including children with disabilities (Ministry of Education, 2010). Recently, the Government of Bangladesh (GOB) has established the Disabled Persons Protection and Rights Act 2013 (MoHFW, 2014) as well as has also taken a number of legislative and policy actions including the Children Policy, adopted in 2011 and the Children Act, passed in 2013. Despite having such policy initiatives, Bangladesh has made little progress in providing education to students with disability specially ASD in regular schools whereas teachers hold divergent views regarding the efficacy of inclusive practices for children with disabilities in the general education classrooms (Asian Development Bank, 2008).

Moreover, data on children with disabilities in Bangladesh are limited and often not reliable, or underestimate the prevalence due to varying definitions of disabilities and data collection processes. The estimate of people with disabilities ranges from 1.4 per cent to 9 per cent of the population, according to surveys conducted by the Government in the last decade. Estimates of the proportion of children with disabilities in Bangladesh are even more varied, ranging from less than 0.18 per cent to 44.64 per cent (Table 1). Given the estimated child population of 57.5 million the number of children with some form of disability could range from under 805,000 to 10 million (Bangladesh Population and Housing Census, 2011). At present, there are 33 special schools for people with hearing impairment. Seven are under government management, with a total capacity of 1500 students. Both government and NGOs run integrated education programmes for children with visual impairments. The government runs the Integrated Education System in 64 districts, while NGOs operate five other schools. Hence, there is a dearth of education inputs/materials such as Braille books, Braille writing frames and syllabuses, qualitative/standard papers for writing in Braille, boards for arithmetical/mathematical teaching/learning and white canes as well as the lack of skilled teachers. For these reasons, the system's benefits have not been realized (Directorate of Primary Education, 2002). To sum up, it is said that access for children with disabilities to education in Bangladesh is extremely limited. Due to unequal educational system, a rigid and unfriendly education curriculum, a lack of awareness of parents, compounded by the

inadequate knowledge of teachers and the unfriendly environment existing in most of the institutions, have done very little to promote education of children with disabilities in Bangladesh.

Table 1: Number of Different Disabilities according to different geographical divisions of Bangladesh

Geographical Division	Children with Autism	Physical Disability	Mentally Retarded	Visual Impairment	Speech Disability	Intellectual Disability	Hearing Impairment	Cerebral Palsy	Down Syndrome	Multiple Disabilities
Dhaka	8806	115264	9027	36782	19167	20529	7597	9883	426	37948
Barisal	2028	41589	3315	13566	7275	6609	3094	4068	222	9648
Chittagong	11695	116880	11497	33370	22995	19885	7156	12653	693	30872
Khulna	4010	90679	6586	27702	11464	18146	5590	9689	269	24099
Mymensingh	2367	48490	2841	15917	6855	8256	4042	4768	93	10570
Rajshahi	3875	93728	6589	28353	13499	17226	4597	9163	374	21344
Rangpur	4632	81763	5447	27430	16230	15569	6055	8697	379	22471
Sylhet	2470	31051	2200	9821	4536	3920	1781	3067	77	8449
Total	39883	619444	47502	192941	102021	110110	39912	61997	2533	165401
Percentage	2.87%	44.64%	3.42%	13.91%	7.35%	7.94%	2.88%	4.47%	0.18%	11.92%

Source: MoSW

1.1.4 ASD and Inclusive Education in Bangladesh

The students with ASD in general education classes have rarely addressed over the past few decades in Bangladesh. Most of the people of Bangladesh live in rural area and having false beliefs and stigma on ASD. They consider that the ASD and other mental disorders are caused by ill spirits and need some measures other than mediation (Rabbani, Helal, Mannan, Chowdhury and Alam, 2014). A study conducted by National Institute of Mental Health of Bangladesh revealed that more than 50% rural people had faith on traditional healers. As a result, most of the pupils with ASD and their families have to face an unfold amount of social stigma. This stigma and lack of awareness act as a barrier to promote scientific management for ASD.

In the last four years, the Government of Bangladesh (GOB) has made tremendous progress in reducing the stigma related to ASD and taken some necessary steps to solve the problem of ASD. According to the Constitution of the People's Republic of Bangladesh, every citizen is equal in the eye of law. As a part of awareness of ASD, the Ministry of Primary and Mass Education (MoPME) has developed a short episode of "Meena" Cartoon on ASD. In 2010, the Centre for Neurodevelopment and Autism in Children (CNAC) was established as a nationwide Pediatric Neurodevelopment and Autism related management, training and research centre in Bangladesh. In 2011, Bangladesh hosted the International Conference, titled "Autism Spectrum Disorders and Developmental Disabilities in Bangladesh and South Asia". In this conference, "Dhaka Declaration on ASD" was ratified by seven regional countries. This declaration highlighted the need for awareness, treatment, research and legislative framework for children with ASD. A resolution was unanimously adopted titled "Resolution 67/82" by the UN in 2012 which builds on the principles of the Convention on the Rights of the Child (CRC) and the Convention on the Rights of Persons with Disabilities (CRPD). The aims of this resolution are to enhance support for individuals, families and communities affected by ASD throughout the world.

In 2013, the Government of Bangladesh (GOB) passed two laws. First of all, a Neuro-developmental Disabled Persons Protection and Trust Act was legislated which provides for a trust to be set up for the benefit of people with neuro-developmental disabilities including ASD and to ensure rights and safety of the neuro-developmental disabled persons by providing physical, mental and financial help. The main function of this act is to arrange appropriate education and technical knowledge for neuro-developmental disabled persons. Secondly, Disabled Persons Right and Security Act was made for ensure the proper right and security of children with ASD (Global autism movement and Bangladesh, 2014). Moreover, The National Five Year Plan has been formulated which includes proper addressing of children with autism through specific activities for future. Firstly, MoHFW and MoSWhave developed few tools for early screening to detect disabilities including autism. Secondly, the operational and implementation plan have formulated through early screening and awareness building for children with disability including autism and strengthen helpline service to provide emergency support children with autism. Finally, it is very essential to increase awareness through dissemination of core messages on disability including autism to parents and society as well as to ensure social security and co-operation along with action plan formulated by ministry.

Many people are deprived from mainstream education because of their gender, ethnicity, disability or poverty in Bangladesh. The effects of such exclusion are deepening inequality across the country. IDDC defined inclusive development as ensures that all phases of the development cycle (design, implementation, monitoring and evaluation) include a disability dimension and that persons with disabilities are meaningfully and effectively participating in development processes and policies. Above all, Inclusive Education (IE) has been recognized as a key strategy to ensure education for all in the developing world for the last two decades. But the implement of inclusive education is yet a promising stage in Bangladesh (Malak and Khanam, 2011). Most children with disabilities in Bangladesh are segregated from regular schools (Akter and Malak, 2008). Due to lack of learner-friendly classrooms many students with disabilities are denied of their education in regular primary schools in Bangladesh (Das, 2011). Another research indicates that the dropout rate of students with disabilities is very high in Bangladesh due to the unfavourable attitudes of teachers (CSID, 2005). Furthermore, the Government of Bangladesh is committed to ensure education for all by 2018 (Kabir, 2008). Recently, the Government of Bangladesh has undertaken a good number of policy initiatives to provide equity and access of all children to education and dedicated to meet the needs of all the marginalized people who are deprived of their civic rights. The need for universal education for all children, regardless of any special circumstances, has been reflected from the birth of this country through its constitution in 1972. Article 28 (3) and 17 (a) of the constitution clearly utters how the state should provide education to all children without making any discrimination.

[Article 28 (3)]: No citizen shall, on grounds only of religion, race, caste, sex or place of birth be subjected to any disability, liability, restriction or condition with regard to access to any place of public entertainment or resort, or admission to any educational institution (Ministry of Law, Justice and Parliamentary Affairs (MoLJPA, 2000).

[Article 17 (a)]...establishing a uniform, mass oriented and universal system of education and extending free and compulsory education to all children to such stage as may be determined by law” (Ministry of Law, Justice and Parliamentary Affairs (MoLJPA, 2000).

In Bangladesh, the most recent national education policy (2010) recognizes inclusive education as a strategy to ensure education for all citizens (Ministry of Education, 2010).

Thus, inclusive education was introduced in the Primary Education Development Plan II (2004-2011) which addressed some of the barriers faced by children with disabilities. On the other hand, the Primary Education Development Plan III (2012-2017) includes making schools more accessible which introduces stipends to support for children with disabilities including pupils with ASD. TQI-SEP (2010) facilitated inclusion at the secondary level and proposed seven principles of inclusive education such as,

- All children have the right to education;
- All children can learn and they learn from one another;
- Every child is different, so instruction should be organized according to their needs;
- Inclusive education is student-centred;
- The inclusive approach addresses all aspects of the learning environment;
- Learning is possible only when there is cumulative cooperation among teachers, students, parents or guardians, and society; and
- An active participation of all education agencies in society is important for the successful implementation of inclusive education.

According to these principles, inclusive education in Bangladesh is perceived as a cumulative social responsibility to educate all children as well as teachers play the key role in its successful implementation. The Bangladesh Primary Education Annual Sector Performance Report 2013 addressed that the number of children with disabilities enrolled in government primary schools as well as registered non-government primary schools respectively.

According to the Millennium Development Goals (MDG), every child has a right to education. In spite of the National Law to ensure an equal and obligatory education for all children, the problem is that, among the poorest part of the population, children are still kept out of school. These children live in the slums, in the tribal districts, or in the most remote rural areas. Mostly they have to work daily to support their family or else they are physically or mentally challenged. Education is still mostly the privilege of only the richest elite. Special needs education is lacking or does not meet the groups needing it. Persons with ASD do not have a possibility for a proper diagnosis and treatment. Also chances to get into a rehabilitation process are poor. On that account, there are still a number of challenges to meeting the goals and aspirations of inclusive education, such as addressing the issue of meeting the learning needs of children with ASD in regular classroom in the context of Bangladesh. In consequence, it is necessary to understand teachers' attitude towards inclusion

of pupils with ASD in regular classroom highlighting teacher-related factors which is associated with agreement or disagreement with inclusion so that educational administrators can take necessary steps in order to promote inclusive education for pupils with ASD in regular schools in Bangladesh.

1.2 The Goal of the Study

The goal of this study is to examine the attitudes of teachers' towards inclusion of pupils with autism into the regular classroom and to find out the relationship between teacher-related factors and their attitudes towards inclusion.

1.3 The Research Questions

This study will specifically answer the following research questions:

1. What are the attitudes of teachers towards inclusion of pupils with autism in regular classroom?
2. Is there any significant relationship between teacher-related factors and teachers' attitudes towards inclusion of pupils with autism in regular classrooms?

1.4 The Significance of the Study

In Bangladesh, the inclusion of pupils with ASD is important to understand because very few pupils diagnosed with autism being included within the regular school system. Although most of the international research examined the relationship between teachers' attitudes towards inclusion and background variables such as gender, age, teaching experience, educational qualification, training and contact with a person with different disabilities including ASD, however, research on how these variables could influence attitudes of teachers towards inclusion of pupils with autism in Bangladesh is limited. At this moment, there are still a number of challenges to meeting the goals and aspirations of inclusive education, such as addressing the issue of meeting the learning needs of children with disabilities remarkably ASD in regular classrooms in Bangladesh. Consequently, due to students with disabilities being placed in regular education classrooms, regular education teachers are facing challenges for which they were never trained adequately.

Therefore, it is necessary to understand teacher attitude towards inclusion of pupils with ASD in regular classroom highlighting teacher-related factors so that educational administrators can take necessary steps in order to promote inclusive education for the pupils with ASD in regular schools in Bangladesh. The findings of this study can be used to enhance the development of a special education curriculum and appropriate teaching strategies for pupils with ASD. It may also provide insight into ways to change teachers' attitudes towards inclusion of pupils with ASD as well as help the researcher to better understand about teachers' attitudes towards inclusion of pupils with ASD in regular classrooms. In future, the government and policy makers could easily use the findings of this study for enriching present education policies with regard to inclusive education for pupils with ASD. It is also expected that the findings of this study will facilitate future research on inclusive education for pupils with ASD as well as formulation of a model for the inclusion of pupils with ASD in the context of Bangladesh. Moreover, this research could be a baseline for further research in this area in Bangladesh.

1.5 Thesis Outline

The outline of the thesis is formed with five chapters. Each of the chapters deals with one specific part which contributes to better understand about teachers' attitudes towards inclusion of pupils with ASD in regular classrooms.

This current chapter presents overview of Bangladesh where the research was conducted and provides the information concerning, the goal of the study, the research questions and the significance of the study.

The following chapter 2 introduces previous studies as well as the theoretical and conceptual framework in relation to inclusive education for pupils with autism in Bangladesh which reflect idea of different authors related to the study.

In chapter 3, describes the research methodology used in this study, research design, data collection procedure, validity and reliability of the measuring instruments. It is explained why the design of the study and other procedure is selected. Furthermore it includes the description of data analysis and ethical concern.

Chapter 4 sketches the presentation of findings through the analysis of data. The presentation of the result gives information about teachers' attitudes towards inclusion of pupils with ASD

as well as indicates significant differences in the teachers' attitudes depending on teacher-related factors.

Finally, the chapter 5 presents discussions, conclusion, limitations and recommendations of the study.

2 Literature Review

This chapter consists of two sections; literature review is like a "compass" which guides the study (Hesse-Biber, 2010) as well as theoretical framework supplies the premise (Camp 2001). The first section outlines an overview of the relevant literature pertinent to this study that examined the attitudes of teachers towards inclusion of pupils with ASD from international and national perspectives. The second section describes the theoretical framework which applied to this study.

2.1 Overview of ASD

Autism Spectrum Disorder (ASD) is a pervasive developmental disorder characterized by impairments in social interaction and social communication and a restricted repertoire of interests and behaviors (APA, 2013). It is arguable that all communication is inherently social in nature, since by definition it involves at least two people engaging in a form of cooperation with one another in order to achieve mutual understanding. Indeed, in the typical child development literature, many researchers do not make a distinction between communication that is presumed to be for the purpose of social relatedness and communication for the purpose of regulating others' behavior (requesting an object). The distinction between social versus not social communication is valuable in young children with ASD, because communication for social relatedness is by definition delayed or absent from their communicative repertoire, while requesting and regulative functions are relatively spared. Social communication is considered to be inherently motivated by a desire to share with others, while communication to regulate others' behavior (e.g., requesting an object) is social in some sense as it involves a social partner but is not underpinned primarily by a desire to share in an experience with others (Volkmar et al., 2014).

Now-a-days, no definitive answers or specific causes have been linked scientifically to the onset of ASD. Given that ASD is very likely there are multiple causes (Halsey, Hyman, & the Conference Writing Panel, 2001). However, there may be many different factors that make a child more likely to have an ASD, including genetic, environmental and biological factors. The Study to Explore Early Development (SEED) is a multi-year study funded by CDC will give us a better idea about the risk factors of autism, including genes, health conditions, and

experiences of mother during pregnancy, as well as the health and the development of the child during infancy and the first few years of life. To sum up, it is said that ongoing research is being done to further investigate the cause of ASD.

The number of children diagnosed with autism is increasing due to improved knowledge about the condition as well as better diagnostic criteria, procedures and awareness (King and Bearman, 2009). Clinicians and researchers are used DSM and ICD as the manuals to diagnose and classify mental disorders. However, DSM-I (1952) & DSM-II (1968) the term autism is not mentioned. As a part of an independent diagnosis, infantile autism appeared first time in DSM-III. According to the *DSM-IV*, the term “PDD” is not a specific diagnosis, but four separate disorders (Autistic Disorder, Asperger Disorder, Childhood Disintegrative Disorder, and Rett syndrome) under which the specific diagnoses are defined. One of the most important changes in DSM-V (2013), defined the autism spectrum to encompass the previous (DSM-IV-TR) diagnoses of autism, asperger syndrome, pervasive developmental disorder not otherwise specified (PDD-NOS), and childhood disintegrative disorder (APA, 2013). Moreover, DSM-V is a revised form of diagnosis which represents a new, more accurate, and medically and scientifically useful way of diagnosing individuals with autism-related disorders. A better reflection of the state of knowledge about autism symptoms of people with ASD will fall on a continuum, with some individuals showing mild symptoms and others having much more severe symptoms. This spectrum will allow clinicians to account for the variations in symptoms and behaviors from person to person.

The prevalence of ASD is more difficult than for a disorder where clear biological markers exist due to the symptoms of ASD vary in severity and may represent differently in children with a mixture of cognitive abilities (King and Bearman, 2009). The prevalence of ASD is rising with a current estimate of 1 in 68 children in the United States diagnosed with the disorder (CDC, 2014) and 1 percent of the adult population of the United Kingdom has autism spectrum disorder (Brugha T.S. et al., 2011). The disorder occurs in all ethnic, racial and socioeconomic groups. One estimation is also that one child in 500 in Bangladesh has autism, meaning that the approximate number of children with ASD in Bangladesh is no less than 280,000 (MoSW, 2013).

On the historical perspectives, Swiss Psychiatrist Eugen Bleuler (1857-1939) was the first person to use the terms schizophrenia and autism in Switzerland (IACAPAP, 2014). From the Greek word *autós* (meaning self) and *ismos* (a suffix of state or action), “autistic” was used to describe the autocentric and apparent withdrawal from the social world by children with schizophrenia into their own fantasy life in an effort to cope with intolerable external perceptions or experiences (Kuhn, 2004).

In 1943, Leo Kanner, a doctor at Johns Hopkins University, used it to describe the withdrawn behaviour of 11 children who were highly intelligent but displayed ‘a powerful desire for aloneness’ and ‘an obsessive insistence on persistent sameness’. In addition, most of the children had speech delays or unusual language—they echoed what they heard or they reversed pronouns. They also hated changes in routine: in the arrangement of furniture. There were also sensory problems. Most were highly skilled at one or two tasks, such as classifying animals, or memorizing addresses or train timetables. Notably, “*extreme autistic aloneness*” and “*insistence on sameness*” are still regarded as the criteria to diagnose ASD in current classifications (Kanner, 1943).

Children described by Asperger (1944) differed from those of Kanner in that they had no significant delays in early cognitive or language development. Asperger’s paper deals with just four boys between the ages of 6 and 11. Asperger called children with his condition ‘little professors’ because of their ability to talk about their favorite subject in great detail. He believed that the syndrome of children with ASD was never recognized in infancy and usually not before third year of life or later. A full command of grammar was sooner or later acquired but there might be difficulty in using pronouns correctly. The content of speech was abnormal, tending to be pedantic and often consisting of lengthy digressions on favorite subjects. Gestures were limited, or else large and clumsy and inappropriate for the accompanying speech. Perhaps the most obvious characteristic was impairment of two-way social interaction, due primarily to an inability to understand and use the unwritten, unstated rules governing social behavior (Volkmar et al., 2014). It has subsequently been recognized, not as uniform, categorical disorder but as a pervasive disability with characteristically heterogeneous manifestations. As a result, for several decades the disorder was referred to as autism. Finally, having knowledge of how ASD have come to be defined will be necessary to appreciate the changes in how we view these disorders that are certain to come.

ICD-10 (World Health Organization, 2010) classifies autism under the *pervasive developmental disorders*, a group of conditions characterized by qualitative abnormalities in reciprocal social interaction, idiosyncratic patterns of communication and by a restricted, stereotyped, repetitive repertoire of interests and activities. Current conceptualizations view ASD as distributed along a continuum, in DSM-5 (Fuentes, Bakare, Munir, Aguayo, Gaddour and Oner, 2014), all autism disorders were merged into one umbrella diagnosis of ASD, creating a unique ASD category, characterized by:

- Persistent deficits in social communication and social interaction across multiple contexts
- Restricted, repetitive patterns of behaviour, interests or activities either current or elicited through the clinical history
- Clinically significant impairment in social, occupational, or other important areas of functioning
- Presence from early childhood (although it may not become fully manifest until social demands exceed the child's limited capacities), and
- Not explained better by intellectual disability or global developmental delay.

DSM-5 has thus eliminated the separate diagnosis of Asperger's disorder while formalizing the 'spectrum' concept espoused by Lorna Wing, who favored considering Asperger's disorder a sub-category of a unified ASD construct (Wing et al, 2011) and incorporated several welcome aspects for placing ASD under the more appropriate heading of "Neurodevelopmental Disorders". After all, the terminology of autism can be bewildering with Autism, Asperger syndrome, and PDD-NOS often called the autism spectrum disorders (ASD) or sometimes the autistic disorder, whereas autism itself is often called autistic disorder, childhood autism or infantile autism.

2.2 Overview of Inclusive Education

An inclusive school is not simply one, which educates children with disabilities; rather inclusive education is about reducing all barriers to learning and developing ordinary schools, which are capable of meeting the needs of all learners. The working definition of inclusive

education is that it is an approach to improve the education system by limiting and removing barriers to learning and acknowledging individual children's needs and potential. The goal of this approach is to make a significant impact on the educational opportunities of those: who attend school but who for different reasons do not achieve adequately and those who are not attending school but who could attend if families, communities, schools and education systems were more responsive to their requirements (Ahuja and Ibrahim, 2006).

Inclusive education is a worldwide reform strategy intended to include children with different abilities in mainstream regular schools as well as provides various benefits to children with disabilities including the fundamental rights of children no matter according to their abilities and disabilities, the provision of quality education and the provision of opportunities to develop the children's social skills as well (Allen & Cowdery, 2005). The World Report on Disability in 2011 argued that, among other things, the inclusion of children with disabilities in mainstream schools promotes universal primary completion, can be cost-effective and contributes to the elimination of discrimination. In this regard, the education of pupils with autism have changed dramatically over the last two decades, and several countries have implemented policies that the foster the integration and inclusion of this students into regular classroom (Visible, 2003). Inclusive education is a contentious term that lacks a tight conceptual focus, which may contribute to some misconception and confused practice (Forlin, Chambers, Loreman, Deppeler, Sharma, 2013). In 1994, UNESCO stated that inclusive schools should accommodate all children regardless of their disability. Thus, all children have the right to receive the kind of education that does not discriminate on grounds of disability, ethnicity, religion, gender, capabilities among others (UNESCO, 2003). In addition, UNESCO (2008) emphasized on international legislation and policy that focus attention on equity and access to high-quality education for all, while respecting diversity. UNESCO (2009) stated that an inclusive education system can only be created ordinary schools for all children in their communities. The article 24 of the UN Convention of the Rights of Persons with Disabilities acknowledged that education should be accessible without discrimination and on the basis of equal opportunity. UNICEF (2013) assumed that children with disability continue to experience different forms of exclusion which vary depending upon their discrimination. Inclusive education is recognised as a basic human right and the foundation for all in the society (European Agency for Development in Special Needs Education, 2012). Grima-Farrell, Bain and McDonagh (2011) stated that inclusive education represents special

education with general education in a manner that most effectively and efficiently imparts quality education for all students with any discrimination. Over and above, inclusive education is defined as the placement of all students including children with disabilities in mainstream classrooms (Alur& Bach, 2010).

2.3 Overview of Attitude

An attitude is an evaluation of an attitude object, ranging from extremely negative to extremely positive (Wood, 2000). Most contemporary perspectives on attitudes also permit that people can also be conflicted or ambivalent toward an object by simultaneously holding both positive and negative attitudes toward the same object. This has led to some discussion of whether individual can hold multiple attitudes toward the same object (Wood, 2000). According to Hogg and Vaughan (2005) "an attitude is a relatively enduring organization of beliefs, feelings, and behavioural tendencies towards socially significant objects, groups, events or symbols". Eagly and Chaiken, (1993) stated that an attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. Moreover, the measurement of attitude depends on attitudes being revealed in overt responses, either verbal or nonverbal responses (Krosnick, Judd, and Wittenbrink, 2005).

Attitudes structure can be described in terms of three components: cognitive, affective and behavioural (Eagly and Chaiken, 1993; Triandis, 1971). The cognitive component consists of one's knowledge and views about a particular issue, the affective component reflects one's feelings about something; and the behavioural component is one's tendency to act towards something in a particular way (Boer, Pijl, and Minnaert, 2011). They reviewed 26 studies on attitudes towards inclusive education and found that the majority of these considered only the cognitive component when investigating teachers' attitudes. Similarly, there are different studied only the cognitive component of attitude (Chhabra, Srivastava and Srivastava, 2010; Loreman, Forlin, Sharma and Earle, 2005; Parasuram, 2006). Very few studies investigated both the cognitive and behavioural aspects of teachers' attitudes, and none of the studies focused on all three components.

On the perspectives of the significance of attitude, many researchers found that positive teacher attitudes are the most important variable influencing successful inclusion of children

with disabilities in regular classrooms (Bender, Vial, and Scott, 1995; Buell, Hallam, Gamet-McDormick, and Scheer, 1999; Chow and Winzer, 1992; Jamieson, 1984). In a word, teacher attitudes are a significant component of successful inclusion, are at the root of the various environmental factors impacting inclusion and may be the factor most resistant to change (Gal, Schreur & Engel-Yeger, 2010). On the other hand, in a study examining views of autism showed that teachers and support staff had significantly different views of autism than the mental health professionals, including not believing the children had learning disabilities and describing autism as an emotional disorder and not a developmental disorder (Phelps, Newsom-Davis, and Callias, 1999). As a result, these misconceptions can affect teacher attitudes toward their students and foster problems in the teachers' ability to meet the needs of their students. In order for children with autism to be afforded a quality educational experience, teachers must be committed and open to the experience and relationships are integral to the learning process.

To sum up, it is clear that attitude is a broad area to be explored in the context of inclusive education, and most of the studies emphasized on the cognitive components of attitudes. In respect to, this study aims to investigate the cognitive component of regular teachers' attitudes, that is, how they view inclusive education for pupils with autism and what they think should be done to enhance its practical implementation in regular schools for pupils with autism in the context of Bangladesh.

2.4 Teacher attitudes toward inclusion of pupils with ASD

Positive teacher attitudes are an important predictor of inclusion of pupils with ASD (Robertson, Chamberlain and Kasari, 2003; Stanovich and Jordan, 1998). Many researchers have focussed on teachers' attitudes related to inclusion (Chhabra, Srivastava and Srivastava, 2010; Cook, 2004; Cook and Cameron, 2010; Cook, Cameron and Tankersley, 2007; Grace, 2006; Heiman, 2001; Ross-Hill, 2009 and Ryan, 2009). In an Indian study, Sharma, Moore and Sonawane (2009) found that students' attitudes towards inclusion are somewhat negative and that this negative tendency was related to the attitudes and beliefs of the teacher educators within the programme. The study of Kuyini and Desai (2007) in Ghana showed that attitudes towards inclusion and knowledge of inclusion are directly linked with effective teaching practices in an inclusive setting. Mortier et al. (2010) identified five teachers' perspectives

that appeared to support the development of educational opportunities for children with disabilities and promote effective inclusion practice in regular classrooms. These included; (a) an open attitude, (b) a safe group environment, (c) equal input into the construction of ideas, (d) committed to success, and (e) a positive atmosphere. To ensure classroom teachers have positive and supportive attitudes towards children with disabilities, there is a need to understand the attitudes of teacher educators who are responsible for the provision of pre-service training for classroom teachers.

A study on the attitudes of teachers towards student with ASD in Kuwait highlighted a need for extensive improvement within the Kuwait Autism School for students who have autism; however, teacher attitude was noted to be overall positive toward the idea of inclusion (Al-Shammari, 2006). A similar study based in Saudi Arabia found a positive relationship between the attitudes of teachers and the inclusion of students with the autism highlighting different variables with respect to teachers that correlated with agreement or disagreement with inclusion (Haimour and Obaidat, 2013). In the same manner, Kasa-Hendrickson and Kluth (2005) acknowledged positive attitudes of US teachers toward inclusion of students with autism within their classrooms. Park and Chitiyo (2011) found that the school level taught (elementary, middle, or high) influenced attitude toward inclusion of students with autism. The result of this study emphasized on workshops experiences of the teachers and noted that focused on autism positively influenced teacher attitude if the teacher attended at least two workshops. In addition, Kosmerl (2011) investigated beliefs of general as well as special education teachers about the inclusion of elementary students with autism and the result indicated that both teachers reported receptive beliefs about the inclusion of students with autism. Ultimately, it is demonstrated that most of the studies clearly identify positive attitudes of teachers towards students with autism who are included into the regular education classroom. On the other hand, Finke, McNaughton, and Darger (2009) exposed positive and negative themes relating to the inclusion of students with autism who require Augmentative and Alternative Communication (AAC) into regular education classrooms. A survey research indicated that teachers attitude toward inclusion of students with autism was hampered by increased student behavioural problems within the classroom (Robertson, Chamberlain, and Kasari, 2003). A parallel study based in France and found that negative teacher attitude toward inclusion increased as severity of autism symptoms increased (Yianni-Coudurier et al., 2008). However, if teachers possess negative attitude toward inclusion for students with

autism, this would negatively effect on the education of students and their academic performance (Love and Kruger, 2005). After all, it is said that teachers play the vital role as a decision maker in adapting instruction to the needs of students with autism in classroom.

One study indicates that education professionals report generally positive attitudes towards inclusion of students with ASD (Segall and Campbell, 2012). Teachers need to use several strategies and have appropriate training and resources to optimise the successful inclusion of children with ASD (Lindsay, Proulx, Scott and Nicole, 2014). Teachers are generally positive towards inclusion of students with autism. Most teachers agreed that both regular and special education teachers were responsible for educating students with autism, and over half were willing to make classroom modifications to meet the individual needs of students with ASD (Wilkerson, 2012). AS children with ASD are increasingly educated within the general education classroom, teachers are becoming more involved in and responsible for educating themselves about ASD in order to understand how to meet the diverse learning needs of the students (Chaaya, 2012). In Sweden, preschool teachers who took special education courses during either their pre-service or in-service training and also worked on a daily basis with children with ASD would respond positively towards inclusion (Engstrand and Pettersson, 2012). One study found that a positive view of teachers' expectations regarding the education of pupils with ASD (Rodriguez, Saldaria and Moreno, 2012). Humphrey and Symes (2013) found that the attitudes of teachers indicate positive attitudes towards inclusion of pupils with ASD. The regular education teachers who have some medium and high amounts of training reported more positive attitudes towards including students with ASD compared to teachers who reported not having such training (Byrne, 2013).

With the prevalence of ASD on the rise, regular teachers are seeing more and more students with ASD in their regular classrooms throughout the world. Some teachers are comfortable with having students with ASD in their classrooms, yet most feel overwhelmed, fearful or distressed (Davis, 2011). In addition, the findings of this study also highlighted that regular teachers begin to feel discomfort or angry due to feeling inadequately prepared. Experienced teachers said feeling inadequately prepared causes them to become defensive, standoffish, and therefore present negative body language. They feel it diminishes their self-confidence causing them to have negative attitudes. "Knowledge is power; this is especially true when teaching students with ASD." (Davis, 2011). Finke, McNaughton and Drager (2009) found

teachers frustrated due to the amount of time it takes to prepare and plan for pupils with ASD in their regular classrooms. In this same study, teachers expressed concerns due to increased noise in the classroom affecting their ability to successfully teach a lesson and pressure from parents of pupils with ASD, as well as those of typical developing pupils. All of the teachers in this study indicated that “maintaining a positive attitude towards the inclusion process was considered paramount to its success”, yet all expressed concerns. In a study by Humphrey and Symes (2013), it was found that teachers feel that they lack the knowledge and skills necessary to meet the needs of pupils with ASD in their regular classroom. This feeling of being unprepared brought about negative attitudes. Alghazo, Dodeen, and Algaryouti (2003) found that pre-service teachers, in general, had negative attitudes toward persons with disabilities in both Jordan and the United Arab Emirates (UAE). In another study, teachers reported negative attitudes toward inclusion of students with disabilities at both in-service (Gumpel&Awartani, 2003; Lifshitz, Glaubman, &Issawi, 2004) and pre-service (Romi&Leyser, 2006) levels. It is essential to know that the cross-cultural previous study findings mentioned that practicing teachers and pre-service teachers differ in their dispositions toward inclusion, specifically in terms of the structure of their educational systems in general and special education. One cross-cultural study identified the differences in the teachers’ attitudes toward inclusion according to different cultural perspectives (e.g., United States, Germany, Ghana, and Taiwan) and found that teachers from Asia and Africa exhibited less positive attitudes due to the limited number of training opportunities for teachers to work in inclusive settings and the limited opportunities for inclusion in these countries (Leyser, et.al., 1994). Accordingly, Sharma et al. (2008) stated that pre-service teachers from Western and Western-style institutions (i.e., Australia and Canada) had more positive attitudes toward students with disabilities than their Eastern counterparts (i.e., Hong Kong and Singapore) because inclusion is a relatively new phenomenon in Hong Kong and Singapore.

A fundamental assumption held by many educators and researchers is that the attitudes educators hold toward the practice of inclusion is an important determinant of the success of inclusive education for students with ASD. That is, personnel responsible for making inclusion successful should hold encouraging views towards the policy in order to maximize its chances of success. While there is limited research on attitudes towards the inclusion of students with ASD, much research has been conducted on the attitudes that educational

professionals hold towards the general concept of inclusion (Avramidis and Norwich, 2002; Scruggs and Mastropieri, 1996). The following review will briefly describe the documentation of the attitudes of general education teachers and school administrators, and comparisons between education professionals, as well as discuss salient variables that may affect attitudes towards inclusion. In the context of Bangladesh, inclusive education for pupils with ASD is an embryonic stage till now. Most children with disabilities in this country are segregated from regular schools (Akter and Malak, 2008). One study revealed that while pre-service teachers hold favourable attitudes towards students with special education needs (Malak, 2012). In another study, the majority of the pre-service teachers have unfavourable attitudes to include students with SEN in regular classrooms (Malak, 2013). Teacher educators' attitudes towards inclusive education was generally positive, however participants were unsure how to implement inclusive education (Rahaman, 2013).

The findings of several previous studies suggest that teachers' attitudes towards inclusion of children with disabilities may be influenced by a number of demographic variables of the teachers including gender, age, level of education, income level, teaching experience, acquaintance with a person with disability as well (Van Reusen, Shoho and Barker, 2001; Alghazo, Dodeen, and Algaryouti, 2003; Brackenreed and Barnett, 2006; Parasuram, 2006; Avramidis and Kalyva 2007; Forlin, Loreman and Sharma et al., 2009, Chhabra, Srivastava and Srivastava, 2010). Similarly, in Bangladesh, Ahmed, Sharma and Deppeler (2012) examined teachers' attitudes towards inclusion of students with disabilities in regular classrooms. This study revealed that teachers' gender, highest educational qualification, past contact with a student with disability in the classroom, past success in teaching a student with a disability and perceived school support for inclusive teaching practices are significant predictors of teachers' attitudes.

The several researches on teacher's gender investigated to determine the significant effect of gender on teachers' attitudes towards inclusion of pupils with disabilities. In one study on teacher attitude toward inclusion, teachers completed a questionnaire indicating agreement or disagreement with statements relating to the philosophy of inclusion. The results of this study indicated that male teachers had less positive attitudes towards including persons with disabilities in the regular classroom than their female counterparts (Alghazo and Gaad, 2004). Accordingly, different studies reported that female teachers have more positive attitudes than

male teachers (Aksamit, Morris and Leunberger, 1987; Eichinger, Rizzo and Sirotnik, 1991), although Jobe and Rust (1996) noted that male teachers have more positive attitudes towards inclusion. On the other hand, a research study conducted by Parasuram (2006) on regular educators to determine their attitudes toward inclusion with disabilities and to check whether there was a statistically significant difference between the mean scores of male and female teachers. The findings of this study discovered that gender did not affect attitude toward inclusion as well as found a non-significant difference between the two means. One another research conducted by Leyser and Tappendorf (2001) examined teacher attitude toward inclusion based upon teacher completion of two questionnaires relating to attitude and willingness to utilize accommodations within the classroom environment. The results indicated that female teachers achieved higher scores indicating a more positive view than male teachers. In addition, female teachers reported using adapted instructional practices more frequently than their male counterparts.

The teacher's age is one of the important personal characteristics of the teacher that may affect his or her attitude toward inclusion of pupils with disabilities. Heflin and Bullock (1999) determined that teacher age influenced teacher attitude toward inclusion as well as they found that older teachers were more resistant than younger teachers. Additionally, Parasuram (2006) also indicated that teacher age affects attitude toward inclusion and findings highlighted that the age group of 20-30 years showed more positive attitudes towards inclusion than in the age group of 40-50 years. To conclude, it is stated that younger teachers are more familiar with disabilities and knowledge about teaching curriculum and technology which may make them less fearful about including students with significant needs within the regular classroom environment.

As demonstrated, teachers with a level of education base of inclusion and autism possess more positive attitudes toward inclusion. Avissar (2000) found that there is a significant correlation between level of education and teachers' attitudes towards inclusion. The research conducted by Parasuram (2006) and Yucker (1988), indicated that higher educational qualification correlate positively with teachers' attitudes towards inclusive education. Therefore, teachers must be provided with further education on the topics of inclusion, disability types, and accommodations that can be utilized within the regular classroom environment to facilitate inclusion. In a preschool context, Guo, Piasta, Justice et al. (2010)

studied the relations among level of educational attainment and teachers' attitudes towards inclusion of children with special needs. They found that having a higher level of education was positively correlated with teachers' attitudes towards inclusion of pupils with disabilities. Alghazo et.al. (2003) found that educational background influenced pre-service teacher attitude toward inclusion of student with disabilities. Teachers from the college of humanities and education were found to have a more positive attitude toward inclusion of students with disabilities than teachers from the college of science. On the other hand, Wilkerson (2012) noted that teachers with Bachelor's degree had statistically significantly higher levels of agreement related to professional roles and inclusion of students with autism than teachers with a Master's or Beyond Master's degree.

The experience level of the teacher is directly related to the teacher's attitude towards inclusion of pupils with autism. Research conducted by Avramidis and Kalyva (2007) discovered that the length of teaching experience is identified as an important variable in shaping teacher attitudes towards inclusive education. Leatherman and Niemeyer (2005) indicated that teachers' positive attitudes toward inclusion were influenced by their previous experiences with children who have disabilities. Lanier and Lanier (1996) examined the effects of teacher experience on the teacher's attitude toward inclusion and noted different results. This study highlights the notion that teaching experience does not seem to make a difference for most teachers when acceptance of students with disabilities is concerned. This highlights the need to continue research on this topic for a more complete understanding of specific characteristics or factors related to successful inclusion. Cornoldi, Terreni and Scruggs et.al. (1998) reported that teachers with fewer years of teaching experience were more positive towards inclusion than the teachers with more years of experience. Wilkerson (2012) noted that teachers with more teaching experience (16-20 years and more than 21 years) were statistically different than those teachers with less experience (1-5 years). Additionally, there was a significant difference between younger teachers (20-29 years) and older teachers (40-49 years and 50-59 years). This states that younger, less experienced teachers have significantly higher levels of agreement for inclusion practices related to professional roles and function than older, more experienced teachers (Wilkerson, 2012). Park and Chitiyo (2011) examined teacher attitudes towards children with autism and no relationship was noted with teaching experience to children with disabilities. Van Reusen et al. (2001) investigated the relationship between high school teacher attitudes toward inclusion

and the level of teaching experience (number of years taught) and found to be insignificant factor in the attitudinal responses of the teachers.

Even an acquaintance with a person with disability has proven to affect teacher attitude toward inclusion. Parasuram (2006) indicated that teachers who were acquainted with a person with disability had significantly more positive attitudes toward people with disabilities and toward inclusion than the teachers who were not acquainted with a person with disability. Elliot (2008) found that a significant positive interaction was noted if the teacher was personally acquainted with a person with disability. Wilkerson (2012) reported that there was no significant correlation between teachers attitudes towards inclusion of pupils with autism and being personally acquainted with a person with autism.

Teachers' attitudes towards inclusion of children with autism in regular classroom may be influenced by frequency of contact with a pupil with autism. Ahmed, Sharma and Deppeler (2012) reported that the teachers who had contact with a student with a disability in the classroom held more positive attitudes towards inclusion of children with disability in their classes than those who did not have such exposure. In addition, Wilkerson (2012) reported that teachers' attitudes regarding the efficacy of inclusion were significantly higher (i.e., more agreement) for teachers who have daily contact with persons who have autism than for teachers who have no contact with persons with autism. According to Engstrand and Pettersson (2012), teachers who worked on a daily basis with children with autism would respond positively towards inclusion. Moreover, Tait and Purdie (2000) found a higher level of sympathy among pre-service teachers who had daily contact with people with special needs.

Avramidis et al. (2000) discovered a relationship between training and teacher attitude and found that teachers with substantial training in special education held significantly higher positive attitudes than those with little or no training about inclusion. Wall (2002) reported that teachers with more special education coursework had more positive attitudes toward inclusion. As the No Child Left Behind Act indicated that highly qualified teachers must be placed in classrooms across the United States, teachers must receive training to be highly qualified not only to teach regular education students, but also those with disabilities as now more than ever, they are being included in regular education classrooms. Therefore, teachers

must be provided with further education and training on the topics of inclusion, disability types, and accommodations that can be utilized within the regular classroom environment to facilitate inclusion (Wolfe and Snyder, 1997). deBoer, et.al. (2011) found that regular education teachers who have some, medium, and high amounts of training showed positive attitudes towards including students with ASD rather than teachers who are not trained. Engstrand and Pettersson (2012) stated that preschool teachers who took special education courses during either their pre-service or in-service training would respond positively towards inclusion. As several researchers noted that teachers with pre-service and in-service training in special education view the inclusion of children with autism more positively than their colleagues with no training (Park, et.al., 2010; Rafferty and Griffin, 2005). Teacher training has a powerful influence on the development of attitudes toward inclusion, especially when it incorporates related and specific professional abilities (Avramidis, Bayliss and Burden, 2000). Teachers who reported having adequate training in autism and those who reported having formal training in autism were significantly more in agreement regarding the efficacy of inclusion than those teachers who reported inadequate and no formal training in autism (Wilkerson, 2012).

2.5 Theoretical Focus

In the context of theoretical framework, many theorists have taken different angles on the conceptualisation of disability and education issues, but this study will be underpinned by the attitudinal theory, social constructivist view of disability organised by the works of Lev Vygotsky (1896-1934) and Ecological system theory of Bronfenbrenner (1979). Hence these theories perform as an imperative for increasing positive attitudes of teachers towards inclusion, developing a teaching-learning curriculum and practice for pupils with disabilities as well as surrounding environment how to influence on effective teaching for pupils with autism .

The attitude is an important concept related to inclusion that has been created in order to explain why people act and react to certain objects, situations or people. As reported in a study conducted by Jaccard and Blanton (2005), attitudes are hypothetical constructs that are not directly observable, so researchers infer a person's attitude based on observable behaviors that the individual performs. Alvidrez and Weinstein (1999), Brophy (1983), Jussim (1991),

Jussim and Eccles (1992), Jussim and Harber (2005) and Love and Kruger (2005) asserted that teachers' attitudes can directly impact on academic achievement of all students including disabilities within the classroom, it is imperative to investigate teachers' attitudes towards inclusion of pupils with disabilities. Downing, Eichinger and Williams (1997) mentioned that the negative attitude of the teachers is one kind of barrier to promote inclusion of pupils with disabilities including autism in regular classrooms. For this reasons, this study is based upon the theoretical framework relating to the attitudinal theory.

Vygotsky's stated that children's intellectual development is influenced by interaction with teachers (Hall, 2007) and he also noted that teachers' attitudes and believe play as an important part for developing language and thoughts of the students with autism. On the other hand, Ecological System theory of Bronfenbrenner (1979) perceives every individual as a part of the social community and he emphasized on surrounding that is important to understand children development and education. If a teacher cannot realise the needs of children, successful inclusion cannot take place. The ecological model is fundamentally part of inclusive teaching where it creates the relationship between person and environment (Gutkin and Reynolds, 2009). This model highlights on school environment and effective teaching strategies that are suitable for pupils with autism. Overall, Vygotsky's learning theory and Bronfenbrenner' ecological system theory are essential for describing how teachers' attitude influence on inclusion of pupils with autism in regular classrooms. To gain a pragmatic insight of inclusive education practice, we need to study inclusive values, inclusive policies, collaboration and inclusive assessment and teaching. Moreover, these theories are necessary for understanding teachers' attitudes towards inclusion of pupils with autism in regular classrooms.

2.6 Conceptual Framework

The Autism Spectrum Disorder Inclusive Collaboration Model (ASDICM) is a recent model developed in United States to offer guidelines for the successful inclusion of children with autism and related disabilities (Simpson et.al, 2003). The model is based on the assumptions that pupils with autism and non disabled students benefit from interaction with each other, that staff endorse the concept of inclusion and are able to take on the responsibility of having pupils with autism, and that there is a spirit of collaboration in the implementation of this

model. This model highlighted the five components for successful inclusion of pupils with autism.

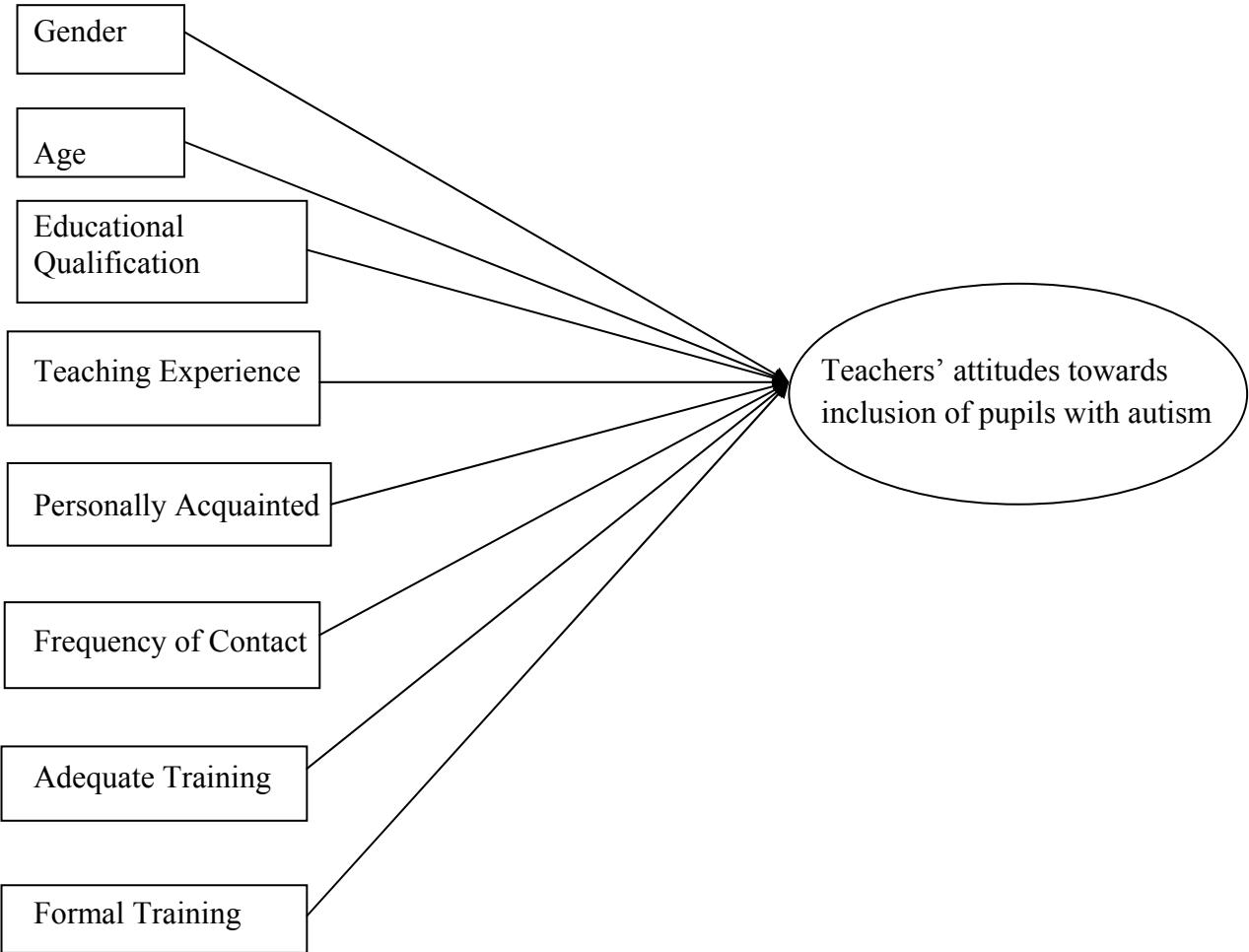
The first component is environmental and curricula modifications and general classroom support which involves appropriately trained support staff, reduced class size, collaborative problem solving and availability of paraprofessional. It also calls for cooperative learning, integrative teaching, learning strategies and individualized instructions.

The attitudinal and social support as a second component which promotes preparation of teachers, school staff and peers for making positive relationship with students with autism. Positive attitudes can be arised through shared beliefs about teaching and learning, assurance and support for educators in their instructional practices and inclusion of pupils with autism. Administrators, special education teachers as well as family members provide that assurance. The commitment of team members includes collaborative problem solving among teachers, personnel and related service holder. Moreover, the special education teacher and regular teacher take responsibility which means support on clear indicators of student progress to enhance natural means of observing them within the context of regular class activities and accountability for adjusting instructional or behavioural practices if they are to be attained within a predetermined period. The fourth component is recurrent evaluation of inclusion procedures that is effective individualized educational program constantly undergoes re-evaluation and re-direction. The home and school collaboration is the last component that fosters partnerships with families in implementing programmes in both school and home setting. Any individual change is focused within the context of the larger social and cultural setting that is most relevant to educational development of the pupils with autism in school, family and community. However, the Autism Spectrum Disorder Inclusion Collaboration Model is designed to support general educators who assume responsibilities for teaching pupils with autism. Autism-Inclusion Collaboration Model proposed by Simpson et al. (2003) is presented in Appendix-III:

There are number of demographical factors influencing attitudes of teachers towards inclusion of pupils with autism. Avramidis, et.al. (2002) summarize three groups of variables impact on teachers' attitudes. They are child-related factors, teachers-related factors and education-environment related factors, which are, in many ways interrelated. Attitudes towards inclusion were strongly influenced by teachers-related factors like teachers' experience with people

with disabilities and teachers' beliefs about the power of teaching can influence their attitudes (Opdal, et al, 2001). The conceptual framework has been formed to understand teachers' attitudes towards inclusive education which are influenced by some demographical variables such age, gender, educational qualification, teaching experiences, personally acquainted with a person with autism, frequency of contact and teachers' training. Taking all of the above considerations, a conceptual framework of this study is formulated which is presented as following:

Figure 1: Demographical variables in relation to teachers' attitudes towards inclusion of pupils with ASD



2.7 Wrapping up

The section of this study has provided studies focused on understanding teacher attitude specific to autism and highlights very important demographical factors that can influence teacher attitude toward inclusive practices for students with ASD. In addition, various studies noted that teachers attitudes can greatly influenced by gender, age, special educational training, increased teaching experience and frequency of contact. The important aspect of this chapter is to focus on literature reviews, theoretical and conceptual framework that provide solid knowledge of theoretical orientation and have the suitability of those theories for the concerned study. All these such as attitudinal theory, Vygotsky's teaching-learning theory and Bronfenbrenner ecological system theory are connected with this study in different manners.

3 Methodology

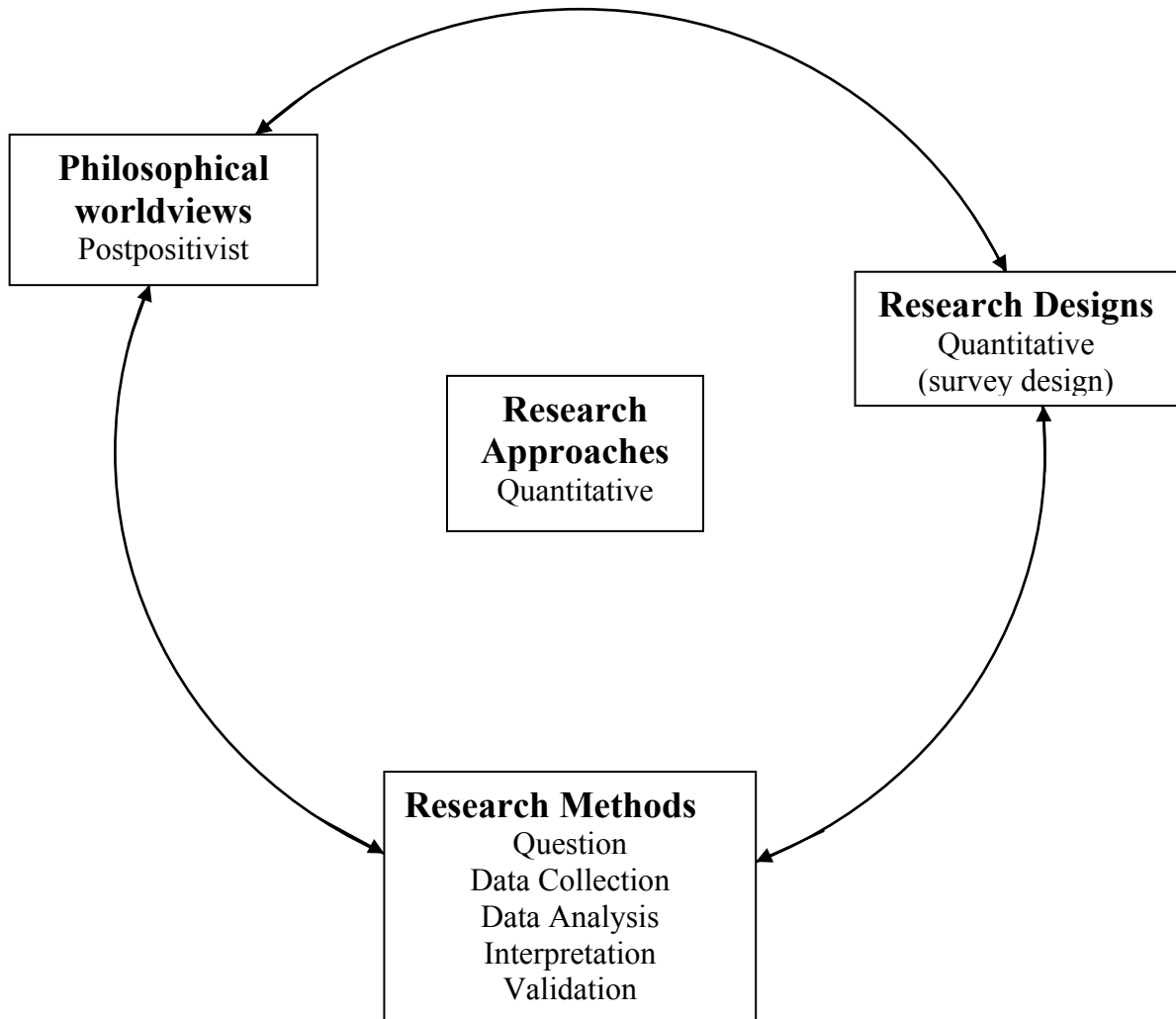
This chapter gives an overview of the research process of the study. It includes what methods will be employed in collecting those data. Furthermore, it includes procedure on how to process those data (Kothari, 1991). This chapter describes the research methodology including research design, the description of measuring instruments (two part questionnaires) which was used to collect data and the method of sampling that was used to select the research participants respectively. After that, an adequate process of data analysis is discussed. This part also contains ethical issues, validity and reliability of the study.

3.1 Research Design

Research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2014). In addition, the term ‘research design’ is used in different ways. Some use it broadly to include the issues of problem formulation, operationalization, sampling and the selection of data collection techniques (Vaus, 2002). According to Stouffer (1950) research design refers to the structure of the data rather than the particular data. The central point of good research design is that it provides a context in which relatively unambiguous statements can be drawn.

This study is designed to use quantitative approach based on a survey design using questionnaires as the instrument. As reported by Meadows (2003), in a quantitative approach, data is collected via surveys or another standardized method and the purpose of the research is deductive in order to test ideas and hypotheses. Survey research is widely regarded as being inherently quantitative and positivistic as well as it is one method of collecting, organising and analysing data (Creswell, 2008). In addition, survey research provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. It includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection, with the intent of generalizing from a sample to a population (Babbie, 1990). Moreover, quantitative survey research is sometimes portrayed as being sterile and unimaginative, but well suited to providing certain types of factual, descriptive information—the hard evidence (Vaus, 2002). The research design of this study can be shown at a glance in the following framework.

Figure 2: The Framework of this study



3.1.1 Typical Features of Quantitative Research

As defined by Creswell, (2003) “A *quantitative* approach is one in which the investigator primarily uses post-positivist claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data”.

Robson (2011) mentioned some typical features of quantitative research as follows:

- Measurement and quantification (i.e. turning the information or data obtained into numbers) is central where accuracy and precision of measurement is sought.
- A focus on what people do or say.
- The scientific approach is related with the same general principles of natural science.
- A deductive logic is followed where pre-existing theoretical ideas or concepts are tested.
- Research design is pre-specified in detail at an initial level of the research process.
- Reliability (consistency over time and with different observers) and validity (showing the measures what is intended) of measurements are very essential for quantitative approach.
- The findings can be checked so the procedure of the research in details is important.
- In general, statistical analysis of the data is expected at the early stage.
- Generalization of the findings is desired (usually in the form of statistical generalizability which requires the sample of participations studied to be representative of some wider population).
- The quantitative approach always try to maintain distance between the researcher and the participants where objectivity is sought.
- For maintaining the control and accuracy, standardization is needed where involves decontextualization (i.e. stripping the situation researched from its context, or ignoring the possible effects of the context). On the other hand, some artificiality may be needed to achieve the desired standardization.
- A natural value-free position is demanded.

3.1.2 Rationale for the use of Survey Design in this study

There were various reasons for choosing survey design in the following:

Firstly, Survey research is one method of collecting, organizing and analysing data (Vaus, 2002). In survey Design, respondents are more likely to provide open and honest feedback. As a result, the researcher makes a minor impact on the information that's collected. It is an unbiased approach to decision making. Overall, survey results provide a snapshot of the attitude and behaviours-including thoughts, opinions and comments about the target population. The main objective of this study was to examine the teachers' attitudes towards inclusion of pupils with autism that could be satisfied by survey but not other research designs.

Secondly, it allowed me to reach a large number of respondents and to generalize the research findings to a representative population (Gall et.al.,2003).

Thirdly, Structured and systematic data collection and analysis which are distinct characteristics of quantitative survey design (Vaus, 2013) helped me in the quest of drawing connective inferences of teachers attitudes towards inclusion of pupils with autism.

3.2 Measuring Instruments

Two parts survey questionnaire used to collect data from the participants for this study. Part one was designed to gather demographic information about the teachers and part two was a modified version of the Teacher Attitudes Toward Inclusion Scale (TATIS) developed by Cullen et.al., 2010. This standardized questionnaire was chosen because it was designed specifically for measuring teacher' attitudes towards inclusion. The original language of the instrument was English and was then translated into Bangla by the researcher to administer in the context of Bangladesh.

Part one: Demographic questionnaire was developed to collect information like gender, age, educational qualification, teaching experience, acquaintance with a pupil with autism, frequency of contact to a pupil with autism, being adequately trained to teach pupils with autism and having formal training in autism as well.

Part two: The TATIS (Teacher Attitudes Toward Inclusion Scale) developed by Cullen et.al. (2010) was used to examine the teachers' attitudes towards inclusion of pupils with mild to moderate disabilities in regular classroom. The original version of the scale was developed and standardized by administering the questionnaire across 252 teachers enrolled in classes at a private university in Connecticut. Construct validity was confirmed through principal component analysis. On the other hand, content validity for the TATIS was assessed with the Cronbach alpha correlation procedure. The TATIS revealed an overall Cronbach alpha reliability coefficient of 0.82.

TATIS consists of 14 items, out of 10 items were worded positively and 4 items were worded negatively. Responses to items are based on a 7-point Likert scale ranging from 1 (Disagree Very Strongly) to 7 (Agree Very Strongly). The wording for negative items 7 - 10 was reversed; therefore, the opposite would be true for ratings on those items (i.e., lower numbers indicates more agreement and higher numbers indicate more disagreement). A higher score on the TATIS was suggestive of more positive attitudes towards inclusion. Scores that fall within one standard deviation of the mean are considered average scores and would not be considered negative or positive. Scores that fall above one yet below two standard deviations are considered slightly negative or positive. The scores that fall outside three standard deviations are considered statistically significant for a positive or negative attitude toward inclusion (Cullen et al., 2010).

3.2.1 Adaptation Process of TATIS

The adaptation of TATIS involved multiphase procedures following the cross cultural standard guideline regarding adaptation and validation of psychometric instrument of Beaton et al (2000) and Borsa et al (2012), which will be described step by step.

First Phase: Translating the items of TATIS

At first, an email was sent to Joseph P. Cullen (main author of TATIS), seeking permission to adapt Teacher Attitudes toward Inclusion Scale (TATIS) into Bangla language. They granted my proposal and gave the permission regarding adaptation of the scale. The English TATIS was translated into Bangla language by two independent Bilingual translators whose mother tongue is Bangla. While translating, meaning and clarity of the items were considered carefully. After translating, total 14 items of TATIS were thoroughly scrutinized and

delivered to ten teachers of the Department of Psychology, University of Dhaka, Bangladesh for evaluation. They were requested to give their comments and recommendations regarding the translation of items. On the basis of the judges' comments some changes and the modifications were made and first translated version was prepared.

First translated version was back translated by two teachers of Department of English, University of Dhaka to see the consistency between the original version and the translated version. After making some minor changes the final Bangla translation of the scale was prepared for administration. The final Bangla version of TATIS was administered to 300 teachers of ten regular primary schools of Dhaka City. After establishing necessary rapport, they were instructed both verbally and written about what to do and how to fill up the questionnaire. In addition, they were assured that the data would be used only for research purpose and would be kept confidential. Respondents chose their answers based on a 7 point Likert scale that is anchored at "1-Disagree Very Strongly (DVS)", "2- StronglyDisagree (SD)", "3-Disagree (D)", "4-Neither Agree nor Disagree(NAD)", "5-Aagree (A)", "6- Strongly Agree (SA)", "7-Agree Very Strongly (AVS)".

Second Phase: Determining Reliability

The reliability of the TATIS scale was recalculated for this study. For this reason, internal consistency of the TATIS was determined by computing Cronbach's alpha reliability coefficients and it was found to 0.76 (alpha coefficient). A reliability coefficient of 0.70 or above is generally considered acceptable (Gable and Wolf, 1993). So the Bangla version of TATIS had satisfactory level of internal consistency.

For determining the test-retest reliability, Pearson product moment correlation coefficient was conducted. However, evidence concerning test-retest reliability came from a sample of 75 the regular primary school teachers. They completed TATIS in an initial session and two weeks later. It is found that the test-retest reliability coefficient was [$r(75) = .782 (p < 0.05)$] significant, suggesting the items have satisfactory levels of external consistency. It is shown in table 2

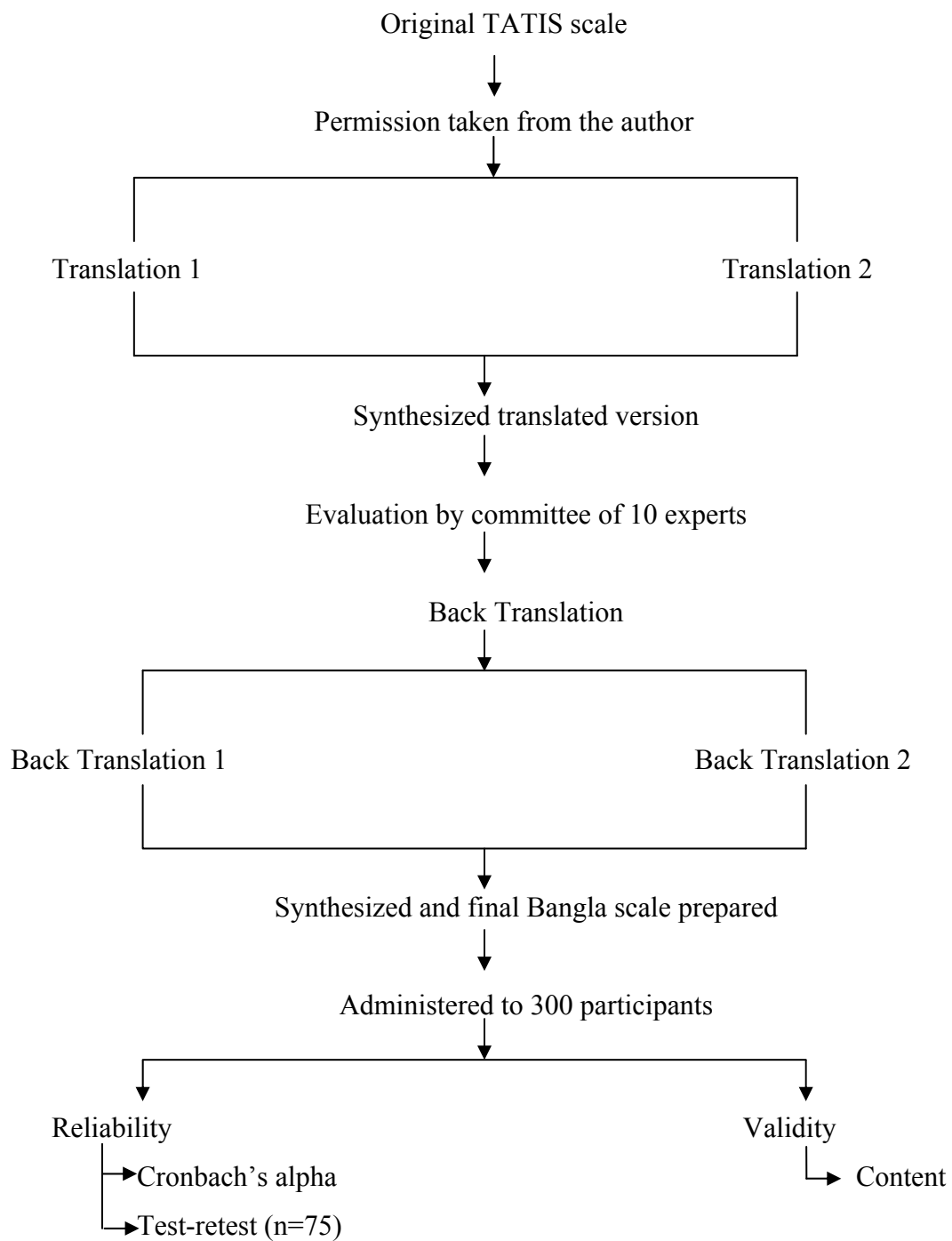
Table 2: Reliability coefficient of the Bangla Version of TATIS

Scale	Cronbach's Alpha, Reliability Coefficient (N=300)	Test-retest reliability coefficient (N=75)
Teacher Attitude Toward Inclusion Scale	0.76	0.782

Third Phase: Determining Validity

To determine the content validity, the Bangla version of TATIS was verified by a panel of ten Bangladeshi teachers who are trained in the field of education and different types of disability of the students. The expert panels gave useful remarks and suggestion during the adaptation process regarding the scale. Based on the group observations and valuable suggestions, some changes were raised and some phrases were reworded. For example, the TATIS was modified slightly for the present study i.e. added *autism* instead of *mild to moderate* disabilities because this study focused on pupils with autism. After implementing the teachers' suggestions, their percentage of agreement reached 95%. The summary of the adaptation process of TATIS is presented in the following:

Figure 3: The Adaptation Process of TATIS



3.3 Participants

The research was conducted in selected regular primary schools in Dhaka city which is the capital of Bangladesh. A list showing names of the primary schools in Dhaka was collected from the Bangladesh Bureau of Educational Information and Statistics (BANBEIS). From this list, thirty primary schools were randomly selected from different areas of Dhaka city. The population for this study was regular primary school teachers employed within the primary school in Dhaka City. Teachers were required to be full-time regular teachers who have teaching experience to teach students in the regular classroom. Out of the available teachers, ten teachers were selected from one schools using random sampling. The information of Table 3 presents the demographics information of the participants in terms of gender, age, educational qualification, teaching experience, acquaintance with a pupil with autism, frequency of contact to a pupil with autism, adequate training to teach pupils with autism, formal training on autism. The result of the study revealed that out of the 300 participants, 55% of the teachers were female, whereas 45% were male. It is mentioned that overall, the participants in this study were predominately female. With regard to teachers' age, the majority of the teachers (53.3 %) were 30-39 years of age. Participants were absent in the age range of 60+ years. With regard to educational qualification, the highest number of the participants (57.3%) had Masters Degree; less than half (34.3%) of the participants reported having a Bachelor Degree and the small percentage of participants (8.3%) reported having a Beyond Masters Degree. Less than half of the participants (34.3%) had a teaching experience of 11-15 years. Almost two-thirds of the participants (64%) reported that they were not personally acquainted with a person who has autism. The highest number of participants (36%) indicated that their average frequency of contact with a person who has autism (other than students) as *very rarely*. The most of the respondents (76.7%) stated that they were not adequately trained to teach pupils with autism as well as 89.3% teachers reported that they had no formal training in autism.

Table 3: Distribution of the participants according to their demographic characteristics

Variable	Category	Number	Percentage	Total mean of attitude score
Gender	Male	135	45	58.97
	Female	165	55	54.50
Age	20-29 Years	46	15.3	53.30
	30-39 Years	160	53.3	54.41
	40-49 Years	66	22	61.80
	50-59 Years	28	9.3	61.32
Educational Qualification	Bachelor's degree	103	34.3	59.56
	Master's degree	172	57.3	55.84
	Beyond Master's degree	25	8.3	48.56
Teaching Experience	1-5 Years	40	13.3	56.60
	6-10 Years	76	25.3	58.76
	11-15 Years	103	34.3	50.36
	16-20 Years	32	10.7	60.59
	21 Years or more	49	16.3	63.20
Acquaintance with a pupil with autism	Yes	192	64	58.02
	No	108	36	53.83
Frequency of contact to a pupil with autism	Daily	66	22	57.86
	Weekly	62	20.7	56.06
	Monthly	45	15	55.13
	Very Rarely	108	36	56.12
	Never	19	6.3	58.74
Being adequately trained to teach pupils with autism	Yes	70	23.3	61.84
	No	230	76.7	54.89
Having formal training in autism	Yes	32	10.7	54.59
	No	268	89.3	56.74

3.4 Data Collection Procedure

The following issues were needed to consider before going to the data collection.

At First, **gaining entry into the field work** is very important to consider. Respective procedures have to be followed to get permission and access for conducting field work in the home country. Before going to the schools, the researcher received ethical permission from the Norwegian Social Science Data Services (NSD) as well as approval of thesis proposal from the department of Special Needs Education at the University of Oslo, Norway. After that, the permission is also acting as prerequisite from the selected schools in Bangladesh as well as participants. Over and above, there are requisition for the agreement among the department and respective supervisor for the supervision of the entire study that is very essential component to accomplish this study.

Pilot Study: Pilot study is very significant stage prior to the final data collection of the proposed study. With the view to examining the completeness of the questionnaire, ten teachers who are employed in mainstream school were selected for the pilot study. Two part questionnaires (Part one and Part two) were sent to the participants together with the consent form. Piloting is necessary for the researcher to identify any weakness in the instruments and also find out which data analysis technique will be appropriate. After piloting, the researcher can modify the instruments for the main activities of the research (Gay et al, 2009). Thus, the piloted respondents were requested to give some suggestions how to appropriate questionnaire for this study. This pilot test surprisingly acted like a short study. In most cases, teachers shared some suggestions for the questionnaire so that this questionnaire is suitable for this study. All participants of this study returned the complete questionnaire. The response rate indicated that the participants could understand the content of the questionnaire.

Main Study: After piloting, main study was conducted according to the standard procedure. Regular primary school teachers were invited to participate in this study. Participating teachers were asked to complete two part questionnaire which was used to determine their attitudes regarding inclusion of pupils with autism in regular school settings. The researcher

contacted the appropriate school administrators in Dhaka to obtain permission to conduct this study. Some phases were followed for collecting data in this study.

At first, participants were assured of voluntary participation and that all collected data would be kept locked in researcher private laptop to ensure confidentiality.

Secondly, participants were informed that they could withdraw from the study at any time.

Thirdly, participants were sent the questionnaire with a brief description of the present study, which directed them to complete a demographic questionnaire and an adapted Teacher Attitudes Toward Inclusion Scale (TATIS).

Finally, the researcher was always present to give instructional support to the participants and after completing whole procedure, given thanks to the participants.

3.5 Statistical Procedure and Analysis

Descriptive statistics and inferential statistics for categorical data (i.e., means, standard deviations, Analysis of Variance-ANOVA, Pearson Product Moment Correlation Coefficients, Independent-Samples T-test and linear multiple regression) were used to answer research questions. The Statistical Package for Social Sciences - SPSS Version 20 was used for data analysis. First research question-Teachers attitudes towards inclusion of pupils with autism were measured by extracting their overall mean score of Teachers' responses on the TATIS for the total sample. To answer the second research question, Analysis of Variance-ANOVA, Pearson Product Moment Correlation Coefficients, Independent-Samples T-test and linear multiple regression were used to identify relationships between teachers' characteristics and their attitude toward inclusion.

3.6 Ethical Considerations

As a concept, 'research ethics' refers to a complex set of values, standards and institutional schemes that help constitute and regulate scientific activity (NESH, 2005). Ethical consideration in conducting any research is important because it defines what is or is not legitimate to do or what moral procedures are involved in the research process (Neuman, 2007). The ethical responsibilities inherent in research and partly associated with standards related to the research process, including relationships between researchers, and partly with

respect for the individuals and institutions being studied, including responsibility for the use and dissemination of the research.

Educational research needs to pay attention to the main ethical issues of informed consent, intrusiveness, confidentiality and anonymity. As a consequence, a researcher needs to have high standards of personal and professional integrity. It is necessary for the researcher to consider the ethical concern which can possibly affect the participants therefore the educational researchers should show respect, protect the participant from any harm and honor their contribution. The issues need to be considered before, during and after conduct of the research study (Gall, Gall& Borg 2007).

Prior to Conduct the Study: At this level, it is important to examine professional association standards while dealing with individuals as study participants. Through the ‘code of ethics’, the researcher is addressed his or her credibility, competency, and professional skills for doing a specific study. Prior to conducting the study, it was necessary to obtain written permission for consent by all the participants and the participants acknowledged that they were fully consenting to the tasks they would complete. During this stage, approval was obtained from the Norwegian data authority, University of Oslo, local organization to gain access in the site and participants. In addition, permission was sought from the Ministry of Primary and Mass Education of Bangladesh.

Beginning of the Study: This phase is significant for ethical consideration including, the researcher explained to the respondents the research topic, the goal of the study and requested their willingness to participate in it. Respondents were notified of anticipated benefits and consequences to participation in this research study via an informed consent form. All participants had the right to withdraw at any time of the study. There was no potential risk or hazard that could have resulted from participation in this study. In addition, anonymity and confidentiality refer to assurance by the researcher that obtained data would not be disclosed.

During the Data Collection: It is inevitably considered to respect the participants which is helpful to make rapport with them. In conducting my data collection, I mentioned that if they did not feel comfortable for answering research question, they have the option to review or revise their answers. Moreover, the confidentiality of the respondents was guaranteed by anonymousness-based responses, which was explained in the instruction of the

questionnaires. The sessions are started with greetings and ended with verbal praising for participating in this study, for instance, “How are you” as greetings and “thank you” as verbal praise and recognition.

During the Data Analysis: In this stage, the issue of confidentiality is important for my study. Participants did not mention their names on the consent form in order to assure confidentiality and anonymity.

Storing Data: After gathering data, the storing is important aspect for maintaining confidentiality of data and for analyzing purpose. In this study, survey data were stored in locked laptops and backups in personal hard disk so that data are protected if there is any kind of software or hardware problems in laptops.

3.7 Summary

Through the extraction of this entire chapter, it can be outlined that this chapter dealt with the description of the methodology followed in the study. The chapter has discussed research design, research instruments, participants, data collection and analysis procedure and also ethical considerations. The goal of this study is to examine the attitudes of teachers’ towards inclusion of pupils with autism into the regular classroom and to find out the relationship between teacher-related factors and their attitude towards inclusion. To measure these concepts, two parts survey questionnaire used to collect data from the participants. Part one including 8 items were presented to collect demographic information and part two was adapted in Bangla language for using in Bangladesh which was developed by Cullen, et.al (2010) containing 14 items. Mainly part two was used to examine the teachers’ attitudes towards inclusion of pupils with ASD in regular classroom. Descriptive and inferential statistics will be utilized to analyze the results and provide answers to the research questions. The next chapter will focus on the results of this study in light of data analysis.

4 Presentation of Findings

This chapter conveys the analysis of data obtained from the questionnaires answered response by 300 regular primary school teachers. The findings are presented in view of the two research questions of this study (see ch.1).

- In order to examine the first research question, descriptive analysis was used. Data were numerically coded and transferred to the Statistical Package for Social Sciences (SPSS) pack 20. This part focuses on analysis and discussion of the teachers’ attitudes towards inclusion of pupils with ASD in regular classroom.
- The t-test, Analysis of Variance (ANOVA) and Regression Analysis were conducted to examine the relationship between teacher-related factors and teachers’ attitudes towards inclusion of pupils with ASD in regular classroom.

4.1 Description of Teachers’ Attitudes towards Inclusion

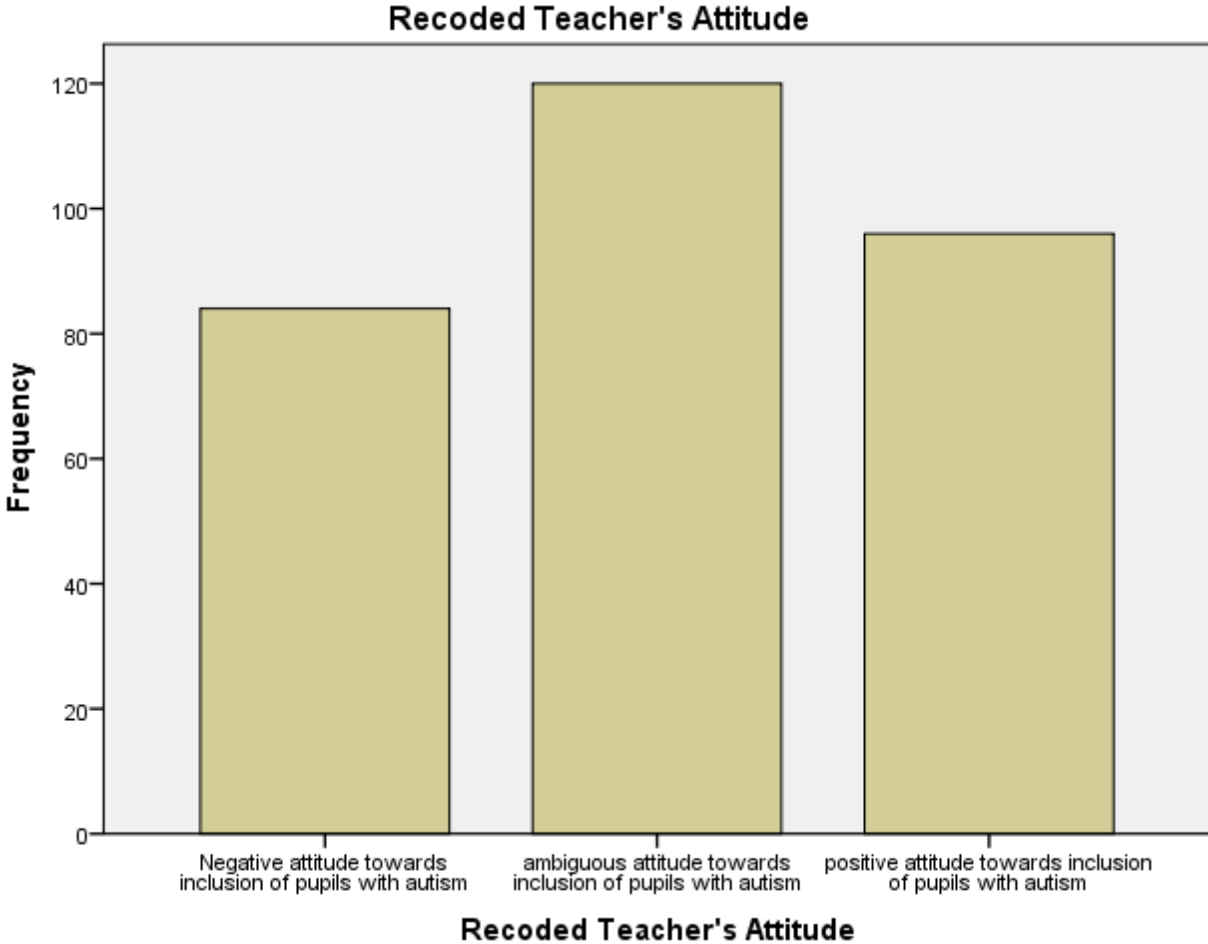
Teacher Attitudes towards Inclusion Scale (TATIS) were used to answer the first research question of this study. The TATIS consists of 14 items with the achieved co-efficient alpha of 0.76 with responses measured by a Likert scale with the following range: 1 = *disagree very strongly*, 2 = *strongly disagree*, 3 = *disagree*, 4 = *neither agree nor disagree*, 5 = *agree*, 6 = *strongly agree*, and 7 = *agree very strongly*. The scale is approximately normally distributed with the scores ranging from 14 to 98 as presented in the following table.

Table 4: Regular teachers’ attitudes towards inclusion of pupils with autism

Overall teacher attitude scale toward inclusion	Negative Range 14-49		Neutral Range 50-63		Positive Range 64-98	
	N	%	N	%	N	%
	84	28	120	40	96	32

Table 4 shows above one third of the teachers (32%) in this study had positive attitudes towards inclusion of pupils with ASD in regular classrooms. On the other hand, almost one third of the teachers (28%) had negative attitudes towards inclusion of pupils with autism. Nearly half of the teachers(40%) had somewhat ambivalent view due to their neutral attitudes (i.e. neither agree nor disagree). Overall, it could be noted that those 180 teachers had both positive and negative attitudes towards inclusion of pupils with ASD in regular classroom.

Figure 4: Histogram of Teacher Attitudes towards Inclusion of Pupils with Autism



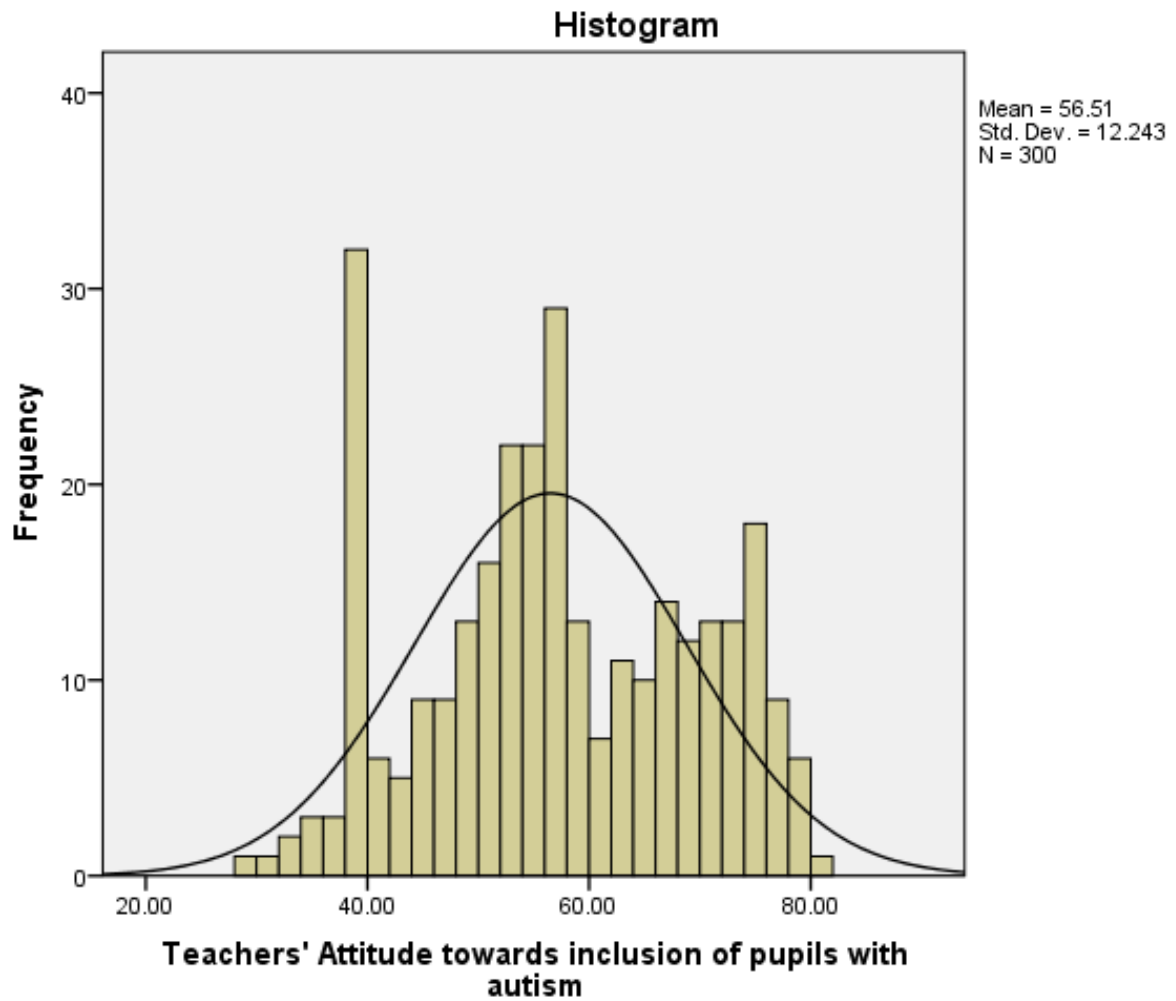
The TATIS was a Likert scale that ranged from 1 to 7 (1=*disagree very strongly*, 2=*strongly disagree*, 3=*disagree*, 4=*neither agree nor disagree*, 5=*agree*, 6=*strongly agree*, and 7=*agree very strongly*). Numbers above 4 were in agreement with the item on the other hand

those below 4 disagreed with the item. In this study, the overall mean score and standard deviation (SD) for each item on the TATIS were calculated and presented in Table 5. Mean scores for all items ranged from 2.74 to 4.81. The lowest mean score was 2.74 for item 2 and the highest mean score was 4.81 for item 14. The mean score is 3.5 which reveals hypothetical separation limit between the positive and negative attitudes as defined by the researcher. The mean above the 3.5 is considered positive attitudes and below 3.5 refers negative attitudes. The finding of this study is that the mean for overall items was 3.74, which denotes that the attitudes of teachers' towards inclusion of pupils with ASD were slightly positive because the most of the teachers were agreed to make classroom modifications for meeting the individual needs of pupils with autism. Besides, nearly half of the teachers (120 teachers) would denote neutral response because they were confused on how to practice inclusive education for pupils with autism.

Table 5: Mean and Standard deviation for each item on the TATIS scale

No of Item	Mean	Std. Deviation
item01	3.67	1.96
item02	2.74	1.91
item03	3.35	1.90
item04	4.40	1.87
item05	3.82	1.58
item06	3.83	1.73
item07	4.09	1.72
item08	4.04	1.79
item09	3.94	1.74
item10	3.65	1.57
item11	4.67	1.70
item12	4.72	1.69
item13	4.77	1.76
item14	4.81	2.06
Overall	3.74	1.71

Figure 5: Histogram of Mean and SD for each item on the TATIS scale



The further examination of teachers' agreement or disagreement according to their choices for each item of the study scale, overall responses were combined as shown in Table 6.

Moreover, all ratings of *Agree*, *Strongly Agree*, and *Agree Very Strongly* were combined to indicate general agreement, on the other hand, all ratings of *Disagree*, *Strongly Disagree*, and *Disagree Very Strongly* were combined to indicate general disagreement.

Table 6: shows the teachers' responses according to their choices for each item of the scale.

No of Item	DVS %	SD %	D %	N %	A %	SA %	AVS %
1	23.0	6.3	22.0	2.3	32.0	4.3	10.0
2	42.0	13.7	13.7	5.3	11.0	13.0	1.3
3	30.0	7.0	14.0	12.0	25.0	8.3	3.7
4	8.0	13.0	14.0	7.3	25.7	17.7	14.3
5	5.0	16.0	32.3	8.3	17.3	19.3	1.7
6	15.3	11.7	11.0	14.7	35.0	8.3	4.0
7	4.7	10.3	33.7	9.7	20.7	6.0	15.0
8	6.7	9.3	35.3	9.0	18.0	5.0	16.7
9	6.7	10.0	35.0	12.7	17.3	3.0	15.3
10	7.0	10.0	43.0	12.7	14.7	3.3	9.3
11	6.0	5.7	14.3	11.0	32.0	14.0	17.0
12	5.7	2.7	20.3	9.3	26.7	18.0	17.3
13	7.0	1.7	19.0	9.7	27.0	14.0	21.7
14	17.0	1.7	3.3	6.3	31.3	13.3	27.0

Note. DVS = Disagree Very Strongly; SD = Strongly Disagree; D = Disagree; N = Neither Agree Nor Disagree; A = Agree; SA = Strongly Agree; A VS = Agree Very Strongly.

It is showed that percentages for items 1, 3, 5, 6, 9, 10 indicated to skew toward the middle of the Likert range to the left indicating neutral attitudes towards inclusion for pupils with ASD. On the other hand, percentages for items 4, 7, 8, 11, 12, 13 and 14 were skewed to the right indicating positive attitudes towards inclusion as well. One interesting finding from this type of analysis is that only item 2 was skewed to the left, indicating more disagreement, it means they were not supported to fulfill educational needs for students with autism from regular classroom and agreed separate classrooms that exclusively serve students with autism as a means of meeting their educational needs. For this reason, further research was essential to identify the resources which responsible for increasing positive attitudes towards inclusion of pupils with ASD .Only little more than half (53%) of the teachers disagreed with the

statement that students with autism can be more effectively educated in regular classrooms as opposed to special education classrooms as well as 51% teachers were not supportive of meeting the needs of students with autism in the regular classroom because they still disagreed that all students with autism should be educated in regular classrooms with non-handicapped peers to the fullest extent possible and agreed maintaining separate classrooms that exclusively serve students with autism. The results from these statements suggest that teachers hold the negative view about full inclusion practices, and think separate classrooms should remain as an option to meet the educational needs for pupils with autism. On the other hand, almost 58% teachers were in favor of the regular classrooms could be modified for meeting the needs of students with autism and 60% teachers agreed that general education teachers are succeed with students with autism, even when they try their best. In addition, the majority of the teachers (71.6%) were supportive of team teaching and a consultant teachers model as a way to meet the needs of students with autism and 62.7% teachers agreed that the responsibility for educating students with autism should be shared between regular and special education teachers. It is found that around half of the teachers (48.7%) agreed that students with autism should not be taught in regular classes with non-disabled students because they will require too much of the teacher's time and half of the teachers (47.7%) disagreed with this statement.

4.2 Relationships between Teacher-Related Factors and Their Attitudes towards Inclusion

Research question 2: Is there any significant relationship between teacher-related factors(such as gender, age, educational qualification, teaching experience, personally acquainted with a person with autism, frequency of contact, adequate training, formal training) and their attitudes towards inclusion of pupils with autism? In-order to answer this question, t-test, one way ANOVA, and linear multiple regression were used. The overall result is showed in the following:

4.2.1 Relationships between teachers' attitudes and their Gender

First of all, an independent-samples *t*-test was used to check whether there was a statistically significant difference in mean scores of teachers' attitudes depending on their gender as shown in Table 7. Result of the *t*-test showed that a statistically significant difference in mean

scores for males and females teacher. The magnitude of the differences in the means was small (Eta squared=0.05). This finding indicates that male teachers are more positive towards inclusion of pupils with autism than female teachers.

Table 7: Means, SD and t-value for the teachers' attitudes depending on gender

Gender	N	Mean	SD	Df	t
Male Teachers	135	58.97	11.67	298	3.197
Female Teachers	165	54.50	12.36		

* $p < .005$ (Significant value)

4.2.2 Relationships between teachers' attitudes and their age

In order to find out the significant relationship between teachers' age and their attitudes towards inclusion of pupils with autism in the regular classrooms, one way ANOVA was used. The result showed a significant difference in attitudes score between younger teachers and older teachers. This implies that older, more experienced teachers have significantly higher levels of agreement for inclusion practices of pupils with ASD than younger, less experienced teachers in the present sample. The Eta squared was .01; thus, indicating a small effect. The results indicated that the group of teachers with age 40-49 years ($M = 61.80$; $p = .01$) and 50-59 years (61.32 ; $p = .02$) had a significantly higher mean score than teachers with age 20-29 years (53.30) and 30-39 years (54.41). It is mentioned that teachers with age above 40 had more positive attitudes towards inclusion of pupils with autism in comparison with teachers with age below 40.

Table 8: Mean, SD and F-value for the teachers' attitudes depending on age

Age	N	Mean	SD		Sum of Squares	df	Mean Squares	F
20-29 Years	46	53.30	11.38	Between groups	3678.09	3	1226.03	8.821
30-39 Years	160	54.41	12.24	Within groups	41138.88	296	138.983	
40-49 Years	66	61.80	10.85	Total	44816.97	299		
50-59 Years	28	61.32	11.89					

* $P < .001$ (Significant value)

For further examining the nature of the differences by age in terms of the overall score, Tukey's HSD was employed. It is found that the mean score for group 3 and 4 were significantly different from group 1 and 2 as well as the means for groups in homogeneous. The group sizes were unequal. The harmonic mean of the group sizes was used. For this reason, Type 1 error levels were not guaranteed.

4.2.3 Relationships between teachers' attitudes and their educational qualification

One way ANOVA was carried out to determine if any significant differences existed between teachers' attitudes and their educational qualification. The participants were divided into three groups according to their educational qualification: (Group 1: Higher Secondary; Group 2: Bachelor degree; and Group 3: Master degree).

Table9: Mean, SD and F-value for the teachers' attitudes depending on educational level

Educational Level	N	Mean	SD		Sum of Squares	df	Mean Squares	F	Level of Sig
Higher Secondary	103	59.56	11.23	Between groups	2618.03	2	1309.01	9.213	0.01
Bachelor	172	55.83	12.50	Within Groups	42198.94	297	142.08		
Master	25	48.56	48.56	Total	44816.97	299			

* $P < .001$ (Significant value)

The result indicates a statistical significant difference in attitude scores for the three groups. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using Eta squared was 0.01. A Scheffe post hoc test was used to determine comparisons among three groups of participants according to educational level. The result showed that the mean score for Group 1 (Higher Secondary) was significantly higher from Group 2 (Bachelor) and Group 3 (Master Degree). It is indicated that teachers with Higher Secondary Degree had more positive attitudes towards inclusion of pupils with autism in comparison with teachers with Bachelor and Master Degree.

4.2.4 Relationships between teachers' attitudes and their teaching experience

One way ANOVA was conducted to find out whether there was a statistically significant difference in attitudes scores with respect to teaching experience. The results of one way ANOVA reveal that the association between teaching experience and teachers' attitudes towards inclusion of pupils with autism in the regular classroom was found to be significant ($F=9.213, p=0.01$). This means that more experienced teachers have significantly higher levels of agreement for inclusion of pupils with autism than less experienced teachers.

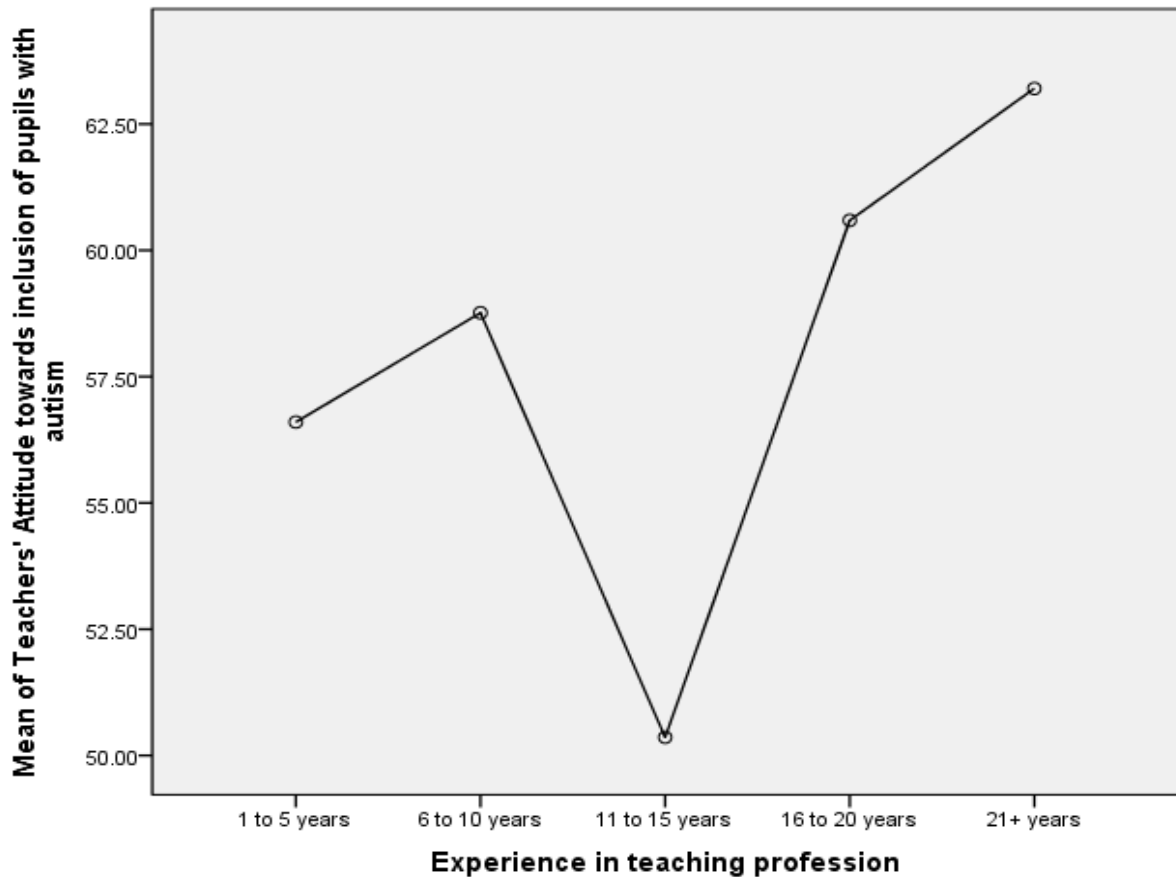
Table 10: Mean, SD and F-value for the teachers' attitudes depending on teaching experience

Teaching Experience	N	Mean	SD		Sum of Squares	Df	Mean Squares	F	Level of Sig
1-5 Years	40	56.60	11.25	Between groups	7012.246	4	1753.062	9.213	0.01
6-10 Years	76	58.76	11.39	Within Groups	37804.724	295	128.152		
11-15 Years	103	50.36	11.45	Total	44816.970	299			
16-20 Years	32	60.59	12.22						
21 Years	49	63.20	10.34						

* $P < 0.01$ (Significant value)

A Scheffe post hoc test was conducted for the comparisons among different groups of teachers according to teaching experience. The results express that mean scores of group 1 (teaching experience 1-5 years), group 2 (teaching experience 6-10 years), group 4 (teaching experience 16-20 years) and group 5 (21 years) had significantly higher than group 3 (teaching experience 11-15 years). It means that teachers with below 11 years of experience and above 15 years of experience had more positive attitudes towards inclusion of pupils with ASD (see Figure 6)

Figure 6: Mean of Teachers' attitudes towards inclusion of pupils with autism depending on teaching experience



4.2.5 Relationships between teachers' attitudes and being personally acquainted with a person with autism

The relationship between being personally acquainted with a person with autism and teachers' attitudes towards inclusion of pupils with autism in regular classrooms was determined by using t-test. A significant difference was found between these two variables. The results mention that teachers who are being personally acquainted with a person with autism had significantly more agreement with inclusion than teachers who are not being personally acquainted with a person with autism.

Table 11: Means, SD and t-value for the teachers’ attitudes depending on being personally acquainted with a person with autism

Acquainted	N	M	SD	Df	t
Yes	192	58.02	13.02	298	2.87
No	108	53.83	10.24		

* $p < 0.04$ (Significant Value)

4.2.6 Relationships between Teachers’ attitudes and frequency of contact

In order to determine the relationship between teachers’ frequency of contact with a pupil with ASD in the classroom and their attitudes towards inclusion, One Way ANOVA was applied. The findings reveal that teachers’ attitudes towards inclusion of pupils with ASD did not vary significantly based on their frequency of contact with a pupil with ASD. It means that teachers who have daily contact with pupils with ASD were not significantly more positive towards inclusion than those teachers who have no contact with pupils with ASD.

Table 12: Mean, SD and F-value for the teachers’ attitudes depending on contact variable

	N	Mean	SD		Sum of Squares	df	Mean Squares	F
Daily	66	57.86	13.36	Between groups	329.136	4	82.284	.546
Weekly	62	56.06	11.68	Within Groups	44487.834	295	150.806	
Monthly	45	55.13	10.84	Total	44816.970	299		
Very rarely	108	56.12	12.87					
Never	19	58.74	9.61					

*Not significant

4.2.7 Relationships between teachers’ attitudes and their adequate training

An independent-samples t-test was employed to determine whether there was a statistically significance difference in mean scores of teachers’ attitudes based on their adequate training. The findings indicate that teachers who reported having adequate training was significantly

more positive towards inclusion of pupils with autism than those teachers who reported that they did not have adequate training in autism.

Table 13: Means, SD and t-value for the teachers’ attitudes depending on adequate training in ASD

Adequate training	N	M	SD	Df	t
Yes	70	61.84	11.99	298	4.29
No	230	54.89	11.87		

* $p < 0.01$ (Significant Value)

4.2.8 Relationships between teachers’ attitudes and their formal training

To determine the significant differences between formal training on autism and teachers’ attitudes towards inclusion of pupils with autism was investigated by using an independent-samples t-test. The result implies that there was a significant difference between teachers who reported having formal training in ASD and teachers who reported that they did not have formal training in ASD.

Table 14: Means, SD and t-value for the teachers’ attitudes depending on formal training in autism

Formal training	N	M	SD	df	t
Yes	32	61.59	12.45	298	3.25
No	268	56.74	12.22		

* $p < 0.05$ (Significant Value)

4.2.9 Regression Analysis

In order to assess the amount of variation in teachers’ attitudes towards inclusion explained by gender, age, educational qualification, teaching experience, acquaintance with a pupil with ASD, frequency of contact to a pupil with ASD, being adequately trained to teach pupils with ASD and having formal training with ASD, a linear regression analysis was utilized. The results of regression analysis showed that gender ($\beta = -.112, p < .05$), age ($\beta = -.274, p < .001$),

educational qualification ($\beta=-.274, p<.001$), adequate training ($\beta=-.288, p<.001$) and formal training ($\beta=-.190, p<.002$) were the significant predictors of teachers' attitudes towards inclusion of pupils with ASD in regular classrooms. On the other hand, it showed that three teachers' characteristics including teaching experience, personally acquainted with a person who has ASD and frequency of contact not contributed significantly to the prediction of teachers' attitudes towards inclusion of pupils with ASD in regular classroom. One interesting finding from this type of analysis was that although the result of regression analysis indicated that no significant effect of teaching experience and personally acquainted with a person who has ASD on teachers' attitudes towards inclusion of pupils with autism, but the result of one way ANOVA and *t*-test for the teachers' attitudes depending on teaching experience and personally acquainted with a person with ASD were significant.

Table 15: Results of Regression Analysis

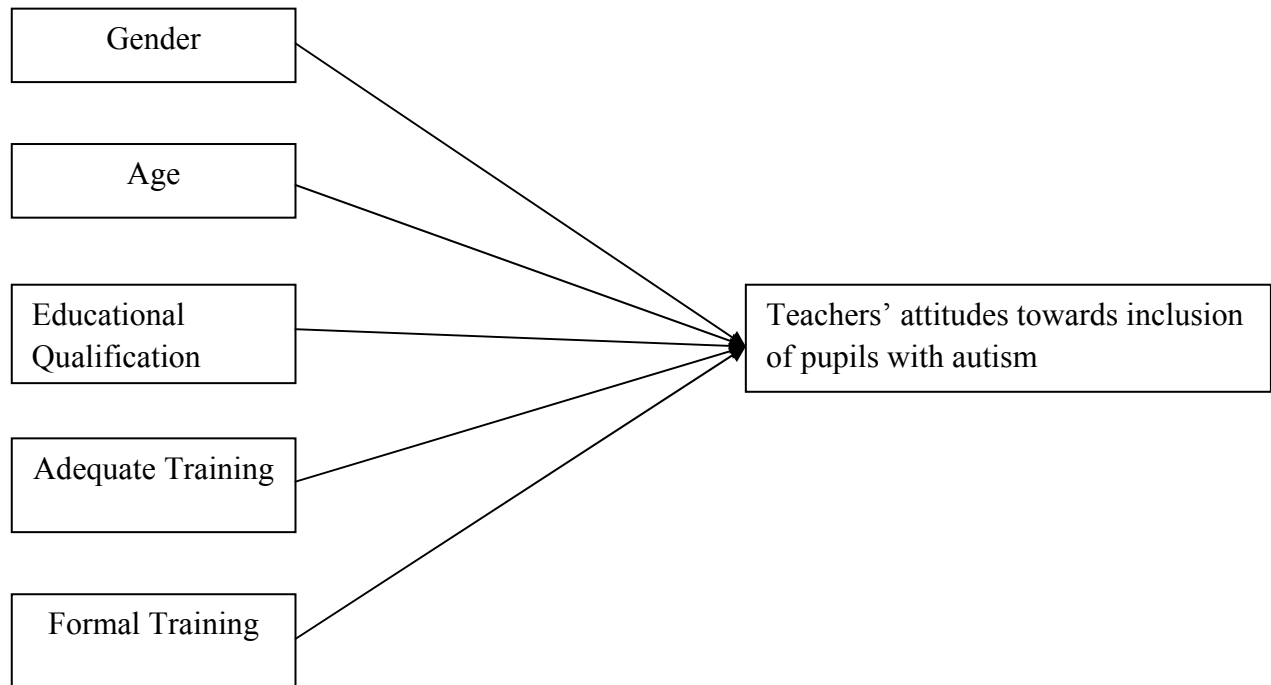
Variables	Standardized Coefficients (β)	Significant Level
Gender	-.112	.05
Age	.274	.001
Educational Qualification	-.155	.004
Teaching Experience	-.079	NS
Personally acquainted with a person who has autism	.061	NS
Frequency of contact	-.029	NS
Adequate Training	-.288	.001
Formal Training	.190	.002

According to the summary of the regression analysis (Table-15), the value of *R* Square and Adjusted *R* Square were .21 and .18 respectively which mentioned that about 21% of the variance on attitudes was due to the variables gender, age, educational qualification, adequate training and formal training.

Table 16: Summary of Regression Model

R Square	Adjusted RSquare	Significant Level
.206	.184	.001

Figure7: Significant predictor variables in relation to teachers' attitudes towards inclusion of pupils with autism on the basis of regression analysis



4.3 Summary of Findings

The findings of this study is discussed in this section. Descriptive and inferential analysis was conducted for analyzing data and the results were displayed. From these findings of the analysis, it was found that overall mean scores of the respondents was 3.74 indicating slightly positive viewpoint towards inclusion of pupils with ASD in regular classroom. The two third of the teachers agreed that regular classrooms should be modified for meeting the educational needs for pupils with autism. Additionally, the most of the teachers were still in favour of team teaching and a consultant teacher model as a means for including students with autism as well as they agreed that teachers are succed to teach students with autism in regular classrooms if they try the best and well trained. On the other hand, more than half of the teachers still supported separate classrooms for pupils with autism instead of regular classrooms to fulfill their educational needs. Data analysis for research question 2 indicated that the statistically significant relations were noted between teacher attitude toward inclusion and the teacher characteristics: gender, age, educational qualification, teaching experience, being personally acquainted with a person with ASD, adequate training and formal training on

ASD. On the contrary, only frequency of contact with pupils with ASD was not related with teachers' attitudes towards inclusion of pupils with ASD. It is noted that teachers' attitudes were not significantly difference between teachers who have daily contact with pupils with ASD and teachers who have no contact with pupils with ASD. On the basis of regression analysis gender, age, educational qualification, adequate training and formal training on ASD of the teachers contributed significantly to the predictions of teachers' attitudes towards inclusion of pupils with ASD in regular classrooms.

5 Discussion, Conclusion, and Recommendations

This chapter consists of discussions, conclusion and recommendations based on the study purposes. The purpose of the study was to examine the attitudes of teachers towards the inclusion of pupils with autism into the regular classroom in Bangladesh and to find out the relationship between teacher-related factors and their attitude toward inclusion of pupils with autism. The sample included full time teachers who are employed in regular primary schools in Bangladesh. This chapter includes a discussion of the findings related to the research questions and how the results relate to the review of the literature. Limitations of this study are discussed, followed by the concluding remarks as well as applicability and suggestions including recommendations for further research on inclusive education and ASD in Bangladesh and policy development are also provided.

5.1 Discussion of the Findings

5.1.1 Teachers' Attitudes toward Inclusion

The findings reveal that teachers generally showed slightly positive attitudes towards inclusion of pupils with ASD in regular classroom. The majority teachers were showed positive opinion to take the responsibility for educating students with autism by team teaching or a consultant teacher model and they were willing to modify the classroom to fulfill the educational needs of students with autism. The findings of this study are consistent with previous research on inclusive education and ASD. Most of the previous studies noted that overall, teachers were found to be supportive of inclusion for pupils with ASD (Robertson, Chamberlian and Kasari, 2003; Stanovich and Jordan, 1998; Park and Chitiyo, 2011; Kosmerl, 2011; Al-Shammari, 2006; Haimour and Obaidat, 2013; Segall, 2003; Engstrand and Pettersson, 2012, Rodriguez, Saldaria and Moreno, 2012; Byrne, 2013 and Humphrey and Symes, 2013). In addition, the findings from Wilkerson (2012); Chaaya (2012); Davis (2011); McNaughton and Drager (2009) and Rahaman (2012) stated that most of the teachers were positive to take the responsibility for educating student with autism and to make classroom modifications to meet the educational needs of students with autism. Although teachers were

stated to be slight positive viewpoint towards inclusion of pupils with autism, above half of the teachers showed negative views towards inclusive education for pupils with autism and consent for maintaining separate classroom for pupils with autism. Moreover, these negative attitudes may be arise due to some reservations, like lack of awareness of pupils with ASD among the respondents, lack of resources for teaching to inclusive classes, insufficient knowledge about inclusive education and ASD, lack of training on ASD and large class sizes as well. Various studies conducted by Sharma, Moore and Sonawane (2009); Yianni-Coudurier et.al. (2008) and Love and Kruger (2005) who found that teachers' attitudes towards inclusion of pupils with autism were overall negative. Overall, most of the participants noted that they did not have sufficient practical knowledge of inclusive education and declared that there was some confusion about inclusion as well as confound how to implement of inclusive education successfully for pupils with ASD in regular classrooms. In the context of Bangladesh, few teachers had showed negative viewpoints towards inclusion because they had not been informed that students with special needs would be included in regular classrooms and that, as regular teachers, they would be responsible for teaching these students in their classrooms. After all, an inclusive service is a relatively new concept within the education system of governmental policy in Bangladesh where regular schools are the major providers of the educational services. In this situation, the majority of regular teachers have not had the opportunity to be involved with discussions or debates about inclusive education for students with disabilities. However, at present the government of Bangladesh have taken some initiatives for inclusion of students with disabilities including autism in regular classroom like they have the right to attend their local schools (CSID, 2002). In addition, the Conventions on the Rights of Peoples with Disabilities is now a legal obligation and must be reflected in educational context (UN, 2006). For this reason, the education system of Bangladesh will continue to move towards inclusion and teachers will favourable towards inclusion of pupils with ASD in regular classroom in near future.

5.1.2 Relationships between Teachers' Attitudes and Teacher-Related Factors

The results indicated that teachers' gender, age, educational qualification, teaching experience, acquaintance with pupils with autism, adequate training and formal training on ASD were significantly associated with teachers' attitudes towards inclusion of pupils with

autism. Besides, this finding did not indicate any significant differences in teachers' attitudes depending on frequency of contact.

The results clearly imply that significant differences in teachers' attitudes toward inclusion of pupil with ASD according to their gender. The results showed that the attitude of the male teachers towards inclusion of pupils with ASD was slightly more positive than the attitudes of their female teachers. This finding is consistent with one study in Bangladesh conducted by Ahmed, Sharma and Deppeler(2012) who noted that male teachers have more positive attitudes than female teachers. However they emphasized on further research for better understanding of these results within Bangladesh context. On the other hand, other studies carried by Forlin, Loreman, Sharma, and Earle (2009); Hodge and Jansma (2000); Leyser and Tappendorf (2001); Park and Chitiyo (2011) concluded that there had been inconsistent results regarding gender differences and suggesting that female teachers were more supportive of inclusion than male teachers. Research studies conducted by Al-Zyoudi (2006); Avramidis et al.(2000); Berryman (1989);Carroll, et.al. (2003); Haimour and Obaidat (2013);Leyser, Kapperman and Keller (1994); Minke, et.al. (1996); Parasuram (2006) and Van Reusen et al. (2001) found no significant relationship between teachers' attitudes and their gender. The finding of this study may be explained by the fact that in Bangladesh female are considered inferior to male who suffer disproportionately from the impact of gender discrimination. On the grounds, female teachers are not adequately aware on the situation of children with ASD which resulted negative attitude towards inclusion of pupils with ASD.

Regarding the teachers' age, it is observed that age is an important variable to promote inclusion of pupils with autism in regular classroom. Teachers with age above 40 were more supportive of inclusion than younger teachers with age below 40. This finding is inconsistent with the results of Wilkerson (2012) where it was found that younger teachers (20-29 years) were more supportive of inclusion than older (40-49 and 50-59 years). Forlin, et.al. (2009) studied the attitudes of 603 pre-service teachers from Australia, Canada, Hong-Kong and Singapore and concluded that younger pre-service teachers were more likely to alter their sentiments towards individuals with special needs. In opposite, other researchers have not found any significant differences between age groups (Avramidis, et.al., 2000 and Carroll, et.al., 2003). This inconsistency warrants an in-depth study in these areas. It can be assumed that this occurred because teacher with age above 40 had more experienced and more

knowledge about inclusion for students with disabilities. In addition, older teachers are influenced by their previous experience with disability, they are more concerned about implementation of inclusive education for students with disability specially ASD.

A statistically significant relationship were found between the educational qualification of the teachers and their attitudes towards inclusion. Interestingly, teachers with a bachelor degree and Masters Degree have lower attitudes compared to the teachers with a higher secondary degree. This finding coincides with the viewpoints of others researchers (Ahmed, Sharma and Deepler, 2012 and Wilkerson, 2012) that teachers with Bachelor degree had higher level of agreement regarding their attitudes than those teachers with higher degrees. This finding is quite contradictory with the results of other studies (Alghazo, et.al., 2003; Brackenreed and Barnett, 2006 and Parasuram, 2006) which reported that teachers with a Masters Degree were found to have more positive attitudes towards inclusion of students with disabilities than the teachers with Bachelor and below Bachelor degrees. In addition, a study conducted by Forlin, et.al., (2009) demonstrated that teachers with higher degrees displayed more positive attitudes towards inclusion, compared to those completing undergraduate studies. Whereas, a study conducted by Carroll, et.al., (2003) found no significant differences between teachers completing undergraduate studies and those undertaking postgraduate studies. The finding of this study may be due to the fact that teachers at the Masters level reported that they did not have sufficient basic or practical knowledge to teach students with ASD in an inclusive environment and thus the teachers' attitudes are a reflection of their lack of knowledge about teaching in inclusive classrooms. This suggests that teachers at higher secondary level gain more information about inclusive education through training which contributes in changing attitudes for inclusion of pupils with ASD in regular classrooms. Ahmed, Sharma and Deepler, (2012) highlighted on an in-depth study to explore the influence of educational qualifications on teachers' attitudes towards inclusion of children with disabilities as higher degree of educational qualifications negatively correlate with teachers' attitudes in Bangladesh.

Teaching experience with inclusion can be related to teachers' attitudes. The relationship between the years of teaching experience and attitudes towards inclusion was found to be statistically significant. It was found that teachers who had teaching experience below 11 and above 15 years showed a more positive attitude towards inclusive education. This finding is

consistent with the findings of other studies regarding teaching experience of the teachers and attitudes towards inclusion of pupils with disabilities (Alghazo, et.al., 2003; Avramidis, et.al., 2000, Brackenreed and Barnett, 2006; Bradshaw and Mundia, 2005; and Leyser, et.al., 1994). In addition, Sharma and Chow (2008); Parasuram (2006); Soodak, et.al. (1998) and Wilkerson (2012) found that teachers with 1-5 years of teaching experience were more supportive of inclusion for pupils with ASD. Due to the fact that younger teachers are more familiar with disabilities and technology which may make them less fearful about including students with significant needs within the classroom environment. The NCATE (2006) noted that teachers should be able to apply assistive technology and effective teaching strategies for all students including students who are at different developmental stages and come from diverse background in the regular education classroom. Besides, Park and Chitiyo (2011) found no relationship between teaching experience and attitudes towards inclusion of pupils with ASD. As reported by Ryndak (2000), some teacher preparation programs are including information regarding disability types, teaching techniques, and accommodations within the regular education classroom in both special education and regular education programs. As a result, teachers currently employed would exhibit more positive views toward inclusion for meeting the needs of all learners within the regular education classroom. One study found that positive attitudes toward inclusion and professional qualification determine the success of inclusion of students with special needs in regular schools. For this reason, it seems that in order to meet the diverse needs of students in inclusive classrooms, teaching skill and experience are the important factors to be considered to promote inclusion of students with ASD in the regular schools in Bangladesh.

The results revealed that the statistically significant correlation was noted between teachers' attitudes towards inclusion and being personally acquainted with a pupil with autism. The results clearly implied that the teachers who had being personally acquainted with a pupil with autism had more positive attitudes towards inclusion of pupils with autism than those who had no being personally acquainted with a pupil with autism. This result is consistent with the previous research like Elliot (2008) found that personal teacher characteristics such as acquaintance with pupils with autism have been associated with teacher attitude toward inclusion of pupils with autism. To the contrary, Wilkerson (2012) noted that there was no significant relationship between teachers' attitudes and teachers' personally acquaintance with pupils with autism.

The result disclosed that the teachers who had contact with a student with ASD in the classroom held more negative attitudes towards inclusion of pupils with ASD in their classes than those who did not have such exposure. This finding is not supported by previous studies, which reported that contact with a pupil with autism and such experience was associated with a more positive attitude towards inclusion (Wilkerson, 2012; Ahmmed, Sharma and Deppeler, 2012). Engstrand and Pettersson (2012) demonstrated that teachers who worked on a daily basis with children with autism would respond positively towards inclusion. Tait and Purdie (2000) noted that higher level of sympathy among pre-service teachers who had daily contact with people with special needs. To sum up, it is found that teachers who reported daily contact with a person who has autism had more positive attitudes toward the efficacy of inclusion versus those teachers who had no contact with persons who have autism. An in-depth investigation is essential for better understanding of these results within Bangladesh context.

The findings of this study indicated that teachers who have proper training (adequate and formal training) reported more positive attitudes towards inclusion of pupils with ASD compared to teachers who reported not having such training. This result is consistent with previous studies. deBoer (2009) found that regular education teachers who have some, medium, and high amounts of training showed positive attitudes towards including students with ASD rather than teachers who are not trained. Engstrand and Pettersson (2012) stated that preschool teachers who took special education courses during either their pre-service or in-service training would respond positively towards inclusion. As several researchers noted, teachers with pre-service and in-service training in special education view the inclusion of children with autism more positively than their colleagues with no training (Park, et.al., 2010; Rafferty and Griffin, 2005). Teacher training has a powerful influence on the development of attitudes toward inclusion, especially when it incorporates related and specific professional abilities (Avramidis, Bayliss and Burden, 2000). There was a significant correlation between the teacher characteristic of being adequately trained on autism and their attitudes towards inclusion of pupils with autism ($p < .01$). Similarly, the teacher characteristic of having formal autism training was significant ($p < .01$). Teachers in the present research openly reported a lack of adequate training and formal training on the topic of autism when assessed by the modified TATIS (Cullen et al. 2010). McConkey and Bhilgri (2003) had similar findings in their study of fifty-six preschool teachers in the United Kingdom. Almost half (46%) of

preschool teachers reported inadequate autism training and over a third (38%) stated they had no training at all. Teachers who reported having adequate training in autism and those who reported having formal training in autism were significantly more in agreement regarding the efficacy of inclusion than those teachers who reported inadequate and no formal training in autism (Wilkerson, 2012). On the basis of previous research findings, it is said that pre- and in-service training was seen as an important factor in improving their attitudes and feelings of preparedness to teach in inclusive settings. Furthermore, trained teachers have more orientation about significant needs of students with ASD within the regular classroom environment. They can easily address students' problems which also reflected in the research findings.

5.2 Limitation of the Study

The findings of this study may be attributable to an increase in the awareness of inclusive education for pupils with autism among the respondents, but there are some limitations that must be considered. There are several limitations related to this study mentioned below:

- (i) The sample size was not so large and since the study was conducted only in 30 schools in Capital City (Dhaka City) of Bangladesh, it cannot be a representative sample of the total population of Bangladesh as a whole. Therefore, generalizability of the results may be limited due to the sample size. Further studies with an enlarged sample drawn from all the regions of Bangladesh are needed.
- (ii) The use of the purposive sample in the present study may have limited the homogeneity of the sample as well as it may contain sampling error and bias. In addition, data was collected only from urban schools; there were no rural school teachers in the participants list.
- (iii) Research in the area of teachers' attitudes towards inclusion of pupils with autism is very limited in Bangladesh. Thus, inclusion is not widely adopted in the Bangladesh educational system and is still at the elementary level. Teachers who participated in this study were regular primary schools with no idea in inclusive education at the theoretical or practical levels.

(iv) The constraint of this study is absent of suitable instrument for measuring teachers' attitudes towards inclusion of pupils with ASD in Bangladesh. For this reason, this study is conducted by using TATIS which is a standardized survey instrument developed by Cullen et.al. (2010) in the United States.

(v) This research was limited in that there was not sufficient time to include all possible participants like all academic staffs. The researcher's original plan as presented in her research proposal was to conduct a survey among only regular teachers who were employing as a teacher in regular primary schools. In addition, the limited time frames do not sufficient for in-depth analysis as well as in-depth discussion of the findings in view of earlier studies. However, the findings may be raw material for further studies later on.

5.3 Recommendations for future research

The inclusion of pupils with autism in regular classroom is still a relatively new concept in Bangladesh. Based on the theoretical framework, literature review, findings and discussion, the study put forward the following recommendation.

As the findings of this study, several teachers' characteristics (gender, age, educational qualification, teaching experience, personally acquaintance, frequency of contact and teachers' training) have an important role in forming teachers' attitudes towards inclusion, which should greater emphasis. It is apparent from other studies that others significant variables contribute to teachers' attitudes towards inclusion of pupils with ASD, but were not evident within this study. The current study suggests additional research to further examine the relationship between teachers' attitudes towards inclusion of pupils with ASD and teacher-related factors.

It must be recognized that, due to a small sample size, the findings of this study cannot be viewed as a large portion of the variance in teachers' attitudes towards inclusion of pupils with ASD. Thus the additional research is needed on a large sample of different cities in Bangladesh for measuring teachers' attitudes towards inclusion of pupils with ASD in a regular classroom.

The result of this study suggests that teachers in Bangladesh generally hold slightly positive attitudes towards inclusion of pupils with ASD in regular classrooms. Recently the Government of Bangladesh have taken some necessary initiatives for increasing the positive view towards inclusion of pupils with ASD, however, a number of issues still need to be addressed. One important issue is related to the lack of adequate and formal training on the autism correlated with an increase in negative teachers' attitude toward inclusive practices for students with ASD. The recommendation for future research would be to examine if specific training on autism is effective and if so, at what level. Additionally, it would be important to explore the influence of teachers' gender and educational qualifications on teachers' attitudes towards inclusion of pupils with ASD as male teachers' attitudes towards inclusion of pupils with ASD was found slightly higher than their female teachers as well as higher degree of educational qualifications negatively correlate with teachers' attitudes in Bangladesh.

Furthermore, the study should be replicated with the use of more updated instrument for measuring teachers' attitudes towards inclusion of pupils with ASD in regular classrooms. The TATIS was translated and modified for the present research and also determined reliability and validity on a small size sample; so, more research with a nationally represented population is warranted to determine the reliability and validity of the instrument.

Exploratory studies could be used to further examine in order to study how teachers' attitudes affect on inclusion of pupils with ASD in regular classrooms. There is also a need to create a model for inclusion of pupils with ASD in regular classrooms for dealing pupils with ASD successfully.

5.4 Recommendations for practice

The findings of this study identified several issues regarding teachers' attitudes towards inclusive education for pupils with ASD and provide a useful guideline for people who are involved in various areas of the educational sector such as teachers, educational administrators and policy makers.

Teachers have the responsibility of understanding the individual's needs of the students in order for inclusion to be successful. This means that teachers play a vital role in the success of

the implementation of any educational idea or concept like inclusive education as the key person (de Boer, Pijl and Minnaert, 2011). In addition, the successful implementation of inclusive education depends on teachers' attitudes and knowledge (Harding and Darling, 2003). For this reason, the teachers must be prepared to be understanding student's needs in order to help incorporate individualized goals and objectives in planning for classroom instruction. However, every student with autism is unique in their own way and it is the teacher's responsibility to learn what is best for the individual student. The most important aspect of teaching a student with autism is to provide the students with opportunities to achieve success, by breaking down tasks and immediately reinforcing the students for appropriate behaviour. As such, this study can provide better knowledge on teachers' attitudes towards inclusion for students with different types of disabilities that are essential for successful inclusion of pupils with autism in regular classrooms.

The findings of this study highlight that teachers who showed favourable attitudes towards inclusive education are likely to have received some training from the Government of Bangladesh, or were aware about inclusive education for students with ASD. In particular, this study suggests that teachers should have more training to gain skills and knowledge (both adequate and formal) as related to social and communication issues associated with students identified with ASD.

This study provides valuable information to develop guidelines for policy makers within education sectors to take necessary steps for ensuring inclusive education for children with ASD. This research also offers insight into what type of teachers' characteristics make the views of teachers positive or negative towards inclusive education for pupils with ASD.

This study will give a good idea for teachers and parents to design future educational plans for students with ASD. It is recommended that this piece of research could have an impact on the field of educational research in Bangladesh, and educational administrators may consider these findings in order to promote inclusive education in regular classrooms as well.

The findings of this study reveal that modifying the teaching and learning environment is very important for inclusion of pupils with ASD in regular classrooms. For this reason, the schools should take necessary steps to establish favourable environment for the pupils with autism in

regular classroom so that teachers can interact easily with students as well as students comes from mixing and sharing with other students. Over and above, the governments should create an opportunity for free education for pupils with autism, providing them with educational materials free of cost, and ensuring inclusive education. Additionally, the government should reform policies to ensure rights of students with ASD as full and equal members of society and the right to enter into and benefit from education. Finally, it is suggested that to overcome the lack of technology, school-based resource centres and support services need to be established.

As inclusion of pupils with ASD in regular schools is an emerging issue in Bangladesh, there is still scope for a large amount of research on this topic. Additionally, persons with disabilities are the most vulnerable and excluded group who are now addressed properly by the government to reduce and alleviate their poverty and vulnerability within shortest possible time. At present, The Government of Bangladesh is firmly committed to improve their socio-economic status and life standard to ensure equal rights according to the Constitution of Bangladesh. In spite of the scope of the study is limited, only regular primary teachers were participants. There are also other factors which could have an influence on the attitudes towards inclusion of pupils with autism, such as their socio-economic status. It is suggested that further research should continue to investigate how teachers' attitudes are reflected in their behaviour whilst teaching in the classroom, both at primary and secondary level, as well as to assess teachers' attitudes of whether pupils with ASD should be mainstreamed in regular school settings of Bangladesh.

To sum up, following the findings in this study, regular primary and secondary school teachers might be inspired for change their viewpoints towards inclusion of students with ASD in regular classrooms.

5.5 Concluding Remarks

To conclude, understanding teacher attitude toward the inclusion of pupils with ASD is important to the educational context in Bangladesh because promoting inclusive education for pupils with ASD in regular classrooms is still a challenging issue for the Government of Bangladesh, where a large number of regular teachers are not comfortable to teach students with ASD in regular classrooms due to lack of training and favorable classroom environments. Therefore, inclusive education for students with ASD is a moral obligation of the education system in Bangladesh. On account of, the study attempted to find out teachers' attitudes towards inclusion of pupils with autism as well as if there any significant relationships between teacher-related factors and their attitudes towards inclusion of pupils with autism. Two important findings emerged from the analysis. First of all, the main findings of this study indicate that overall teachers' attitudes toward inclusion of pupils with autism were slightly positive. As a part of this findings, it is found that the most of the teachers were agreed to make classroom modifications for meeting the individual needs of pupils with autism. Moreover, nearly half of the teachers (120 teachers) would denote neutral response because most of the teachers in regular primary schools in Bangladesh are not conscious about inclusive education and ASD and also they have confused on how to practice inclusive education for pupils with ASD in regular classrooms. Additionally, due to lack of adequate and formal training on autism as well as favorable classroom environment, teachers showed negative attitudes towards inclusion of pupils with ASD. The findings of second research question are stated that different demographic variables such as teachers' age, gender, educational qualification, teaching experience, acquaintance with pupil with autism, frequency of contact to a pupil with autism, being adequately trained to teach pupils with autism and having formal training in autism make significant effect on teachers' attitudes towards inclusion of pupils with autism. The main surprises of this study indicate that male teachers was slightly more positive towards inclusion of pupils with ASD than female teachers, this variable requires further investigation for an in-depth understanding. Similarly, this study indicates opposite direction compared to the previous research, where it was found that highly educated teachers (Masters and Beyond Masters degree) had more positive attitudes than teachers with bachelor degree. Additionally, compare to similar studies, this study reveals that teachers' attitudes towards inclusion of pupils with ASD did not differ significantly based on their frequency of contact with pupils with ASD. Thus, an in-depth

investigation is needed for better understanding of these results within the Bangladesh context.

In order to improve the education of students with autism, the findings of this research must be utilized to enhance professional development programs regarding inclusion of students within the regular education classroom. Improvement in professional development programs in order to enhance teacher knowledge and attitudes regarding autism will positively impact the education of students with autism, as teacher attitude directly affects student achievement. It is also determined that gender, age, educational qualification, and amount of training are significant factors relating to teacher attitude toward inclusion. Moreover, understanding teacher characteristics related to their attitude towards inclusion of pupils with autism is essential in efforts to reduce negative attitudes towards inclusion in general. On the other hand, most of the teachers predicted that, if resources are available to support inclusion, and if there is adequate administrative support and appropriate infrastructure, teaching material and technological devices, then the aim of inclusive education will be successful. It is imperative to improve teacher attitude toward inclusion in order to successfully implement inclusion and effectively educate all students with disabilities, including autism. Effective inclusion of these students will positively impact their education and future earnings as members of society. All in all, the main findings are consistent with several studies of teachers' attitudes towards inclusion of pupils with ASD in other countries, such as India, Malaysia, Kuwait, UK, New Zealand, Australia, Canada, and USA. This study is the first contribution in Bangladesh, so specific recommendations based upon the results of this research urge educational administrators may consider these findings in order to create positive attitudes towards the inclusion of pupils with autism.

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Appendix I: The Map of Bangladesh

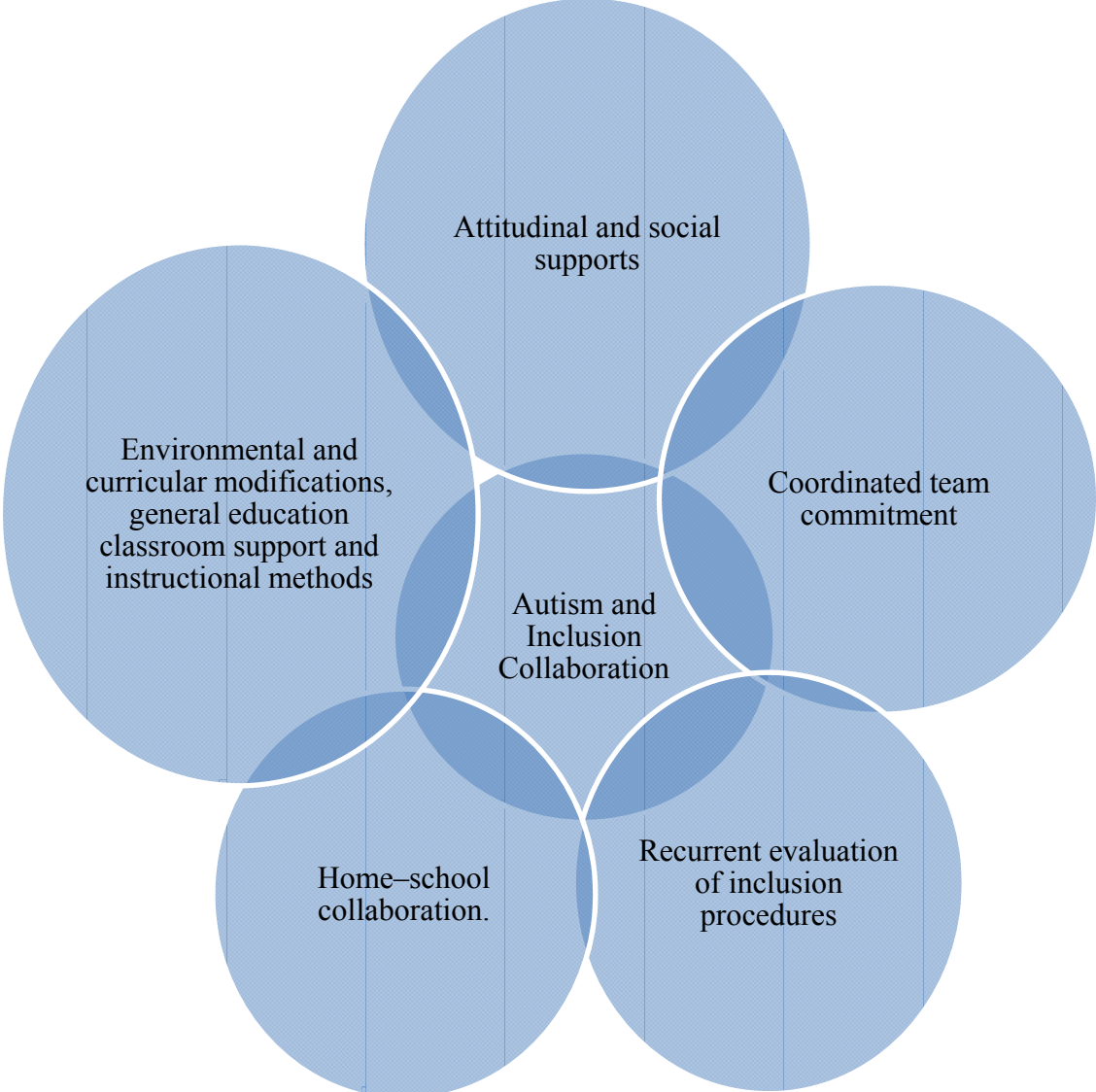


Appendix II: The Present Educational Structure of Bangladesh

THE PRESENT EDUCATIONAL STRUCTURE OF BANGLADESH

Age	Grade														
26+	XX														
25+	XIX	Ph. D		PostMBBS Dip		Ph. D(Engr)		Ph.D (Medical)							
24+	XVIII	M.Phil	Ph. D	M.Phil(Medical)						Ph. D (Education)					
23+	XVII			LLM			MSc(Engr)	MSc.(Agr)		M B A					
22+	XVI	MA/MSc/MCom/MSS/MBA		LLB(Hons)		M B B S		BSc.Eng		B B A					
								BDS							
								BSc.aGR							
								BSc.Text							
								BSc.Leath							
21+	XV	Bachelor (Hons)	Masters (Prel)					M.Ed & M A (Edm)		MA (LSc)	Kamir				
20+	XIV		Bachelor (Pass)			BSc. (Tech.Edn)		B.Ed &Dip.Ed		BP ED		Dip. (LSc)			
19+	XIII														
18+	XII	Secondary		Examination		HSC		Diploma (Engineering)		C in Edu	C in Agri	Diploma in Comm	Diploma in Nursing	Alim	
HIGHER SECONDARY EDUCATION															
16+	XI			Examination		SSC		TRADE Certificate		ARTISAN COURSE e.g. CERAMICS					
15+	X	Secondary		Examination		SSC		TRADE Certificate		ARTISAN COURSE e.g. CERAMICS				Dhakir	
SECONDARY EDUCATION															
14+	X			Secondary											
JUNIOR SECONDARY EDUCATION															
13+	VIII	Secondary													
12+	VII			Secondary											
11+	VI					Secondary									
10+	V	Secondary													
9+	IV			Secondary											
8+	III					Secondary									
7+	II	Secondary													
6+	I			Secondary											
PRIMARY EDUCATION															
5+															
4+		PRE-PRIMARY EDUCATION													
3+															

Appendix III: Autism-Inclusion Collaboration Model proposed by Simpson et al. (2003)



Appendix IV: Permission Letters

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårfagres gate 29
N-5007 Bergen
Norway
Tel: +47-55 58 21 17
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www.nsd.uib.no
Org nr. 985 321 884

Tamara Tabakhmelashvili
Institutt for spesialpedagogikk Universitetet i Oslo
Postboks 1140 Blindern
0318 OSLO

Vår dato: 22.06.2015

Vår ref: 43598 / 3 / AGL

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 28.05.2015. Meldingen gjelder prosjektet:

43598	<i>Teachers' Attitudes Toward Inclusion of Pupils with Autism Spectrum Disorders</i>
Behandlingsansvarlig	Universitetet i Oslo, ved institusjonens øverste leder
Daglig ansvarlig	Tamara Tabakhmelashvili
Student	Mst. Maleka Pervin

Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstillende kravene i personopplysningsloven.

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/meldeplikt/skjema.html>. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://pvo.nsd.no/prosjekt>.

Personvernombudet vil ved prosjektets avslutning, 30.06.2016, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Katrine Utaaker Segadal

Audun Løvlie

Kontaktperson: Audun Løvlie tlf: 55 58 23 07

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

Avdelingskontorer / District Offices:

OSLO: NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. nsd@uio.no

TRONDHEIM: NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47-73 59 19 07. kyrre.svarva@svt.ntnu.no

TROMSØ: NSD, SVF, Universitetet i Tromsø, 9037 Tromsø. Tel: +47-77 64 43 36. nsdmaa@svt.uit.no

Date: 10 September, 2015

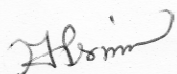
To
The Head Teacher
..... School
Subject: Permission for collecting research data

Dear Sir,

With due respect, I would like to inform you that I am a student of Master of Philosophy programme at the University of Oslo, Norway. As a part of my thesis, I have to collect data from Bangladesh. My research is related to autism and inclusive education through which I will get research data from your school.

It would be grateful if you give permission to collect data through your school.

Sincerely yours



Mst. Maleka Pervin
M.Phil. in Special Needs Education
University of Oslo
Norway

PERVIN, Mst. Maleka

Date: 22 May 2015

Your ref.:

Our ref.: int./2015 JBH/db

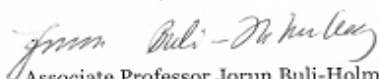
TO WHOM IT MAY CONCERN:

This is to certify that **PERVIN, Mst. Maleka**, date of birth 14.11.1979, is a full-time student pursuing a course of study at the Department of Special Needs Education at the University of Oslo, Norway, leading to the degree of Master of Philosophy in Special Needs Education (M. Phil. SNE).

This is a continuous two-year programme run on the "sandwich" principle, which involves periods of study and field work/research in both Norway and the home country. The student has successfully completed the first two semesters (autumn 2014 and spring 2015) of the initial study period in Norway and will then be working on the collection of data and the writing of a thesis during the autumn semester 2015. This involves a period of field work in Bangladesh. When the field work is complete the student will return to Norway at the beginning of January 2016, and the total period of study will be completed at the end of May 2016 in Norway.

The main responsibility for supervising the research, developmental work and thesis remains with the Department of Special Needs Education, University of Oslo, Norway. However, we would kindly request that the relevant authorities give the student the access required to the schools and educational establishments necessary in order to undertake field work and research. We would also be most grateful for any assistance that is afforded to the student which enables her to carry out this work, particularly the use of facilities such as access to telephone, fax, e-mail, computer services and libraries at the various educational establishments.

Yours sincerely



Associate Professor Jorun Buli-Holmberg
Joint Academic Head of International Master's Programme
Department of Special Needs Education

Officer in charge:

Denese Brittain (+ 47) 22 85 80 75, d.a.brittain@isp.uio.no



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Education (DSNE)**
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Org. no.: 971 035 854

Appendix V: Study Information Letter and Consent Form

Request for participation in research project

Teachers' Attitudes toward Inclusion of Pupils with Autism Spectrum Disorders

Background and Purpose

This research is a Master's thesis in the Department of Special Needs Education at the University of Oslo. The purpose of the study is to examine the attitudes of teachers toward inclusion of pupils with autism into the regular classroom and to find out the relationship between teacher-related factors and attitude factors toward such inclusion. This study will specifically answer the following research questions within the Bangladesh context:

1. What are the attitudes of teachers toward inclusion of pupils with autism in regular classroom?
2. Is there any significant relationship between teacher-related factors and teachers' attitudes toward inclusion of pupils with autism in regular classrooms?

The data for this study will be collected from regular school in Bangladesh. A sample of 300 teachers (approximately) would be selected from the population following simple random sampling.

What does participation in the project imply?

The data will be collected only through surveys with teachers. The questions will concern teacher's attitudes toward inclusion of pupils with autism and will focus on the relationship between teacher-related factors and attitude factors toward such inclusion. On receiving permission, the questionnaires (Part-A and Part-B) will be used to teachers in school settings for collecting data. Respondents will be asked to complete the questionnaire at their own pace.

What will happen to the information about you?

All personal data will be treated confidentially. Only the Master's student and the supervisor (if requested) will have access to the data. Moreover, to ensure confidentiality list of names will be stored separately from other data. In publications the participants will not be identifiable. The thesis will be completed by June 2016. By thesis completion the data will be made anonymous.

Voluntary participation

It is voluntary to participate in the project, and you can at any time choose to withdraw your consent without stating any reason. If you decide to withdraw, all your personal data will be made anonymous.

If you would like to participate or if you have any questions concerning the project, please contact

Student: Mst. MalekaPervin

Phone: +47-40982570

Email: mpervinpsy@gmail.com

Email: mstmp@student.uv.uio.no

Or

Supervisor: Tamar Tabakhmelashvili

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The study has been notified to the Data Protection Official for Research, Norwegian Social Science Data Services.

Consent for participation in the study

I have received information about the project and am willing to participate

(Signed by participant, date)

Appendix-VI: Instrument including demographic questionnaire and teacher attitude toward inclusion scale (TATIS)-English

Teacher Attitude Toward Inclusion Scale (TATIS)

Part A: Respondent Information (Demographic Questionnaire)

English Version
1. What is your gender? A. Male B. Female
2. What is your age? A. 20-29 years B. 30-39 years C. 40-49 years D. 50-59 years E. 60+ years
3. What is your current teaching position? A. Regular Education Teacher B. Special Education Teacher C. Resource/Self-Contained D. Collaboration
4. What is your degree status? A. Higher Secondary B. Bachelor's degree C. Master's degree
5. How many years of teaching experience do you have? A. 1-5 years B. 6-10 years C. 11-15 years D. 16-20 years E. 21 years or more
6. Are you personally acquainted with a person who has autism (not a close family member or student)? A. Yes B. No
7. Describe your frequency of contact on average with a person who has autism (not a student)? A. Daily B. Weekly C. Monthly D. Very Rarely E. Never (Not Applicable)

English Version
8. Do you feel adequately trained to teach students who have autism? A. Yes B. No
9. Do you have formal training in autism beyond the basics (basics = overview of definition or characteristics of autism) A. Yes B. No

Teacher Attitude Toward Inclusion Scale (T A TIS)

Part B: T A TIS Survey

Use the following scale for all items:

Response Category

English Version	বাংলাঅনুবাদ
1 = Disagree Very Strongly (DVS)	অত্যন্তদৃঢ়ভাবেদ্বিমত
2 = Strongly Disagree (SD)	দৃঢ়ভাবেদ্বিমত
3 = Disagree (D)	দ্বিমত
4 = Neither Agree nor Disagree (NAD)	মতামত নাই
5 = Agree (A)	একমত
6 = Strongly Agree (SA)	দৃঢ়ভাবে একমত
7 = Agree Very Strongly (AVS)	অত্যন্ত দৃঢ়ভাবে একমত

Items of the Scale

English Version
1. All students with autism should be educated in regular classrooms with non-handicapped peers to the fullest extent possible.
2. It is seldom necessary to remove students with autism from regular classrooms in order to meet their educational needs.
3. Most or all separate classrooms that exclusively serve students with autism should be eliminated.
4. Most or all regular classrooms can be modified to meet the needs of students with autism.
5. Students with autism can be more effectively educated in regular classrooms as opposed to special education classrooms.
6. Inclusion is a more efficient model for educating students with autism because it reduces transition time (i.e. the time required to move from one setting to another).
7. Students with autism should not be taught in regular classes with non-disabled students because they will require too much of the teacher's time.

English Version
8. I have doubts about the effectiveness of including students with autism in regular classrooms because they often lack the academic skills necessary for success.
9. I have doubts about the effectiveness of including students with autism in regular classrooms because they often lack the social skills necessary for success.
10. I find that general education teachers often do not succeed with students with autism, even when they try their best.
11. I would welcome the opportunity to team-teach as a model for meeting the needs of students with autism in regular classrooms.
12. All students benefit from team teaching; that is, the pairing of a general and a special education teacher in the same classroom.
13. The responsibility for educating students with autism in regular classrooms should be shared between general and special education teachers.
14. I would welcome the opportunity to participate in a consultant teacher model (i.e. regular collaborative meetings between special and general education teachers to share ideas, methods and materials) as a means of addressing the needs of students with autism in regular classrooms.

Appendix-VII: Instrument including demographic questionnaire and teacher attitude toward inclusion scale (TATIS)-Bangla

Teacher Attitude Toward Inclusion Scale (TATIS)

বর্তমানে আমি নরওয়ের University of Oslo তে এমফিল প্রোগ্রামে অধ্যয়নরত, যার অংশ হিসাবে একটা গবেষণা কার্যক্রম পরিচালনা করছি। আমার গবেষণার বিষয় হচ্ছে “Teachers’ Attitudes Towards Inclusion of Pupils with Autism Spectrum Disorder”. এই গবেষণার মূল উদ্দেশ্য হচ্ছে নিয়মিত শ্রেণীকক্ষে অটিজম শিক্ষার্থীদের অন্তর্ভুক্তিকরণে আপনার মনোভাব কি তা দেখা। নিম্নের প্রশ্নপত্রে দুইটি অংশ আছে যার প্রথমটি আপনার ব্যক্তিগত বিষয়কতথ্য সম্বলিত আর দ্বিতীয়টি শ্রেণীকক্ষে অটিজম শিক্ষার্থীদের অন্তর্ভুক্তিকরণে আপনার মনোভাব কি সেই প্রশ্ন সম্বলিত। প্রথম অংশে আপনি আপনার ব্যক্তিগত তথ্য দিবেন। আর দ্বিতীয় অংশে প্রত্যেকটি বাক্যর পাশে ৭টি করে সম্ভাব্য উত্তর (অত্যন্তদৃঢ়ভাবে ভিন্নমত, দৃঢ়ভাবে ভিন্নমত, ভিন্নমত, মতামত নাই, একমত, দৃঢ়ভাবে একমত, অত্যন্ত দৃঢ়ভাবে একমত) দেয়া আছে। বাক্যগুলি পড়ার পর আপনার কাছে যেউত্তরটি সব থেকে সঠিক মনে হয় সেটাতে টিক (✓) চিহ্ন দিবেন। এখানে কোন সঠিক বা ভুল উত্তর নেই। আপনার দেওয়া তথ্যগুলোর গোপনীয়তা রক্ষা করা হবে।

আপনার সহযোগিতার জন্য আন্তরিক ধন্যবাদ।

প্রথম অংশ-ব্যক্তিগততথ্য

১। আপনার লিঙ্গ

ক) পুরুষ খ) মহিলা

২। আপনার বয়স

ক) ২০-২৯বছর খ) ৩০-৩৯বছর গ) ৪০-৪৯বছর ঘ) ৫০-৫৯ বছর ঙ) ৬০+ বছর

৩। শিক্ষকতা পেশায় আপনার বর্তমান অবস্থান কি ?

ক) নিয়মিত শিক্ষার শিক্ষক খ) বিশেষ শিক্ষার শিক্ষক গ) রিসোর্স/ স্বয়ংসম্পূর্ণ ঘ) যৌথ শিক্ষকতা

৪। আপনার শিক্ষাগত যোগ্যতা কি?

ক) উচ্চ মাধ্যমিক খ) স্নাতক গ) স্নাতকোত্তর

৫। আপনার শিক্ষকতা পেশায় অভিজ্ঞতার সময়সীমা?

ক) ১-৫ বছর খ) ৬-১০ বছর গ) ১১-১৫ বছর ঘ) ১৬-২০ বছর ঙ) ২১ বছর বা তার বেশি

৬। অটিজম আছে (পরিবারের সদস্য বা শিক্ষার্থী নয়) এমন কোন ব্যক্তির সাথে কি আপনার ব্যক্তিগত ভাবে পরিচয় আছে?

ক) হ্যাঁ খ) না

৭। অটিজম আছে (শিক্ষার্থী নয়) এমন ব্যক্তির সাথে গড়পড়তা কতবার বা কত ঘনঘন আপনার যোগাযোগ হয়?

ক) প্রতিদিন খ) সাপ্তাহিক গ) মাসিক ঘ) খুব কদাচিৎ ঙ) কখনও নয়

৮। অটিজম আছে এমন শিক্ষার্থীদের পড়াতে আপনি নিজেকে যথেষ্ট প্রশিক্ষণপ্রাপ্ত মনে করেন কি ?

ক) হ্যাঁ খ) না

৯। অটিজম বিষয়ে মৌলিক জ্ঞানের (সংজ্ঞা ও বৈশিষ্ট্যসমূহ) বাইরে আপনার কোন আনুষ্ঠানিক প্রশিক্ষণ আছে কি ?

ক) হ্যাঁ খ) না

দ্বিতীয় অংশ

শ্রেণীকক্ষে অটিজম শিক্ষার্থীদের অন্তর্ভুক্তিকরণে আপনার মনোভাব বিষয়ক প্রশ্নপত্র

বাক্যসমূহ	অত্যন্ত দৃঢ়ভাবে ভিন্নমত	দৃঢ়ভাবে ভিন্নমত	ভিন্নমত	মতামত নাই	একমত	দৃঢ়ভাবে একমত	অত্যন্ত দৃঢ়ভাবে একমত
১। যতটা সম্ভব অটিজম শিক্ষার্থীদেরকে সাধারণ শিক্ষার্থীদের সাথে নিয়মিত শ্রেণীকক্ষে শিক্ষাদান করা উচিত।							
২। অটিজম শিক্ষার্থীদেরকে তাদের শিক্ষার প্রয়োজন মেটানোর জন্য নিয়মিত শ্রেণীকক্ষ থেকেবাইরে এনে শিক্ষাদান করার তেমন প্রয়োজন নাই।							
৩। অটিজম শিক্ষার্থীদের শিক্ষাদানের জন্য বিশেষভাবে নির্মিত সকল অথবা অধিকাংশ শ্রেণীকক্ষ বাদ দেওয়া প্রয়োজন।							
৪। অটিজম শিক্ষার্থীদের চাহিদা পূরণের জন্য সকল অথবা অধিকাংশ নিয়মিত শ্রেণীকক্ষ উন্নততর করা প্রয়োজন।							
৫। বিশেষ শ্রেণীকক্ষের পরিবর্তে, নিয়মিত শ্রেণীকক্ষেই অটিজম শিক্ষার্থীদের ফলপ্রসূভাবে শিক্ষাদান করা সম্ভব।							
৬। অটিজম শিক্ষার্থীদের শিক্ষাদানে অন্তর্ভুক্তিকরণ একটি বিশেষভাবে কার্যকরী মডেল কেননা এতে স্থানান্তরের (এক পরিবেশ থেকে অন্য পরিবেশে যাওয়ার সময়) কমে যায়।							
৭। অটিজম শিক্ষার্থীদেরকে সাধারণ শিক্ষার্থীদের সাথে একই শ্রেণীকক্ষে পাঠদান করা উচিত নয়। কেননা তাদের জন্য শিক্ষকের অনেক বেশী সময় দেওয়া প্রয়োজন।							
৮। নিয়মিত শ্রেণীকক্ষে অটিজম শিক্ষার্থীদের অন্তর্ভুক্তি কতটা ফলপ্রসূ সে ব্যাপারে আমার সন্দেহ আছে কারণ সফলতা অর্জনের জন্য তাদের প্রয়োজনীয় প্রাতিষ্ঠানিক দক্ষতার অভাব আছে।							

বাক্যসমূহ	অত্যন্ত দৃঢ়ভাবে ভিন্নমত	দৃঢ়ভাবে ভিন্নমত	ভিন্নমত	মতামত নাই	একমত	দৃঢ়ভাবে একমত	অত্যন্ত দৃঢ়ভাবে একমত
৯। নিয়মিত শ্রেণীকক্ষে অটিজম শিক্ষার্থীদের অন্তর্ভুক্তি কতটা ফলপ্রসূ সে ব্যাপারে আমার সন্দেহ আছে কারণ সফলতা অর্জনের জন্য তাদের প্রয়োজনীয় সামাজিক দক্ষতার অভাব আছে।							
১০। আমার জানা মতে, সাধারণ শিক্ষার শিক্ষকেরা যথাসাধ্য চেষ্টা করা সত্ত্বেও অনেকক্ষেত্রে অটিজম শিক্ষার্থীদের পাঠদানে সফল হতে পারে না।							
১১। নিয়মিত শ্রেণীকক্ষে অটিজম শিক্ষার্থীদের প্রয়োজন মেটানোর জন্য আমি “দলীয় পাঠদান” এর মত কর্মসূচীকে স্বাগত জানাই।							
১২। সকল শিক্ষার্থীই দলীয় পাঠদানে উপকৃত হয় কারণ সেখানে একজন সাধারণ শিক্ষার শিক্ষক এবং একজন বিশেষ শিক্ষার শিক্ষক একত্রে পাঠদান করেন।							
১৩। অটিজম শিক্ষার্থীদের নিয়মিত শ্রেণীকক্ষে পাঠদানের দায়িত্ব সাধারণ এবং বিশেষ শিক্ষার শিক্ষকদের একসাথে ভাগ করে নেওয়া উচিত।							
১৪। নিয়মিত শ্রেণীকক্ষে অটিজম শিক্ষার্থীদের প্রয়োজন মেটানোর উপায় হিসাবে পরামর্শক শিক্ষক কার্যক্রমে (অর্থাৎবিশেষ এবং সাধারণ শিক্ষার শিক্ষকদের নিয়মিত যোগাযোগ এবং তাদের ধারণা, পদ্ধতি ও পাঠ উপাদান ভাগ করে নেওয়া বা বিনিময় করা) অংশগ্রহণের সুযোগকে স্বাগত জানাই।							