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Teachers' Attitudes towards the Inclusion of Children with
Autism and their Peer Social Acceptance across Schools in
Mount Lebanon and Beirut

By

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To my loving parents, . . .

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Teachers' Attitudes towards the Inclusion of Children with Autism and their Peer Social Acceptance across Schools in Mount Lebanon and Beirut

Howaida Daher Al Rayess

ABSTRACT

This study examines the attitudes of regular and special education teachers towards the inclusion of children with autism across four private inclusive schools in Mount Lebanon and Beirut. The study aims at revealing possible differences in teachers' attitudes based on teacher-related variables: gender, age, years of experience, training and previous exposure to children with disabilities. A total of 35 elementary-level teachers were surveyed using the Autism Attitude Scale for Teachers. The results showed that teachers' attitudes towards autism are generally positive; however, special educators had significantly more positive attitudes than general educators. Teachers with in-service or formal training in teaching students with autism held more positive attitudes than their colleagues. Differences in attitudes based on gender, age and years of experience were statistically insignificant. Peer social acceptance was assessed using sociometric measures. Five inclusive classes with typically one child with autism were examined. Results showed in 3 of the 5 surveyed classes, the exceptional child was neglected, whereas in the other two, the child was well integrated socially. This study has important implications for promoting social acceptance of students with autism in inclusive settings, especially with regards to teacher training and peer-mediated interventions.

Keywords: Autism Spectrum Disorder, ASD, Special Education, Inclusion, Teachers' Attitudes, Social Acceptance, Peer Relationships, Mainstream Schools, Elementary.

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Chapter One

Introduction

1.1 Overview

Autism is considered a pervasive, neurodevelopmental disorder sometimes coexisting with an intellectual disability. Autism remains puzzling to many researchers as individual characteristics of children with autism vary from one case to another. However, common symptoms mainly include delay or abnormal functioning in social interaction and communication. Social impairment is often reflected in poor eye contact, difficulty in understanding social cues and gestures, deficiency in social and emotional reciprocity, and poor peer interaction. Communication impairments might include delay or absence of language, stereotyped language and deficiency in pretend play. Children with autism might also exhibit restricted and repetitive interests and problems in behaviors (American Psychiatric Association, 2013). Those symptoms and their implications have great effects on how individuals with autism are perceived in their environments whether at home, at school, or in society in general. Children with autism are often withdrawn, teased and might be bullied which causes distress especially when the child is not aware of what is going on (Jordan & Powell, 1995, p.25).

In the United States, ever since the reauthorization of Individuals with Disabilities Education Improvement Act (IDEA) in 1997, children with disabilities, including children with autism, are no longer segregated and placed in special classrooms. They are rather included to the optimal extent possible in general education

classrooms along with typically developing peers. In fact, the Congress added autism as a separate disability category in its 1990 authorization of Public Law 94-142. In Lebanon, part 7 of the Law 220/2000 mandates that all people with disabilities (children and adults) have equal opportunities in all schools and educational institutions. Further, the National Inclusion Project (NIP), managed by a Consortium of four organizations, was initiated to address the issues of inclusion in Lebanon and also to fortify the inclusion of children with disabilities in mainstream schools (Khochen & Radford, 2012). In particular, autism has been receiving increasing attention as evidenced by the existence of two highly active parents' organizations (the Lebanese Autism Society & the Autism Association for Social Integration) that are advocates of inclusion of children with autism in mainstream schools. The Lebanese Autism Society and the Autism Association for Social Integration are partnered with private schools to provide inclusion for children with autism. As a result, the inclusion of students with autism in Lebanon is on the rise.

However, given the array of impairments that children with autism have, mere placement in the general classroom does not guarantee that children with autism would be accepted by their teachers or that they would they be socially integrated with their peers. Education, being in part a social activity, is often faced with misapprehensions by students with autism. This may yield feelings of incompetence or fear of failure that leads the child to withdraw from academic and social activities in the classroom. Feelings of incompetence are not only experienced by children with autism, but also by their teachers, at least as far as American research is concerned. Research shows that although teachers might reflect positive attitudes toward individuals with autism, they still express caution towards inclusion due to feelings of inadequacy (Scruggs &

Mastropier, 1996).

In Lebanon, Khochen and Radford (2012) examined the attitudes of teachers and headteachers towards the inclusion of special needs children. The results of the study showed that, in general, teachers had positive attitudes towards inclusion of children with disabilities; however, they expressed reservations about the inclusion of students with social, emotional and behavioral difficulties. Based on those results, it is necessary to closely investigate teachers' attitude towards the inclusion of children with autism specifically, since individuals with autism have both social and behavioral problems.

As for the social acceptance of children with disabilities, Khochen and Radford (2012) noted that only few typically developing children are friends with special needs students. Thus, it is also essential to investigate social acceptance and friendships of children with autism in inclusive schools in Lebanon.

1.2 Purpose and Rationale

It is noted that there is little published research that examined teachers' attitudes towards the inclusion of children with autism and/or studied peer social networks in inclusive schools across Lebanon. Hence, it is imperative that we get some information on how students fare in these settings and what can be done to enhance their social acceptance within the school setting.

The suggested study has a fourfold purpose: (1) to examine elementary teachers' attitudes towards individuals with autism; (2) to assess whether there is difference in attitudes amongst general education teachers and special educators; (3) to assess the variables that influence teachers' attitudes such as gender, age, years of experience, in-

service training, and the types of exposure teachers have to youngsters with disabilities;
(4) and to assess peer social acceptance towards children with autism in inclusive settings across private schools in Mount Lebanon and Beirut.

1.3 Research questions

The research questions addressed in this study are:

- (1) What are the attitudes of elementary teachers towards the inclusion of individuals with autism across private schools in Mount Lebanon and Beirut?
- (2) To what extent do attitudes vary between general education teachers and special educators towards children with autism?
- (3) How are teachers' attitudes affected by the variables: gender, age, years of experience, in-service training, and exposure teachers have to youngsters with disabilities?
- (4) What is the level of peer social acceptance of children with autism in the general education classroom?

1.4 Hypotheses

In the present study, it is hypothesized that:

- (1) Teachers in inclusive schools in Lebanon would show a negative attitude towards children with autism.
- (2) There would be no difference between the attitudes of special educators and that of general educators towards the inclusion of children with autism.
- (3) Teachers' attitudes are likely affected by a myriad of factors:

- 3a. Female teachers have more positive attitudes than male educators.
 - 3b. Younger teachers have more positive attitudes than older teachers.
 - 3c. Teachers with more years of experience have more positive attitudes than teachers with less years of experience.
 - 3d. Teachers who had in-service training and formal training in teaching children with autism hold more positive attitudes than teachers who did not.
 - 3e. Teachers with more exposure to children with disabilities have more positive attitudes than teachers with no exposure.
- (4) Children with autism are ignored by their peers in the general education classroom.

1.5 Definitions of terms

1. Autism – as defined by the American Psychiatric Association, autism refers to the term Autism Spectrum Disorders (ASD) that “encompasses the autistic disorder, Asperger’s disorder, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified. ASD is characterized by 1) deficits in social communication and social interaction and 2) restricted repetitive behaviors, interests, and activities.” (APA, 2000).
2. Inclusion – will be used interchangeably with *mainstreaming* and will refer to “the meaningful participation of students with disabilities and other special needs in general education classrooms and programs” (Lewis & Doorlag, 1999, p.5)
3. Shadow teachers – refers to paraprofessionals whose “primary responsibilities is to assist in the day-to-day inclusion process” and “to facilitate the independent

learning and participation of the student in the general education classroom” (De Boer, 2009, p. 97).

1.6 Thesis Outline

This thesis includes eight chapters. The first chapter serves as an introduction to the discussed topic, rationale, research questions, hypotheses and key-term definitions used in the following study. The second chapter includes a review of the literature of what scholars and other researchers discussed about inclusion of children with ASD. The third chapter presents the methodology adopted in this research study and mainly highlights the research design, participants and sampling, measures, data analysis, and ethical considerations. The fourth chapter portrays the study’s findings and results for both teachers’ attitudes and children’s social acceptance. The fifth chapter looks into the data analysis and discussion of results based on the literature review. The sixth chapter includes the conclusion, limitations, and recommendations for further studies. The seventh and eighth chapters include the references and appendices respectively.

Chapter Two

Review of Literature

2.1 Introduction

Based on previous research and studies done on children with autism within inclusive settings, there is a general consensus that students with autism have difficulties in social interactions and in maintaining friendships. These difficulties are due to their deficit in social and communication skills, as well as behavior problems. This chapter delivers a synthesis of recent research on autism and inclusion. The first section of the literature review explores the history, symptoms, categories, etiology, and treatment of autism. The second section of the literature review includes studies on the inclusion of children with disabilities and specifically children with autism. The third section discusses teachers' attitudes toward the inclusion of children with autism in mainstream classrooms and possible factors that might affect their attitudes. The last section examines the social acceptance of children with autism and their social networks within the classroom setting.

2.1.1 History of Autism

Around the year 1912, the Swiss psychiatrist Eugen Bleuler first coined the term “autism” that initially referred to “an escape from reality”. This term originates from the Greek word “autos” which means self. Autism formerly referred to severe withdrawal of one's self from social life, which reflected a basic disorder in schizophrenia (Firth, 2003 as cited in Holaday, 2012). In 1943 in the USA, Leo Kanner provided the first official

documentation of autism in his paper *Autistic Disturbances of Affective Contact*. He described 11 children displaying behavior distinct from any syndrome he has previously treated. Those children were characterized with language delays, lack of communication, and obsessive and repetitive behaviors. Kanner also emphasized the more prominent two characteristics: “autistic aloneness” and an “obsessive insistence on the preservation of sameness.” (Kanner, 1943, as cited in Baker, 2013). Kanner gave this novel condition the label of “early infantile autism” (Kanner, 1943, as cited in Holaday, 2012). In that same year in Austria, Hans Asperger also submitted a study entitled *Autistic Psychopathy in Childhood* where he also used the term coined by Blueier to describe four ‘autistic’ children (Lyons & Fitzgerald, 2007). ‘Autistic psychopathy’ was then referred to by the neutral term ‘Asperger's syndrome’ since the term psychopathy was confused with sociopathic behavior (Wing, 1981). In the 1950s throughout the 1960s, there still was no consistent definition for autism; it was widely thought of as early childhood schizophrenia. Autism was believed to be caused by lack of child-parent emotional bonding where parents, mostly mothers, were labeled as “refrigerator parent” (Myles, Swanson, Holverstott, & Duncan, 2007). In the 1970s, evidence that autism has biological origin emerged, and there was decline in the psychogenic paradigm (Baker, 2013; Holaday, 2012). Not until the year 1980 was autism considered a distinct disorder from schizophrenia where the DSM-III defined infantile autism as a ‘pervasive developmental disorder’ (APA, 1980). Additional refinement in the definition of autism was made in the subsequent DSM editions. In the DSM-IV, autism is considered to be on a continuum as inferred by Wing (1981). It included autistic disorder, Rett disorder, childhood disintegrative disorder, Asperger’s disorder and pervasive developmental disorder-not otherwise specified (APA, 1994). The new manual DSM-V eliminates all

subcategories and is in favor of a single ‘umbrella’ diagnosis of ‘Autism Spectrum Disorder’ which is defined by deficits in social communication and interaction, and restricted and repetitive behaviors (APA, 2013).

2.1.2 Symptoms

According to DSM-V criteria, the two broad domains of impairment in social communication and interaction and restricted and repetitive behavior should be present in individuals with autism. Impairment in social communication and interaction might be manifested in deficits in social-emotional reciprocity including reduced sharing of emotions and interests and failure to react to or lead social interactions. People with autism also have nonverbal communication deficits including poor eye contact and abnormal body language. They tend to misread nonverbal interactions and have difficulty building social relationships and friendships typical to their age. As for the restricted and repetitive behaviors, people with ASD might show stereotypical motor movements such as lining up toys, and stereotypic speech such as echolalia. They also tend to have inflexible and restricted interests and adhere to routines (APA, 2013).

It is important to note that the variety and intensity of symptoms of people with ASD will fall on a continuum. Some individuals might display mild symptoms while others might show much more severe symptoms. Thus two individuals although diagnosed under the same label of ASD can have varying aptitudes, skills, and deficits presenting a wide spectrum of abilities (Sicile-Kira, 2004). The symptoms in individuals with ASD must show during early childhood (APA, 2013). This encourages earlier diagnosis of ASD and thus early intervention.

2.1.3 Epidemiology

The prevalence of autism has increased dramatically over the past decade. According to the Center of Disease Control and Prevention (Rice, 2000), the average ASD prevalence was 6.7 in every 1,000 children in year 2000. In 2009, CDC estimates, autism prevalence was 1 in every 110 children. A recent surveillance study released by the CDC in 2014 reported an increment in this estimate to 1 in every 68 children (Baio, 2014). Adjacently, comparable increases have been reported in the UK with estimates of more than 1 in every 100 children (“Statistics,” 2014) and around the world (Fombonne, 2003). This increase in prevalence rates has been attributed to changes in diagnostic criteria, differences in methodologies used in epidemiological studies, increased awareness amongst parents and professionals, and true increments in the number of individuals with diagnosed with ASD (Wing & Potter, 2002).

2.1.4 Etiology

What causes autism remains unknown despite extensive research done on the etiology of the disorder. The exact cause of ASD in individuals is not known until now. Nevertheless, research studies suggest possible risk factors such as heredity, neurological factors, immunological problems, and exposure to environmental toxins (Sicile-Kira, 2004). Most researchers believe that certain genes inherited could make the child vulnerable to developing autism (Szatmari, 2003). Twin studies give evidence of heritability with an estimate of 90%. Although this might suggest little room for a prominent role of environmental risk factors; however, this is not the case since even minute amounts of environmental alteration can have substantial phenotypic effects (Simonoff, 2012). Environmental factors include premature birth and exposure to

medications or stimulants during pregnancy (“Causes of Autism Spectrum Disorder,” 2013). Some studies suggest that individuals with ASD have abnormal levels of neurotransmitters in the brain. Others suggest that autism results from anomalies in the brain during fetal development given the irregularities found in several regions in the brain (“What is Autism,” 2009).

2.1.5 Interventions

Currently, there is no definite cure for patients with autism, yet there are several treatments and interventions that can be effective in improving their skills. A wide range of interventions exists, and it can be very challenging to determine which is most appropriate and effective, for each person with autism is affected differently. Some of the main approaches used in treating individuals with autism are: (1) dietary, (2) medication, and (3) educational approaches, behavior and communication interventions.

2.1.5.1 Dietary approaches

Dietary approaches are less traditional ways, introduced in the 1960s, used in treating individuals with autism (Francis, 2005). Those approaches entail either introducing vitamins and mineral supplements or removing certain types of food from the child’s diet. One of the dietary approaches, the mega-vitamin therapy, consists of giving children with autism vitamin B₆ and magnesium (Francis, 2005). Another prevalent dietary approach is the gluten- and casein-free diet that is claimed to improve the behavior of children with ASD (Millward, Ferriter, Calver, & Connell-Jones, 2008). Many of these approaches lack the adequate scientific support and basic research needed to determine whether their effects are more significant than that of placebo (National Initiative for Autism, 2003). Many even oppose using some of these treatments because

of the risky side effects associated with them (Dunn-Geier et al., 2000). Nonetheless, few studies have shown otherwise, and results showed that the development of children with autism who were on special diets significantly improved (Knivsberg, Reichelt, Høien, & Nodland, 2002).

2.1.5.2 Medication approach

There exists no specific medication that can cure people diagnosed with ASD or its core symptoms. Nevertheless, there are some medications that can treat correlated symptoms of ASD such as hyperactivity, aggressive behavior, irritability, and sleeping disorders, among others. A large body of research investigated the effects of medication on autism especially within the last decade, but little evidence has been found (Siegel & Beaulieu, 2012). Even though studies do not provide solid evidence in the field medication, still around 45% of children diagnosed with autism receive medication (Aman et al., 2003). Examples of medications used are Aripiprazole and Risperidone, agents of antipsychotics, which treat irritability and hyperactivity. Another is Methylphenidate, a stimulant that treats hyperactivity. Contrary to common beliefs, mood stabilizers that were used to treat several ASD symptoms did not prove to have good effects on multiple measures (Siegel & Beaulieu, 2012).

2.1.5.3 Educational approaches

Many studies researched the effectiveness of various types of behavioral and communication interventions applicable to children with autism including but not limited to Applied Behavioral Analysis (ABA) approach, Picture Exchange Communication System (PECS), Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH), and Social Stories. Those interventions among others aim at reducing the general level of impairment in autism in

an attempt to improve communication and reduce inappropriate and stereotypic behaviors. It is important to note that the individuality and variability amongst children with autism also extends to affect their response to behavioral interventions. Some children will achieve limited progress in therapy while others make rapid and considerable gains (Ben-Itzhak & Zachor, 2007).

Applied Behavioral Analysis

ABA is the application of experimentally derived principles of behavior such as operant conditioning, developed by Skinner in 1938. It aims at increasing socially appropriate behaviors using reinforcement and decreasing maladaptive behaviors using extinction or punishment (Naoui, 2009). When applied to children with autism, behavior analytic early intervention programs, based on ABA methodology, lead to substantial improvements in verbal IQ and communication and contribute to reducing maladaptive behaviors. A review of the literature comparing the effectiveness of various interventions seems to indicate, so far, that the most effective forms of early intervention for children on the autism spectrum are based on ABA approaches (Reed & Osborne, 2012). Nevertheless, the nature and degree of improvements fluctuate across studies depending on various variables. Some variables include the number of hours of intervention, the initial IQ of children prior to intervention, and the severity of autism (Ospina et al., 2008).

Picture Exchange Communication System

PECS is a pictorial system that uses basic behavioral principles to teach children functional communication. The pictures are mounted on a PECS board with Velcro. Using PECS requires few complex motor movements and can be taught relatively rapidly. The children are required to approach and initiate interaction with the listener

before emitting their communicative act (Charlop-Christy, Carpenter, Le, Leblanc, & Kellet, 2002). Initially, children are trained to hand the appropriate picture of the desired item to the therapist who then responds directly. In advanced levels of PECS, children become able to actively choose the desired items from a movable communication book and use them to construct simple phrases (Francis, 2005). Several studies have indicated positive correlation between using PECS and communication acquisition in children with autism (Frost & Bondy, 1994).

Treatment and Education of Autistic and Related Communication Handicapped Children

TEACCH, specifically designed for children with autism, is defined as a global approach. It targets improved adaptation, skills enhancement, parents' involvement and collaboration, as well as individualized treatment assessment through structured teaching (Panerai et al., 2009). This psychological and behavioral intervention begins with children in their early years and continues throughout their adulthood (Francis, 2005). TEACCH approach is a special training program based on 'Structured TEACCHing'; thus, instead of using a standard program, a plan is tailored after assessing each individual's needs. The program consists of assessment and diagnoses, family plan, communication, tutoring, social integration, and employment training (Francis, 2005). Reports show that this method proved to increase children and adults' functional skills and adaptation (Smith, Polloway, Patton, & Dowdy, 2007). Additionally, it can be used in any educational setting including general education classrooms as it yields positive outcomes within inclusive settings (Panerai et al., 2009).

Social Stories

A Social Story is a recently introduced technique used for improving social skills of children with autism (Sandt, 2008). Each story is an individualized short story, usually five to ten sentences, that is written and illustrated at the specific level for each student based on one's cognitive abilities (Ryan, Hughes, Katsiyannis, McDaniel, & Sprinkle, 2011). According to Sansosti, Powell-Smith, and Kincaid (2004), social stories initially were introduced to help children with ASD comprehend game rules. However, nowadays their use has become popular in teaching children with autism appropriate interactive and social skills (Barry & Burlew, 2004). The main benefits of this technique are to (1) clarify the social and communication expectations for children with autism, (2) address issues from the standpoint of children with autism, and (3) to provide an outline for conduct in certain social situations. Social Stories seem to be specifically beneficial in easing the process of inclusion of children with autism in mainstream classrooms (Gray & Garand, 1993).

2.2 Autism and Inclusion

Given the range of impairments and variability of interventions, it might not be surprising that the inclusion of children with autism spectrum disorder in mainstream schools can be multifaceted and complex. Inclusion of children with ASD requires that children with autism be placed in general education classrooms along with typically developing peers. For school-aged children, such programs should be made available in their local schools, whether public or private. Including children with autism provides them with opportunities to develop social relationships and improve their behavior by

learning from and modeling their peers' typical behavior (Fein & Dunn, 2007). Parents believe that including children with autism with their peers provides them with social models that help them improve their social functioning. A strong body of research suggests that educating children with disabilities, including ASD, alongside their typical peers leads to significant gains at the cognitive, emotional, social, and academic levels (Fisher & Meyer, 2002; Whitaker, 2004). Including children with autism not only provides them with opportunities to acquire academic and adaptive skills but also helps them become accepted members in their society (Allen & Cowdery, 2012).

However, children with autism, being unique in their abilities and disabilities, present a challenge to the general education teacher. Students with ASD vary to a great extent; some are nonverbal with severe language impairments and learning disabilities, and others function at an academic level similar to that of their peers. Thus, educating children with autism requires thorough understanding and knowledge of their condition and cognitive and social deficits (Mesibov & Shea, 1996; Simpson, de Boer-Ott, & Smith-Myles, 2003). Although some advocate the full inclusion of autism, many others recommend a continuum of educational placements for students with ASD (Harrower & Dunlap, 2001; Simpson et al., 2003). It is indeed one of the most challenging tasks for educators and parents to determine the most appropriate placement for the child that specifically addresses the student's unique needs. In fact, as noted by Simpson and his colleagues (2003), few guidelines and models have been put to ease the inclusion of students with autism and ensure successful placement. Thus, general education teachers and other professionals are faced with the overwhelming task of planning inclusion programs.

Simpson et al. (2003) discussed a revised Autism Inclusion Collaboration Model

that contributed to the success of inclusion of children with autism in general education settings. The model includes five major interwoven components based on collaboration. The components are: (1) curricular and environmental modifications and support in the general education classroom, (2) social and attitudinal support, (3) team coordination and commitment, (4) continuous evaluation of the inclusion procedures, and (5) home-school collaboration. The first component includes, but is not limited to, availability of qualified and trained educators and professionals, reduced class size, and availability of paraprofessionals. According to Young, Simpson, Myles, and Kamps (1997), paraprofessionals should be trained to work with children with autism and have in depth knowledge about students' characteristics, behavior modification techniques, and instructional methods. Boomer (1994) stated that training paraprofessionals allows them to perform several other tasks, including curriculum modification, aiding teachers in planning and developing instructional materials, and helping students maintain and generalize previously taught skills. They are essential in facilitating the integration of children with autism into least restrictive environments and in teaching functional and adaptive skills in natural environments. Friend and Cook (2007) further added that the paraprofessionals' role also involves providing the child with autism contingent reinforcement in the classroom when appropriate and monitoring and documenting student progress. However, in their study, Giangreco, Edelman, Luiselli and MacFarland (1997) reported that students who spent a lot of time in close proximity with their paraprofessionals ended up being separated from their classmates. This proximity had negative effects on the students' peer interactions and increased their dependency on adults. In an experimental study conducted by Shukla, Kennedy, and Cushings (1999), results gave evidence to the use of peer-support strategies rather than direct

paraprofessional help in general education classrooms. It was suggested that peer-mediated intervention increased the levels of social interaction between the children with disabilities and their typical peers.

In fact, research gave support to numerous approaches that involve peers. Peer-mediated interventions entails that typical peers in the classroom provide support and assistance to students with autism. Recently, the focus is to develop school-based peer-mediated interventions that integrate evidence-based direct instruction with peer training. This results in more successful inclusive classrooms with superior social outcomes (Thiemann-Bourque, 2013). Peer mediated interventions also aims at training peers to deliver interventions that lead to better social exchanges with children with autism and promote friendships and relationships between typical peers and children with ASD. It also trains peers to provide direct instruction that helps improve verbal and nonverbal social communication behaviors in children with autism. Chan, Lang, Rispoli, O'Reilly, Sigafoos, and Cole (2009) reviewed 42 studies that explored the effects of peer-mediated interventions when used with individuals with autism. Collectively the studies gave evidence to the efficacy of the peer-mediated interventions and indicated that this approach is supported by solid research base.

2.2.1 Inclusion in Lebanon

Most governments in the Middle East have tried to provide appropriate initiatives and laws to promote social justice yet they were not able to stimulate school personnel to implement those measures. This is also the case in Lebanon (Oweini & El Zein, 2014). Most learners with disabilities in Lebanon, including individuals with autism, are excluded from mainstream schooling (Lakkis & Thomas, 2003). Although the Lebanese

law 220, approved in May 2002, states that all individuals with disabilities should be guaranteed equal educational opportunities in mainstream settings, there is still no legal obligation that mandates schools either to accept children with disabilities or to cater for their individual needs within their educational institutions (Khochen & Radford, 2012). This law still lacks a structured itinerary for schools to follow up on the placement, provision and the level of inclusion provided for learners.

According to the Universal Periodic Review (UPR) report *Lebanon: Mid-term Implementation Assessment* in 2013, no progress is achieved regarding the inclusion of special needs children in the formal education. There is still no national integration strategy for individuals with disabilities in the Lebanese educational system. Some NGOs participating in this report, such as the Lebanese Disabled People's Organizations (LDPO) and Youth Association of the Blind (YAB) stated that public educational systems in Lebanon are still inaccessible for individuals with disabilities even though the Lebanese government signed the UN Convention on the Rights of Persons with Disabilities year 2007 (UPR, 2013). In fact, according to European Commission report in 2014, Lebanon has failed to ratify the Convention and its optional protocol and did not take action to fortify the implementation of equal access and treatment for persons with disabilities as indicated in Article 24 (European Commission, 2014). In the 2010 UNESCO background paper for the Education for All, based on the *2006 National Inclusion Project*, the Arab Resource Collective (ARC) reported that the majority of children with special needs are placed in specialized institutions whilst most private schools have a policy of excluding special needs students automatically (Peters, 2009). Those special institutions are partly funded by the government and run by 46 NGOs (Khochen & Radford, 2012).

It is important to note that in Lebanon, the education of children with special needs has been relegated to the province of the Ministry of Social Affairs (MoSA) and not the Ministry of Education. Thus, being under the facility of care and not education, individuals with disabilities generally have limited or no access to adequate education. (Wehbi, 2007). Nevertheless, according to the 2012 *National Report for the United Nations Conference on Sustainable Development (Rio + 20)*, MoSA is providing a wide array of services to individuals with disabilities. The Ministry of Social Affairs is working along 72 institutions nationwide to deliver reintegration and learning services to individuals with special needs. MoSA had given out 83,000 cards for persons with disabilities until 2011, delivering aids and benefits in education, among others, including employment and health care. But unfortunately, people with disabilities continue to have restricted access to basic services specifically in education, given that the facilities of the public education system are not yet equipped to cater for special needs (UNDP, 2012).

In fact, most of the special educational services are delivered by the private sector (Ismail 2004, as cited in Oweini & El Zein, 2014). According to the 2014 *Directory of Inclusive Schools in Lebanon*, 75 private schools across Lebanon, out of which 44 are located in Beirut and Mount Lebanon, currently have special education programs that cater for children with various disabilities. The disabilities include learning disorders, speech problems, Attention Deficit Hyperactivity Disorder (ADHD), mild intellectual disability, Down syndrome and autism. Currently, 23 private schools across Lebanon include children with autism, some of which only accept mild cases of autism spectrum disorder (*Directory of Inclusive Schools*, 2014). This would not have been possible without the efforts of several NGOs (Lebanese Autism Society (LAS), OpenMinds – formerly known as Autism Association for Social Integration (AASI), ALI

for ABA, and North Center for Autism) that advocate for the rights of children with autism and their education. LAS offers services for children with autism at two private schools (Collège du Sacré-Cœur and Adduha High School), and AASI established a specialized resource room for children with autism in the Lebanese Evangelical School for Boys and Girls. In a study conducted on the inclusive schools in Lebanon (Nadjarian, 2009), the total number of children with autism served in schools was 60 students enrolled in 15 private schools that participated in the study. However, it was noted that the number of children with certain disabilities, specifically children with autism spectrum disorder, included might have been greater than recorded because some schools chose not to reveal the number of children with ASD (Nadjarian, 2009).

2.2.1.1 The State of Special Education Programs

Some private schools have special education units, mainly referred to as the ‘Learning Support Department’, and others use resource rooms to provide academic interventions for students with disabilities (Oweini & El Zein, 2014). Some use the alternative teaching approach of co-teaching where the classroom is divided into two groups (a small group and a big group) to provide the optimal educational benefit for children with disabilities and facilitate enrichment activities. In a study conducted on the inclusive schools in Lebanon, Nadjarian (2009) further described the inclusive education programs practiced across 41 private schools that provide inclusive education. In the first form, special needs children were served in the general education classroom with the presence of either a full-time or part-time special educator (support teacher) who provides supplemental services and accommodations. The second model was the resource room model where mainstreamed children with special needs are pulled out for

special education sessions and related services. The third form was the special education classroom approach. Students received instruction for most of their academic subjects in separate classes; however, they were included in all non-academic subjects and school activities. The most common model adopted in the Lebanese schools (31 schools) was the first model that implemented co-teaching in the general education classroom (Nadjarian, 2009).

2.2.1.2 Challenges Facing Inclusive Education

Wehbi (2006) examined the challenges facing inclusive education in Lebanon. Findings reveal that besides that lack of training opportunities, many schools do not have qualified staff to work with children with disabilities. This was not limited to special educators but also included psychologists, social workers, speech therapists, etc. Besides the lack of qualifications, some educators showed lack of awareness of inclusion; some understood inclusion as “integration within an already established framework”. Others, even within schools that adopted an inclusion mission, did not even accept the actual ‘concept’ of inclusion. In another Lebanese study conducted in 2007 (as cited in Khochen & Radford, 2012), Rizic also confirmed that a barrier facing inclusion in schools is the lack of special educational needs qualifications for some teachers. Nadjarian (2009) further discussed other challenges faced by the inclusive schools including lack of contribution from general educators in planning and lack of collaboration with the special education team. The challenges extend to include lack of parents’ acceptance of inclusion, whether they were parents of typical children or children with special needs, and lack of acceptance of diversity amongst typical peers. Moreover, as reported in the UPR report (2014), schools still lack the infrastructure and

appropriate environments to accommodate persons with disabilities. There is also an absence of curricular modifications and resources, and absence of teacher training aiming at enabling educators to deal with various disabilities.

2.3 Teachers' Attitudes towards Inclusion

The drive towards inclusive practices of learners with difficulties within schools is still at an early stage in Lebanon. Hence, for inclusion to be implemented, cultural and environmental barriers are to be removed. One of the barriers to be considered is the negative attitude of administrative personnel and teachers towards learners with disabilities within an inclusive setting. Research has shown that it is essential to understand teachers' attitudes and beliefs since their judgments can help facilitate or hinder the implementation of inclusion policies. Khochen and Radford (2012) stated that educational professionals' attitudes towards inclusion and exclusion of learners with disabilities is an influencing factor that determines the success of inclusion. In fact, teachers are considered the primary agents in implementing the philosophy of inclusion within the classroom, thus their attitudes are one of the most important aspects in determining equitable and effective practices (Hammond & Ingalls, 2003). In a revealing teachers' survey, over 74% of teacher-respondents in inclusive settings considered teacher's attitudes towards their students to be the first or second most important factor required to ensure successful inclusion and student growth (Weiner, 2003).

Since the success of the implementation of inclusive policies is dependent on educators' attitude, it is essential for educators working with children with disabilities, specifically children with ASD, to embrace positive attitudes. Attitudes of teachers are affected by several factors. For instance, Khochen and Radford (2012) noted that

educators with particular training and knowledge in inclusive education showed more positive attitudes than those who lack such training. Hence, positive attitudes in schools can be fostered by providing training and constructive experiences to teachers within inclusive settings (Leyser, Kapperman & Keller, 1994). It was also suggested that attitudes vary not only upon knowledge of the teachers but also upon the teachers' preceding generalized views and beliefs towards a particular disability. Consequently, students with behavioral, emotional or intellectual disability were considered the most difficult cases for teachers to deal with and therefore were at the highest risks to be rejected (Khochen & Radford, 2012). However, the more teachers become knowledgeable about their students' disabilities and ways to cater for their specific needs, the more positive their attitudes turned out to be (Donaldson & Martinson, 1977; Khochen & Radford, 2012).

In their review of articles that examined teacher attitudes towards mainstreaming, integration and/or inclusion, Avramidis and Norwich (2002) discussed several other factors that might influence teachers' attitude towards inclusion, including child-related variables, teacher-related variables, and environment-related variables. The child-related variables are mostly related to the type of disability, whether it is a cognitive, physical, behavioral, sensory, or motor difficulty, and its severity. For example, children with a physical and sensory motor disability were more accepted than children with cognitive disability or emotional and behavioral difficulties. Furthermore, the less the severity of the condition and the less accommodation and modification needed, the more positive the attitudes of teachers were towards including the learner in the general classroom (Rae, Murray & McKenzie, 2010). On the other hand, the teacher-related variables included: gender, age, years of teaching experiences, and previous contact with learners

with disability. Research has shown that teachers with more years of teaching experience within an inclusive setting display more positive attitudes towards inclusion of children with disabilities. Yunker (1988) discussed the 'contact hypothesis' which suggested that within inclusive programs teachers have more contact with children with disabilities and as a result they display more positive attitudes than teachers with fewer or no years of experience working with students with disabilities. Nevertheless, inclusive programs should be carefully planned and supported, since as revealed by Stephens and Braun (1980) mere social contact with children with disabilities does not yield more positive attitudes in educators. As for the educational environment-related variables, they relate to the availability of support services within the inclusive classrooms. The presence of remedial resources and materials and the support of trained personnel within the classroom have generated more positive attitudes towards inclusion by teachers.

When including children with ASD in the general education classroom, the above-mentioned dimensions are also relevant when it comes to teachers' attitudes towards teaching those students (Rodriguez, Saldana & Moreno, 2012). Increasing teachers' knowledge about the disability and their exposure to children with autism improves their attitudes (Lewis & Doorlag, 2010). Research indicated the necessity of updating and developing teachers' awareness and knowledge on autism (Al-Shammari, 2006; McGregor & Campbell, 2001) since teachers generally consider themselves least prepared at the notion of including children with autism (Avramidis & Kalyva, 2007). Rodriguez et al. (2012) interviewed 69 special educators that directly worked with children with ASD. They were administered a questionnaire that assessed their attitudes towards teaching children with autism and included items that considered the various dimensions that could influence teachers' educational practices. Overall the study

showed predominantly positive beliefs of teachers' expectations regarding educating students with autism and their own competence to influence the students' development. Nevertheless, teachers' responses additionally indicated that the inclusion of students with autism in mainstream settings is substantially challenging for personnel involved, and needs comprehensive and explicit support. Being involved with an ASD network that collaborated with other mainstream schools and provided teachers with additional training and resources or specialized staff leads to more positive attitudes towards inclusion of students with ASD (Rodriguez et al., 2012). McGregor and Campbell (2001) discussed two major influences that affected teacher attitudes: direct contact with students with autism and confidence arising from being supported and appropriately equipped. Mainstream teachers in Scotland who taught children with ASD were found to be more positive than inexperienced teachers even though they have not taken any training. As well, teachers provided with expert guidance and adequate aid displayed more positive attitudes. Park and Chitiyo (2011) also examined teachers' attitudes towards students with autism. They further confirmed that several teacher-related variables influence teachers' attitudes towards inclusion of autism such as age, gender, and types of exposure. Results showed that the younger the educators and the lower grade level they taught, the more positive their attitudes seemed to be. However, contrary to expected, when comparing the attitudes of general education teachers and special educators no significant differences were found. The authors contributed those results to both the increased exposure resulting from the inclusion of children with ASD in mainstream schools as mandated by the IDEA and the growing autism awareness amongst the public.

Robertson, Chamberlain, and Kasari (2003) examined teachers' perceptions

towards their relationships with an included child with ASD. The researchers found that teachers reported generally positive relationships with children with autism. However, the quality of teacher-student relationship was perceived to be less positive when students exhibited behavioral problems. It is important to maintain a positive teacher-child relationship since the more accepting and positive the teacher's attitude towards a child with autism the more socially accepted one was perceived among peers. Research has shown that teachers' attitudes have a significant effect on students' attitudes within the classroom (Cartledge, Frew & Zaharias, 1985) and, thus negative attitudes towards students with disabilities are readily communicated to their peers. Thus, teachers should be aware of their attitudes and actions since they serve as being a model for their students; they should display a positive attitude that promotes the social acceptance of children with disabilities (Lewis & Doorlag, 2010).

2.4 Social Status of Children with Autism in the Classroom

The concept of inclusion entails that students with special needs be educated in the same educational setting as typically developing peers supported with appropriate services to cater for their individual needs. It has been shown that students with special needs who have been given individualized instructions and accommodations within the regular classroom yielded higher achievements than when contained within special education classrooms. However, this fails to happen when those students are not appreciated by their peers. Their social acceptance amongst their regular peers in the classroom not only contributes to their positive academic achievement but also to their high self-esteem and self-perception. (Smith et al., 2007). Murray and Greenberg (2006) further stressed the roles peer relationships and friendships have on the social and

emotional health of children, besides their academic achievement. In their research study, Flook, Repetti, and Ullman (2005) found that peer problems in the classroom negatively influenced students' self-concept and mental health, resulting in poor school performance.

Peer problems in the classroom usually result from the delays in social development in students with disabilities that are usually comorbid with their academic delays. This fact is even more emphasized in the case of children with autism. It is acknowledged as a 'logical truism' that children with ASD demonstrate delays or deficits, in various degrees, in social interactions and relationships with others. Students with ASD also face difficulties initiating positive social relationships and interpreting social cues (McConnell, 2002). As a result, children with autism spectrum disorder end up having fewer friends than their typically developing peers (Sigman & Ruskin, 1999) and are even rejected on occasion (Symes & Humphrey, 2010). When comparing social status between children with autism, typical students and students with dyslexia, Symes and Humphrey (2010) found that children with ASD experienced lowest levels of social acceptance and social support, and highest levels of peer rejection.

Since students with ASD experience difficulties in communication and interactions with peers and teachers, many studies have looked into the students' quality of social interaction and experience within an inclusive setting. A large body of research reported that students with ASD and behavior problems face more problems in their contact with peers than children with other types of disabilities such as motor impairments or intellectual impairments (Chamberlain, Kasari, & Rotheram-Fuller, 2007; Mand, 2007). Chamberlain et al. found that children with ASD experienced low centrality in peer social networks and experienced lower social acceptance in the regular

classroom (2007). Humphrey and Symes (2011) reported similar findings. Results showed that students with autism spectrum disorder experienced more rejection from peers, received less social support from classmates, and belonged to limited social networks within the classroom. This contributed to the experience of an overall negative social outcome within the mainstream. It was understood that students with ASD engage in solitary behaviors most of the time and engage less in cooperative interactions with peers, which reduced their motivation to interact with others even further. Rotheram-Fuller, Kasari, Chamberlain, and Locke (2010) examined the social networks of students with autism and their peers in elementary school. Their findings showed that, within an inclusive setting, students with ASD experienced fewer reciprocal relationships among classmates. It is worthy to state that this reciprocity is the key component to friendship because it offers bonding, support and intimacy among peers. It was also found that around 48% of children with autism were included in their classroom social networks; however, they mostly belonged to the isolated or peripheral network centralities within the classroom. However, in this study, even though students with ASD were less accepted by their peers, it was reported that they were not more likely to be rejected.

Conversely, other studies found that children with ASD are accepted by their peers and are integrated within the social networks of the class. Boutot and Bryant's study (2005) revealed that students with autism show no difference in social networking when compared to students with no disabilities. They also are as likely as their peers to be chosen for an activity within an inclusive setting. In addition, the authors found that the severity of the characteristics of autism had no influence on the social network affiliation within the inclusive setting. Those findings show that inclusion can yield positive impact on the social integration of children with autism regardless of the array

of disabilities and their severity. Another study by Mesibov & Shea (1996) maintained that integration of children with autism within regular classrooms rather than segregation within resource rooms or special education rooms enhanced their acquisition of social interaction skills. Furthermore, not only were students interacting more proactively, but they were also performing better academically.

Mesibov and Shea (1996) asserted that the teachers' role in such situation is fundamental, in that social interaction was dependent on the teachers' involvement in facilitating instruction and the amount of support given. De Boer (2009) emphasized that educators need to apply social skills interventions to children with autism to help them improve their communication and social interactions. This is mostly the responsibility of the special educator; however, the general educator and the paraprofessional, if available, should also implement the intervention and promote opportunities for social interaction for children with autism within the school setting. Unless the teachers foster the social adjustment of children in the classroom, optimum learning won't be attained. The patterns of children's friendships dramatically affect learning; it can either enhance or impede this process depending on the nature of the relationship (Worthen, Walter, & Borg, 1993).

In conclusion, teachers' attitudes and peer social acceptance play an essential role in ensuring successful inclusion and fruitful learning experiences to both children with ASD and typically developing children. As discussed, including children with autism in the classroom is a multifaceted and complex process. Teachers and students are primary agents in the classroom where teachers should share control with their students and encourage and foster interactions amongst peers of various abilities to facilitate this process.

Chapter Three

Methodology

The methodology chapter is divided into seven sections. The first three sections include the research design, sampling, participants and ethical considerations. The fifth section illustrates the instruments used in the process of data collection, both the teacher questionnaires and peer nomination forms. The last part includes the procedure and data analysis.

3.1 Research Design

This study falls under quantitative survey research. Survey research is used to collect information from a target group of people to describe certain aspects or features of a population, such as knowledge, opinions, attitudes, or beliefs (Fraenkel, Wallen & Hyun, 2012). In survey research, information is obtained from a sample of individuals predetermined by the researcher and not from every member of the population. Mainly information is collected through asking questions; in this study the survey questions are administered to the target population through questionnaires.

3.2 Sampling

A purposive-convenient nonrandom sampling technique was adopted for this study (Fraenkel et al., 2012). It is purposive since all the participants were chosen according to predetermined criteria set by the researcher and mentioned below. It is convenient as well since the schools were chosen based on their inclusion criteria and willingness to participate in the study.

3.3 Participants

3.3.1 Schools

The sample of the study consisted of four private schools that included children with autism (School 1, School 2, School 3, and School 4). Two of the schools are located in Mount Lebanon district and the other two are in Beirut.

3.3.2 Teachers

The targeted populations were elementary-level general and special education teachers in those mainstream schools and peers enrolled in classrooms that included children with autism specifically. A total of 35 elementary teachers from all four schools took part in this study; 30 teachers were females and 5 were males. The sample consisted mostly of females and general education teachers, 86% and 71% of the sample respectively. The demographic characteristics of the teachers assessed for in the teachers' information questionnaire are presented in Table 1.

Table 1
Demographic Characteristics of Participating Teachers

Variable	Category	Frequency	Percentage
Gender	Male	5	14
	Female	30	86
Age	20-35	16	46
	36-45	11	31
	46-55	6	17
	56 or more	2	6
Educational role	General Educator	25	71
	Special Educator	10	29

Years of experience as an educator		
1 to 2 years	5	14
2 to 5 years	8	23
5 to 10 years	11	31
More than 10 years	11	31

3.3.3 Students

As for the student participants, the total number of students in the classes studied was 90 students out of which 5 were diagnosed with autism. The actual number of students that had parents' consents and participated in the study was 82. In each of the classrooms studied, there was one child diagnosed with autism spectrum disorder included either fully or partially, more than 60% of the school day. All students with autism in the examined classes were accompanied with a paraprofessional (shadow teacher) in the classroom. As for their demographic characteristics, all the students with ASD in this study were males; no other information was disclosed about the students with autism in the classrooms. The students were enrolled in grade 3 (Class A), grade 4 (Classes B and C), grade 5 (Classes D) and grade 6 (Class E) across the schools. Class A has 33 students: 15 males and 18 females. Two students in Class A (A28 and A*) did not have parents' consent and thus did not fill in the students' survey. Class B has 7 students, 4 females and 3 males. Class C has 6 students all of which are males. Class D has a total of 34 students: 22 males and 12 females. Four students in Class D (D28, D29, D30, D31) did not have parents' consent, and two students (D32 and D33) were absent during the group administration of the survey. As for class E, the class size was 10 students: 5 males and 5 females. Class A and Class D were in School 1; Class B and Class C were in School 2, and Class E belonged to School 3. School 4 did not have any

child with autism currently included between grades 3 and 6.

3.4 Instruments

3.4.1 Demographic Questionnaire

The demographics questionnaire was used to gather both professional and personal information from both special and general education teachers. For the purpose of this research, the demographics assessed include: gender, age, years of teaching experience, educational role, types of exposure to children with disabilities, attending in-service training workshops aimed at informing teachers more about autism, and receiving formal training in autism (see Appendix D). This questionnaire provided the data needed to tackle and explore the study's second and third research questions.

3.4.2 The Autism Attitude Scale for Teachers

The Autism Attitude Scale for Teachers (AASST) was developed by Olley, DeVellis, Wall and Long (1981) to measure the prevailing attitudes in teachers towards children with autism or to evaluate changes in attitude as a result of in-service intervention or training (Olley et al., 1981). The scale consists of two seven-item alternate forms A and B, which have a correlation of 0.84 with one another. AASST can be administered as a single 14-item questionnaire or as two alternate forms (Form A and Form B) consisting of seven items each. This scale can be used in its 14-item form to assess the attitudes on a one-time basis where the results of the attitudes of the regular teachers serve as a baseline to be compared to the results of the attitudes of special educators. The scale can also be used to assess the attitude change over time by administering a test/retest method to compare the change in attitude from first administration and after in-service intervention is provided; in such case it is helpful to

use the alternate forms A and B.

For the purpose of this study, it is most advantageous to administer this questionnaire in a single 14-item form of alpha reliability 0.91, as recommended by Olley and colleagues (see Appendix D). This yields more reliable data than administering either form A or B with respective alpha reliabilities 0.85 and 0.78. AAST is a Likert-type scale consisting of five options: (1) strongly disagree, (2) disagree, (3) uncertain, (4) agree and (5) strongly agree (see Appendix D). To determine teachers' attitudes, the scores on individual items are added. However, using a reverse-scoring formula, some negatively worded items included in this instrument should be changed into positive scores in advance (Olley et. al, 1981).

The AAST used in this study is adapted by Park and Chitiyo (2011) where the researchers changed some of the items' wording to reflect 'person first language' and follow the current terminology used in the field (e.g., 'normal children' was changed to 'typically developing children' and 'autistic children' was replaced by 'children with autism'). The administered questionnaire is also under the title of "Belief Scale" where this neutral title is meant to eradicate any bias that might be implied from another title. Some items on the questionnaire pertain to: how behavior of students with autism can be perceived, whether or not special education teachers are the only ones that can help students with autism, and if students' condition impairs them from following up with daily activities and curricula used in general classrooms.

3.4.3 Sociometric Measures

Peer nomination sociometric technique introduced by Moreno (1934) was used to determine the status of students with autism within the social network of their class. This method requires classmates to name peers who fit a particular social criterion. A

child's score depends on the number of nominations received from peers. The nomination criteria can be based on positive or negative criteria. For the purpose of this study, only the positive sociometric items were administered not to raise any ethical concerns. It was also suggested by researchers that youngsters tend to be uncomfortable with negative sociometric questions especially when asked about whom they dislike (Poulin & Dishion, 2008). Furthermore, Bonney (1943) found that positive nomination scores are stable over time among elementary school children; the test-retest reliability coefficients ranges from 0.67 to 0.84 for positive nominations over a period of one year.

In the proposed study, this method was implemented to classify the social position of children with autism within the mainstream. Hence, students were asked to name their best friends, if they had any, and to nominate their peers depending on sociometric measures for positive criteria such as: "Whom do you like the most?" and "Whom do you like to play with?" (see Appendix E). The questions were designed to cover most aspects of children's social life and thus covered both academic and recreational activities. The fixed positive nomination criterion was applied where children can name up to five candidates for each item. This is meant to reduce limiting the students' freedom of choice and therefore interfering with the results yielded, as was suggested by Wasserman and Faust (as cited in Avramidis, 2009).

3.5 Procedure

The schools that fit the researcher's criteria were visited to discuss the research with the principal or the special education coordinator. The Autism Attitude Scale for Teachers questionnaire was distributed to general and special education teachers in the

inclusive schools through the principal or the special education coordinator. Teachers were given one week to fill in the questionnaires and return them to the researcher through the school's principal or special education coordinator. The researcher also contacted the schools' counselors regarding the administration of the peer nomination and friendship forms. The purpose of the forms was explained to a key person (e.g. counselor, coordinator, or special educator) who oversaw their administration. The forms were given out during classroom time upon approval of the general education teacher; thus the mode of data collection was through direct administration to a group. Children were assured confidentiality and the importance of not sharing their answers. Filling in the student forms required around 10 -15 minutes from the classroom time.

3.6 Ethics

Before the implementation of this research, the Institutional Review Board (IRB) approved this study (see Appendix A). An informed consent was obtained from the principal of each participating school. The researcher provided them with a preliminary description of the study and the respective roles of both students and teachers and ensured the voluntariness of their participation (see Appendix B). As for the participating students, consent forms were sent to the parents and only children who had their parents' consent participated in the study (see Appendix C). A child's assent form was also attached to the peer nomination forms to assure the students voluntary participation (see Appendix E). The information obtained during this project was kept strictly confidential and was only analyzed by the researcher.

3.7 Data Analysis

Analyzing the data collected from the AAST questionnaire provided information that responds to the first three research questions of this study. For the AAST questionnaire, data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) program. Using SPSS, the negatively worded items in the questionnaire (items 1, 2, 4, 6, 7, 8, 9, 11, 13 and 14) were reverse-scored and recoded before summing up the scores of the questionnaires' 14 items and then calculating the mean scores for the teachers' attitudes. As indicated by Olley et al. (1981) higher scores reflect more positive attitudes and vice versa. When comparisons were made between two groups, such as the difference in attitudes between special educators and general educators, a *t*-test for independent means was used. This test is usually used to compare the mean scores of two different groups and assess for significance (Fraenkel et al., 2012). When comparisons were made for more than two groups, an analysis of variance (ANOVA) was used to assess whether differences in attitudes based on the variables (such as age and years of experience) are significant. In addition, a Pearson Correlation (*r*), which is a bivariate correlation technique, was used to express the degree of relationship between (1) attitude and age, and (2) attitude and years of experience. The correlation coefficient determines the presence of a relationship between data, its strength, and its direction.

As for the student questionnaires, the data collected provided information to answer the fourth research question. The information gathered via the peer nomination forms were analyzed using the procedures described by Northway (1940). Every choice

of each of the five questions was scored according to the following criteria: the first choice was worth 5 points, the second choice was worth 3 points, the third choice was worth 2 points, and the fourth and fifth were worth 1 point each. The choices were counted using a matrix prepared in Microsoft Excel. The first column and the first row included the names of all the students in the classroom, which were later coded to ensure confidentiality (see Appendix F). The value of each student's choice was placed in the column beneath one's name; thus the value of choices each student received from peers would be present in the row opposite one's name. Scores in each row were then added which yielded each person's 'acceptability score', which is the sum of value of choices each student received from the group. Further to show whether each student's preference is reciprocated, the color red is used in the cells corresponding to the pair of students, where the two students' choices intersect. For the purpose of this study, only the reciprocity of nominations related to the children with autism were added to the matrices and discussed. The high scores received for each student with autism is shown in red in the matrices (see Appendix F), and the peers corresponding to those scores had their choices examined to assess reciprocity.

The 'acceptability scores' were then divided and distributed over four quartiles. The first quartile includes the students with the lowest acceptability scores; those students would be least nominated and thus would be considered "*neglectees*". The fourth quartile includes the students with the highest scores; those students would be the ones nominated most and considered "*stars*". The students that are never chosen in the process are referred to as "*isolates*" (Worthen et al., 1993). The distribution of the students across the quartiles for each classroom was then graphed in a target diagram (refer to results). Four concentric circles are drawn. The circle in the center includes the

students with the highest acceptability scores and refers to the scores in the fourth quartile or Quartile 4 (Q4); and the outer circle corresponds to the lowest quartile (Q1). Thus, the nearer the student is to the center, the higher his acceptability scores and social status. The children with autism in Class A, Class B, Class C, Class D, and Class E were given the codes A*, B*, C*, D*, and E* respectively (shown in red).

In the target diagram an arrow should be added for each individual towards the student to whom he/she gave the highest value of nominations. For the purpose of this study, only the scores corresponding to children with autism were analyzed. Those scores are shown in either red, blue or green in the matrix (see Appendix F). If the choice was reciprocated, also with a high composite choice with the corresponding peer, a double-headed arrow was drawn between the pair of students reflecting a mutual relationship (shown in red). When the choice was not reciprocated as one of highest choices, a single-headed arrow was drawn from the student to the chosen peer (shown in blue). When the data is not available a green single-headed arrow was drawn to differentiate between a non-reciprocated highest choice and missing data.

The students who were absent and the ones who didn't have parents' consent did not fill in the student survey. However, they had their names added in the matrix due to the nominations they received from other members of the group. Since their preferences were not available, the columns beneath their codes remain empty. In case a peer nominated a friend who did not fill the student questionnaire, the information was dealt with as missing data rather than non-reciprocal friendship.

Chapter Four

Results

This chapter will show the results of both teachers' questionnaires and student surveys. The tables associated with the AAST results are also displayed beneath each variable assessed in the questionnaire. As for social acceptance, target diagrams are presented beneath each of the five classes.

4.1 Results of the Teachers' Questionnaires

4.1.1 Descriptive Statistics

Table 2 shows the educators' mean attitudes towards children with ASD per item on the AAST scale. The scores range from 1 to 5, with 1 representing the least favorable attitudes and 5 corresponding to positive attitudes. The results showed that the participants generally displayed positive attitudes towards children with ASD ($M = 3.82$, $SD = 0.63$). The highest scores corresponded to items that related to teaching children with autism in mainstream schools. In addition, most teachers believed that including children with autism in the general classroom yields educational benefits to both typical peers and student with ASD; the mean scores of items 3 and 10 are 3.97 and 4.00, respectively.

Table 2
Scores of Teachers' Attitude by Item

Items	Mean	Standard Deviation
1. Only teachers with extensive special education training can help a child with autism*.	3.06	1.16

2. Mealtime behaviors of children with autism are disruptive and negatively influence the behavior of children around them*.	3.71	0.99
3. Schools with both typically developing children and children with autism enhance the learning experiences of typically developing children.	3.97	0.92
4. Typically developing children and children with autism should be taught in separate schools*.	3.94	0.91
5. Children with autism can learn from a good teacher.	4.00	0.94
6. Regular schools are too advanced for children with autism*.	3.40	1.01
7. I would not want the children in my class to have to put up with children with autism*.	4.17	0.82
8. Teachers not specifically trained in special education should not be expected to deal with a child with autism*.	3.34	1.16
9. Children with autism are too impaired to benefit from the learning experiences of a general school*.	3.66	1.11
10. Schools with both typically developing children and children with autism enhance the learning experiences of children with autism.	4.00	0.73
11. If I had a choice, I would teach in a school in which there were no children with autism*.	4.26	0.82
12. A good teacher can do a lot to help a child with autism.	4.31	0.90
13. Children with autism cannot socialize well enough to profit from contact with typically developing children*.	3.71	1.02
14. It's unfair to ask teachers to accept children with autism into their school*.	4.06	0.91
Aggregate mean score	3.82	0.63

***Those items were reverse-scored based on the instructions of Olley et al. (1981), the developers of AAST.**

4.1.2 Differences in teachers' attitudes based on educational roles

An independent-samples t-test was conducted to compare the mean attitudes for general education teachers and special educators. Special education teachers displayed more positive attitudes and had significantly higher attitudes scores ($M = 4.22$, $SD = 0.52$) than the general education teachers ($M = 3.67$, $SD = 0.59$); $t(33) = -2.545$, $p = 0.016$ (see Table 3). An alpha level of 0.05 was used for all statistical tests.

Table 3
Mean Attitudes Based on Educational Roles

Educational role		N	Mean	Standard Deviation
Attitude	General Education Teacher	25	3.67	0.59
	Special Educator	10	4.22	0.52

4.1.3 Correlations among the variables of the study

According to the results, there was no significant relationship between attitude and age ($r = -0.151$, $p = 0.385$). The negative correlation implies that the younger the educator, the more positive their attitude turned out to be; however, it is weak and not significant. There was also no significant correlation between the years of experience and attitude ($r = 0.081$, $p = 0.644$).

4.1.4 Differences in educators' attitudes based on demographics

The results of the differences in attitudes based on gender, age, years of experience, in-service training, formal training, and types of exposure are presented below.

4.1.4.1 Gender

An independent-samples t-test was conducted to compare teachers' attitudes between males and females. There was no significant difference in the mean attitudes across male educators ($M = 4.00$, $SD = 0.77$) and female educators ($M = 3.80$, $SD = 0.60$); $t(33) = 0.66$, $p = 0.51$.

4.1.4.2 Age

Analysis of variance (ANOVA) indicated that there was no significant difference in the teachers' attitude scores across the four age groups [$F(3,31) = 1.843$, $p = 0.16$]. The mean attitude score for each age group is reported in Table 4.

4.1.4.3 Years of experience

Analysis of variance (ANOVA) indicated that there was no significant difference in the teachers' attitudes based on their years of experience [$F(3,31) = 1.01$, $p = 0.40$]. See Table 4 for attitudes scores for each group.

Table 4
Differences in Educators' Attitudes across Gender, Age Groups, and Years of Experience

	N	Mean	Standard Deviation
Gender			
Male	5	4.00	0.77
Female	30	3.80	0.60
Age of teacher			
20-35	16	3.91	0.53
36-45	11	3.92	0.78
46-55	6	3.32	0.40
56 or more	2	4.18	0.15
Years of experience			
1 to 2 years	5	3.44	0.17
2 to 5 years	8	4.05	0.49

5 to 10 years	11	3.86	0.69
More than 10 years	11	3.81	0.74

4.1.4.4 In-service training

An independent-samples *t*-test was conducted to compare the mean attitudes for teachers as a function of in-service training. Teachers who had completed an in-service training workshop aimed at teaching professionals about ASD had significantly higher mean attitude scores ($M = 4.18$, $SD = 0.58$) than teachers who did not attend an in-service training workshop ($M = 3.42$, $SD = 0.38$); $t(33) = 4.52$, $p = 0.00$, and therefore were more accepting (see Table 5).

Table 5
Differences in Attitude Based on Autism Workshop Experience

	In-service training	N	Mean	Standard Deviation
Attitude	Attended an in-service training autism workshop	19	4.18	0.58
	Did not attend in-service training autism workshop	16	3.42	0.38

4.1.4.5 Formal training

An independent-samples *t*-test was conducted to compare the mean attitudes for teachers as a function of formal training in autism. Teachers who had formal training in teaching children with autism beyond the basics had significantly higher mean attitude scores ($M = 4.16$, $SD = 0.63$) than teachers who did not receive formal training ($M = 3.65$, $SD = 0.55$); $t(33) = 2.49$, $p = 0.02$, and therefore were more accepting (see Table 6).

Table 6
Differences in Attitude Based on Autism Formal Training

	Formal training in autism beyond the basics	N	Mean	Standard Deviation
Attitude	Yes	12	4.16	0.63
	No	23	3.65	0.55

4.1.4.6 Types of exposure

Multiple response analysis was performed to describe the types of exposure teachers had to children with autism. 71% of the participating teachers in this study taught exceptional children in their general classroom and thus had some experience teaching children with disabilities. 28% of the participants had indirect contact with exceptional children that were included in their school and another 28% learned about exceptional children in college courses. Twenty-five percent of the teachers taught a special class and twenty percent performed some volunteer work with children with disabilities. Most importantly, all of the participants had some kind of exposure to children with special needs (see Table 7).

Table 7
Frequency and Percentage of Various Types of Exposure

Types of exposure	Frequency	Percent of Cases
Taught a special class	9	25.7
Taught some exceptional children who were mainstreamed into my regular classroom	25	71.4
Volunteer work with exceptional children	7	20.0
Indirect contact with exceptional children	10	28.6
Learned about exceptional children in college courses	10	28.6
None	0	0.00

4.2 Results of the Student Questionnaires

The results obtained from the student nominations are presented in the matrices in Appendix F. A sample matrix for Class B is described below. Also presented in the tables below are the acceptability scores for each student as well as the quartiles to which students' scores belong. The target diagram for each class is also shown in the figures below.

4.2.1 Class A

The acceptability scores for Class A are shown in Table 8, and the distribution of the scores across the four quartiles is presented in Table 9. Results show that the acceptability score for student A* who is diagnosed with ASD is 48 and belongs to the third quartile, which is in the top 75% of scores.

Table 8

Class A Students' Acceptability Scores

Student	Acceptability Score	Student	Acceptability Score
A1	0	A18	5
A2	84	A19	124
A3	20	A20	32
A4	48	A21	42
A5	47	A22	37
A6	37	A23	79
A7	33	A24	95
A8	46	A25	9
A9	92	A26	78
A10	4	A27	25
A11	0	A28	116
A12	5	A29	105
A13	5	A30	39
A14	64	A31	68
A15	31	A32	7
A16	6	A*	48
A17	61		

Table 9
Distribution of Class A Scores Across Quartiles

Quartile	Acceptability Score Range
Q1	0 - 9
Q2	9 - 39
Q3	39 - 68
Q4	68 - 124

Figure 1 represents the target diagram showing the students of Class A divided into quartiles based on their acceptability scores and predominating choices for children with autism. The two green arrows show that students A1 and A2 consider student A* to be a friend that they like to interact with. However, student A* did not have his parents' consent and thus information about reciprocity is not available in his case.

Figure 1. Class A target diagram.

4.2.2 Class B

The acceptability scores for Class B are shown in the matrix in Table 10, and the distribution of the scores across the four quartiles is presented in Table 11. Results show that the acceptability score for student B* who is diagnosed with ASD is 28 which belongs to the lowest quartile. Thus student B* would be considered a *neglectee* given the few numbers of nominations.

The matrix in Table 10 shows that B* gave students B1, B2, and B6 the highest number of nominations as shown in the weighted acceptability scores, 18, 15, and 16 respectively. B* received a weighted score of 15 from B2, which shows that their relationship is reciprocated (shown in red). As for B1 and B6, B* received weighted scores of 6 and 5 respectively (shown in blue), which shows that their relationships were not reciprocated.

Table 10

Class B Matrix of Peer Nominations Value of Choices and Acceptability Scores.

	B1	B2	B3	B4	B5	B6	B*	Acceptability score
B1		7	22	9	30	3	18	89
B2	6		1	5	13	30	15	64
B3		5		14	2	1	1	23
B4	5	4	21		15	2	5	47
B5	19	5	18	20		6	4	53
B6	23	30	1	3	8		16	58
B*	6	15		7	1	5		28

Table 11

Distribution of Class B Scores Across Quartiles

Quartile	Acceptability Score Range
Q1	23 - 37.5
Q2	37.5 - 53
Q3	53 - 61
Q4	61 - 89

Figure 2 represents the target diagram showing the students of Class B divided across the quartiles based on their acceptability scores and predominating choices for children with autism. The red arrow reflects a reciprocated friendship between B* and B2; whereas the two blue arrows show that B* highly nominated students B1 and B6 but the relationship was not reciprocated.

Figure 2. Class B target diagram.

4.2.3 Class C

The acceptability scores for Class C are shown in Table 12, and the distribution of the scores across the four quartiles is presented in Table 13. Results show that the acceptability score for student C* who is diagnosed with ASD is 28 which belongs to the lowest quartile. Thus student C* would be considered a *neglectee*.

Table 12

Class C Students' Acceptability Scores

Student	Acceptability Score
C*	28
C1	34
C2	79
C3	42
C4	54
C5	69

Table 13

Distribution of Class C Scores Across Quartiles

Quartile	Acceptability Score Range
Q1	28 - 36
Q2	36 - 48
Q3	48 - 65.25
Q4	65.25 - 79

Figure 3 represents the target diagram showing the students of Class C divided across the quartiles based on their acceptability scores and predominating choices for children with autism. The red arrow reflects a reciprocated friendship between C* and C3; whereas the two blue arrows show that C* highly nominated students C1 and C2 but the relationship was not reciprocated.

Figure 3. Class C target diagram.

4.2.4 Class D

The acceptability scores for Class D are shown in Table 14, and the distribution of the scores across the four quartiles is presented in Table 15. Results show that the acceptability score for student D* who is diagnosed with autism is 40 which belongs to the third quartile. Student D*'s acceptability score is within the top 75% of scores.

Table 14

Class D Students' Acceptability Scores

Student	Acceptability Score	Student	Acceptability Score
D*	40	D17	38
D1	30	D18	13
D2	42	D19	26
D3	5	D20	22
D4	39	D21	11
D5	70	D22	35
D6	34	D23	70
D7	36	D24	49
D8	33	D25	86
D9	94	D26	49

D10	34	D27	89
D11	75	D28	69
D12	39	D29	41
D13	32	D30	52
D14	22	D31	97
D15	80	D32	58
D16	16	D33	46

Table 15
Distribution of Class D Scores Across Quartiles

Quartile	Acceptability Score Range
Q1	5 - 32.25
Q2	32.25 - 39.5
Q3	39.5 - 66.25
Q4	66.2 - 97

Figure 4 represents the target diagram showing the students of Class D divided across the quartiles based on their acceptability scores and predominating choices for children with autism. The two red arrows reflect reciprocated friendships between D* and D2, and between D* and D19; whereas the green arrow shows that D* highly nominated student D32 whom did not participate in the study and thus the data to analyze the reciprocity is not available.

Figure 4. Class D target diagram.

4.2.5 Class E

The acceptability scores for Class E are shown in Table 16, and the distribution of the scores across the four quartiles is presented in Table 17. Results show that the acceptability score for student E* who is diagnosed with ASD is 11 which belongs to the lowest quartile. Thus student E* would be considered a *neglectee*.

Table 16
Class E Students' Acceptability Scores

Student	Acceptability Score
E1	35
E2	71
E*	11
E3	51
E4	92
E5	75
E6	6
E7	56
E8	28
E9	32

Table 17
Distribution of Class E Scores Across Quartiles

Quartile	Acceptability Score Range
Q1	6 - 29
Q2	29 - 43
Q3	43 - 67.25
Q4	67.25 - 92

Figure 5 represents the target diagram showing the students of Class E divided across the quartiles based on their acceptability scores and predominating choices for children with autism. The blue arrow shows that student E* diagnosed with autism highly nominated student E1 but the relationship was not reciprocated.

Figure 5. Class E target diagram.

Chapter Five

Analysis and Discussion

This chapter discusses the results obtained from both teacher and student surveys and links them to previous research and findings in the literature. The chapter is divided into two parts. The first part discusses the findings with respect to teachers' attitudes and the variables associated with the difference in attitudes. The second part discusses the social acceptance of children with autism in the studied schools.

5.1 Teacher Questionnaire

5.1.1 Hypothesis 1

The first hypothesis argued that teachers in inclusive schools in Lebanon would show a negative attitude towards children with autism. However, the results of this study obtained from the teachers' questionnaires revealed that elementary-level teachers mostly reflected a positive attitude towards the inclusion of children with autism with a mean of 3.82 out of 5.00 thereby contradicting the suggested hypothesis. The obtained results implying that educators held positive attitudes are consistent with the study conducted by Park and Chitiyo (2011). The mean attitude of the participants was 4.21 (Park & Chitiyo, 2011), which is even more positive than the attitude of the teachers in this study. However, the significance of those differences could not be assessed for since the researcher does not have access to the data from Park and Chitiyo's study. As for Lebanon, it was not possible to determine attitudinal changes that might have taken place since the introduction of Law 220/2000 and the initiation of inclusive programs led by NGOs in the absence of earlier administrations of the AAST scale to Lebanese

teachers.

The results of this study are also consistent with the research by Avramidis, Bayliss, and Burden (2010), Avramidis and Kalyva (2007), and Avramidis and Norwich (2002) who also found that teachers generally held positive attitudes towards the concept of inclusion. Further, within the Lebanese context, similar findings have been reported. The results of this study are supported by Kustantini (1999) who studied the attitudes of parents, teachers, and administrators in schools in Beirut, as well as by Khochen and Radford (2012) who studied teachers' attitudes within NIP inclusive schools. Findings generally reflected positive attitudes towards the inclusion of children with special needs into mainstream schools.

The positive attitudes of educators may be attributed to the fact that all the participating teachers have had some kind of exposure to children with special needs either directly in their classroom or indirectly within the school premises. Several studies have suggested that the experience of contact is an important variable that influences teachers' attitudes in the positive direction (Avramidis & Norwich, 2002). In his study, Beh-Pajoo (1992) found that teachers held more positive attitudes when they experienced increased social contact with children with severe disabilities.

Another possible factor that might have contributed to the teachers' positive attitudes is the increased level of awareness towards children with special needs in Lebanon. Many initiatives have been taken to promote inclusion both socially and academically. Recently, the Ministry of Education launched April 22nd as the National Day for Students with Learning Difficulties to increase awareness in schools. In addition, several NGOs are constantly organizing promotional activities to raise awareness and interest towards children with disabilities, including children with autism.

5.1.2 Hypothesis 2

The second hypothesis claimed that there would be no difference in attitudes between special educators and general educators towards the inclusion of children with autism. The results of this study indicated that special educators have significantly more positive attitudes than general educators. Those findings are consonant with the research of McGregor and Campbell (2001), Buell, Hallam, Gamel-McCormick, and Scheer (1999), and Minke, Gear, Deemer, and Griffin (1996) who found that special educators held more positive attitudes towards inclusion than general education teachers. Minke et al. also revealed that special educators were more aware of students' individual differences and more sensitive to their specific needs.

This may be explained by the fact that special education teachers undergo more extensive teacher training than general education teachers when it comes to children with exceptionalities. In addition, special educators spend more time with students with disabilities, thus in accordance with the contact hypothesis they are more prone to having favorable attitudes.

5.1.3 Hypothesis 3

The third hypothesis indicated that teachers' attitudes were affected by various teacher-related variables such as gender, age, years of experience educational role, in-service training, formal training, and exposure to children with disabilities. In this study, hypotheses 3a, 3b, and 3c were not supported. Results revealed that in the studied schools gender, age and years of experience did not have significant effects on teachers' attitude.

With respect to gender, similar findings have been reported where gender did not have a direct impact on attitudes (Avramidis et al., 2010; Beh-Pajooh, 1992; Leyser et

al., 1994; Minke et al., 1996; Padelidu & Lampropoulou, 1997). However, those findings are not consistent with other research that found that female teachers show more tolerance toward the integration of special needs children (Avramidis & Norwich, 2002; Park & Chitiyo, 2011). Nevertheless, it is important to note that the differences in attitudes based on gender in this study are not representative given that the sample of males is minor (14% of participants).

Regarding age, the hypothesis that younger teachers will have more positive attitudes than older teachers, as shown by Leyser et al. (1994), was not supported. No significant differences based on age were found. Similar findings have been reported by Avramidis et al. (2010) and Butler and Shevlin (2001). Also contrary to what was expected, the variable 'years of experience' was not a significant factor in improving attitudes. The results of this study are in accordance with other research that suggested that years of teaching experience have no significant effect on teachers' attitudes (Avramidis et al., 2010; Butler & Shevlin, 2001). None of those factors can be considered as robust predictors of teachers' attitudes as research regarding the age and years of experience factors is inconsistent. Other researches have reported that age and experience are negatively correlated with attitude (Forlin, 1995; Leyser et al., 1994; Padelidu & Lampropoulou, 1997). The mentioned investigators agree that younger teachers are more supportive of inclusion, and as teachers gain more years of experience in teaching they become less accepting of inclusion.

As for teacher training, results indicate significantly more positive attitudes in teachers who received either in-service training or formal training on autism which confirm the hypothesis suggested. The obtained results are in accordance with a large body of research. Research has shown that training is an essential factor in shaping and

improving teachers' attitudes towards the implementation of successful inclusion policies (Avramidis et al., 2010; Beh-Pajoo, 1992; Khochen & Radford, 2012; Minke et al., 1996; Leyser et al., 1994; Van-Reusen, Shoho, & Barker, 2000). Dickens-Smith (1995) examined the attitudes of general education teacher and special educators towards inclusion in response to in-service teacher training. Both groups exhibited positive attitude change toward inclusion after training, with general educators revealing more considerable attitude changes. The consensus among the above-mentioned studies suggests that staff training and professional development is essential to ensure successful inclusion.

With respect to the 'exposure' factor, it was suggested that positive attitudes are associated with more exposure to children with exceptionalities. Our results show that all participants had some kind of exposure that resulted in mostly positive attitudes among the participants in this study. Differences between exposure and absence of exposure could not be assessed for given that none of the participants did not have any kind of exposure.

5.2 Student Questionnaire

5.2.1 Hypothesis 4

Concerning the social acceptance of children with autism within inclusive classrooms, it was hypothesized that students with autism will be neglected in the classroom. This hypothesis was partially supported since the results across schools were inconsistent. It was revealed that in Classes B, C, and E children with ASD were neglected; however, in School 1, the students in Classes A and D were socially accepted.

The results of Schools 2 and 3 were consonant with the research of Chamberlain et al. (2007), Humphrey and Symes (2011), Sigman and Ruskin (1999), Symes and Humphrey (2010) where students with disabilities and ASD were socially less accepted amongst their peers within inclusive settings. The low social status of children with autism might be attributed to their poor social interactions and poor understanding of social cues that hinder their peer relationships.

As for School 1, students with ASD in the studied classes were socially accepted and nominated by their peers contrary to what was predicted. Those results are consistent with the research of Boutot and Bryant (2005) who found that children with ASD are as likely as their peers to be chosen for activities within inclusive settings. This difference in obtained results might be attributed to the fact that School 1 organizes numerous student-centered autism awareness activities during the month of April on the school premises. It was also noted that the class size of Classes A and D is considerably larger than the other classes. The increased social acceptance of children in those larger classes can be interrelated to increased class size. The study of Blatchford, Edmonds, and Martin (2003) suggested that children in large classrooms engage in more social interactions and more likely to interact with their peers. On the other hand, in small classes, the probability of exclusion increases which is the case of Classes B, C, and E.

5.3 Conclusion

Overall, teachers in Lebanon generally have positive attitudes towards the inclusion of children with ASD. Special educators had significantly more positive attitudes than general education teachers within the surveyed schools. Gender, age, and years of experience did not yield significant difference in teachers' attitudes. As for

teacher training, both in-service and formal training, it was a major factor that influenced teachers' attitudes and shaped them into a more positive direction. Regarding social acceptance of children with autism, dissimilar results were obtained. In some classes, children were socially accepted, while in others they were considered *neglectees*, depending on the school culture and class size.

Chapter Six

Conclusion and Recommendations

6.1 Conclusion

Based on this study, it may be concluded that teachers' attitude toward inclusion is taking a curve to becoming more positive specifically when it comes to children diagnosed with autism spectrum disorder. Several factors might have taken part in making this shift possible. This redirection in attitudes is a positive indication to children with autism and their parents with respect to children's education. Teachers with positive attitudes ensure the success of the inclusion process and ease the transition of children with autism into inclusive settings.

All the participating teachers had some experience with children with disabilities which may have influenced their attitudes. It was shown that several variables affect their attitude. The teacher-related variables were assessed for and teacher training seemed to play a crucial role in developing positive attitudes towards inclusion. The current study highlighted the importance of both in-service training and formal training to teach pupils with autism in mainstream schools.

As for the peer social acceptance of children with autism, results revealed differences in social status of children with ASD in difference schools. Sociometric measures showed that 2 out of the 5 children where socially accepted, while the remaining three were neglected in the classroom. This raises a concern towards Schools 2 and 3 given that the social well being of students affect their achievement and process of learning. Social skills training and awareness programs should be considered to

promote social acceptance of children with autism in the school setting.

6.2 Limitations

There are some limitations that might constrict the generalizability of the obtained results. The participants of this study were obtained using nonrandom sampling from four schools that included children with autism. In addition, the total number of participant was 35 educators, which is a fairly small sample. The researcher also was not able to assess for the return rate of the questionnaires given that they were distributed by either the school's principal or the special education coordinator. Thus the sample might not be an accurate representative of the entire population and the results will only be representative of teachers in mainstream schools that specifically include children with autism. In addition, the researcher in this study targeted schools that already included children with autism where teachers interacted and had more contact with children with disabilities than schools with no inclusive programs. The attitudes of teachers in regular schools that do not endorse inclusion and in other schools that have inclusion programs for different learning disabilities might have different attitudes towards inclusion of children with autism. Furthermore, given that the questionnaire was a Likert-scale that includes socially sensitive items, teachers might have chosen socially desirable ratings to the scale items rather than what they truly believe. This is known as the social desirability bias (Nederhof, 1985). As for the student participants, the sample included 5 children with autism which is also a relatively small sample to generate generalizable results.

6.3 Future Research

This research was done in schools in Mount Lebanon and Beirut; there is a need to extend this research to cover more districts such as the North, South, and Bekaa to have a more comprehensive view of attitudes across the country. Further, this research was done on elementary teachers; supplementary research should be done across all school levels to assess differences in attitudes based on grade level. There is also a need to examine other variables such as child-related and environmental-related variables that influence teachers' attitudes towards the inclusion of individuals with autism. More specifically, it is essential to research more factors that attribute to the development of positive attitudes. Knowing that training plays a great role in forming positive attitudes, it might be beneficial to research what types of training yield better outcomes with respect to inclusion. As for the students' relationship, further research should be done to account for the factors that affect social acceptance of children with autism in the schools. Observations are recommended in order to assess the quality of friendships children with autism have and find ways to promote social interactions in the school.

6.4 Recommendations

Based on the findings of this study, it was understood that teacher training is essential to acquiring positive attitudes towards children with autism. Thus, it is important that administrators in inclusive schools promote teacher training and development through in-service training, conferences, and workshops. Not all teachers are usually trained on autism once they are admitted into the school system. Professional development should be planned as teacher training provide educators with confidence and power to tailor for individual needs in the classroom. Such training should be

specifically arranged for general education teachers who usually lack adequate experience to deal with various kinds of disabilities in the classroom.

It is also recommended that in order to maximize the experience of inclusion of children with autism in mainstream schools, it is critical for policy makers to add to the requirements of teacher education some mandatory courses on exceptional children and pre-service training. Such training opportunities can prepare future teachers face the difficulties of including children with various disabilities especially children with ASD in the classroom. It provides them with exposure to children with disabilities early throughout their career whether they were general educators or special educators.

As for students, it is important for teachers to engage students in activities that promote acceptance and increase tolerance towards differences and diversities. In the schools where children with autism are ostracized, it is suggested that intensive social skills training be administered to children with autism. Teachers should use classroom-based strategies such as peer-mediated interventions to assist children in the development and maintenance of positive peer relationships.

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Appendices

Appendix A: IRB Approval

الجامعة اللبنانية الأمريكية
Lebanese American University
Institutional Review Board (IRB)

لجنة المراجعة

NOTICE OF IRB APPROVAL

To: Miss Howaida Daher Al Rayess
Advisor - Dr. Ahmad Queini.

Date: May 16, 2014

RE: IRB #: LAU.SOAS.HR1.16/May/2014

Protocol Title: Teachers' Attitudes Towards the Inclusion of Children with Autism and their Peer Social Acceptance Across Schools in Mount Lebanon and Beirut

APPROVAL ISSUED: 28 April 2014

EXPIRATION DATE: 28 April 2015

REVIEW TYPE: Expedited / Student Project /
Amendment

The amended title for the above referenced research project has been approved by the Lebanese American University, Institutional Review Board (LAU IRB). This approval is limited to the activities described in the Approved Research Protocol and all submitted documents detailed in the Approval letter dated 28 April 2014. **Kindly forward a copy of the signed letter to the schools for our files.**

APPROVAL CONDITIONS FOR ALL LAU APPROVED HUMAN RESEARCH PROTOCOLS

LAU RESEARCH POLICIES: All individuals engaged in the research project must adhere to the approved protocol and all application LAU IRB Research Policies. PARTICIPANTS must NOT be involved in any research related activity prior to IRB approval date or after the expiration date.

PROTOCOL EXPIRATION: The LAU IRB approval expiry date is listed above. The Office of the IRB will send an email at least 45 days prior to protocol approval expiry - Request for Continuing Review - in order to avoid any temporary hold on the initial protocol approval. It is your responsibility to apply for continuing review and receive continuing approval for the duration of the research project

MODIFICATIONS AND AMENDMENTS: All protocol modifications must be IRB approved prior to implementation, unless they are intended to reduce risk. Any protocol deviations without IRB approval must be reported to the IRB.

If you have any questions concerning this information, please contact the IRB office by email at christine.chalhoub@lau.edu.lb

Dr. Costantine Daher
Chair, Institutional Review Board

Lebanese American University FWA00014723
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Appendix B: Principals' Consent Form

Lebanese American University
Department of Education
Howaida Rayess

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Dear _____,

I hereby wish to request permission to conduct research towards my graduate studies. I am a student at the Lebanese American University (LAU) in pursuit of a Master's degree in Special Education. The purpose of the study is to examine elementary teachers' beliefs towards the inclusion of individuals with autism and assess peer social acceptance towards children with autism and their social networks in inclusive settings across private schools in Mount Lebanon and Beirut. Your school, _____, is an integral part of my research as it holds one of the most successful integration programs in Lebanon. Kindly find a summary of the research study below.

I. Research Background

Title of the Study: Teachers' Beliefs towards the Inclusion of Children with Autism and their Peer Social Acceptance across Schools in Mount Lebanon and Beirut

Name of Researcher: Howaida Rayess

Phone: _____

E-mail: _____

II. Description of Research Procedure

- Questionnaires (the Autism Belief Scale) will be distributed to elementary teachers.
- Peer nomination forms will be distributed to students in classrooms that have children with autism integrated to examine their social networks in the classroom. Only positive criteria are included. Sample items include: "Whom do you like to play with the most?"

Kindly note that the privacy and confidentiality of any staff or student will be protected and the data collected will be dealt with anonymously. I am looking forward to hearing from you. Your participation is highly appreciated. Please do not hesitate to contact me for further details.

Best regards,
Howaida Rayess

Appendix C: Parents' Consent Form

Parental Consent Form

Dear parents,

My name is Howaida Rayess and I am a graduate student at the Lebanese American University (LAU) currently enrolled in the Master's Program in Education. As part of my graduation requirements, I am conducting a research study that examines the social networks of students at the elementary level. Your child's classroom has been selected for this study because it fits the age range and grade level criteria.

The study: The purpose of this study is to examine the social groups in the classroom. All the students in the classroom will be asked to fill in a student form that needs around 10 minutes. Sample questions include: "Who are your best friends?" and "Whom do you like to study with most?" The social status of the students is derived from the number of nominations received.

Confidentiality: All the data and the results that will be obtained during this research will be remain anonymous and will not affect your child's school records. ***Your child's name will not be written on any document or be kept in any other records. All responses he/she provides for this study will remain confidential and only the researcher will have access to it. All data will be discarded once the study is done.***

I kindly ask that you read this form before agreeing to have your child participate in this study. Not sending the form back will grant me consent to administer the survey through your child's classroom teacher.

Thank you in advance for your cooperation; your child's participation is highly appreciated.

If you do **not** want your child to participate please sign this form and send it back with your child.

☐ I do not want my child to fill in the student form.

Printed Name of Child

Signature of Parent(s) or Legal Guardian

Date

For further inquiries about the study, please do not hesitate to contact me at _____ or via email:

If you have any questions about your child's rights as a participant in this study, or you want to talk to someone outside the research, please contact the:

IRB Office,

Lebanese American University

3rd Floor, Dorm A, Byblos Campus; Tel: 00 961 1 786456 ext. (2332)

Appendix D: Teacher Questionnaire

Lebanese American University
Department of Education
Howaida Rayess

I am a graduate student at the Lebanese American University (LAU). I would like to invite you to participate in a research study which aims at collecting data for my thesis as part of a Master's degree in Special Education. The purpose of the study is to examine elementary teachers' beliefs towards the inclusion of individuals with autism and assess peer social acceptance towards children with autism and their social networks in inclusive settings across private schools in Mount Lebanon and Beirut.

You will be asked to fill out a short questionnaire that aims to investigate the beliefs towards the integration of students with autism. This may take 10 minutes of your time. Please make sure that you have responded to every statement.

Your answers will not be released to anyone and will remain anonymous. Your name will not be written on the questionnaire or be kept in any other records. All responses you provide for this study will remain confidential. When the results of the study are reported, you will not be identified by name or any other information that could be used to infer your identity. Only researchers will have access to view any data collected during this research. Your participation is voluntary and you may withdraw from this research any time you wish. Your refusal to participate will not result in any penalty or loss of benefits to which you are otherwise entitled to.

The research intends to abide by all commonly acknowledged ethical codes. You agree to participate in this research project by filling the following questionnaire. If you have any questions, please do not hesitate to contact me for further details.

Your participation is highly appreciated. Thank you for your time.

Name of Researcher: Howaida Rayess
Phone:
E-mail:

If you have any questions about your rights as a participant in this study, or you want to talk to someone outside the research, please contact the:

IRB Office, Lebanese American University 3rd Floor, Dorm A, Byblos Campus; Tel: 00 961 1 786456 ext. (2332)

TEACHER INFORMATION QUESTIONNAIRE

1. What is your gender?

- ☐ Male ☐ Female

2. Please indicate your age by checking one of the following

- ☐ 20 – 35 years
☐ 36 – 45 years
☐ 46 – 55 years
☐ 56 years or more

3. Which applies to you? (Please check one only)

- ☐ I have just completed an in-service training workshop aimed at teaching educators more about autism
☐ I completed a workshop of this type earlier this school year (several weeks ago)
☐ I have just begun or will soon be participating in a workshop of this type
☐ I have not been to this type of workshop and I don't know of any plans to have one in the near future

4. Do you have formal training in autism beyond the basics (basics = overview of definition or characteristics of autism)?

- ☐ Yes ☐ No

5. Do you have or have you had a student with autism in your class?

- ☐ Yes ☐ No

6. What is your educational role? (Please check only one)

- ☐ General Education Teacher
☐ Special Education Teacher
☐ School Psychologist
☐ Teacher Aide
☐ Principal
☐ Other (specify)

7. In what level school do you work? (Please check only one)

- ☐ Elementary
☐ Middle school
☐ High School
☐ Other (specify)

8. How long have you been an educator?

- ☐ Less than 1 year
☐ 1 to 2 years
☐ 2 to 5 years
☐ 5 to 10 years
☐ More than 10 years

9. What types of exposure have you had to exceptional children? (Check all that apply)

- ☐ Taught a special class
☐ Taught some exceptional children who were mainstreamed into my regular class
☐ Volunteer work with exceptional children
☐ Indirect contact with exceptional children who were in other classes of my school
☐ Learned about exceptional children in college courses
☐ None of the above

BELIEF SCALE INSTRUCTIONS

On the following pages(s) you will find a list of sentences. Each sentence is a statement about a belief. Beside each sentence is a set of numbers which range from 1 (strongly disagree) to 5 (strongly agree).

For each sentence you should circle the number that shows how much you disagree or agree with the sentence. The more strongly you agree with the sentence; the higher will be the number you circle.

Please make sure that you answer every item and that you circle only one number per item. As much as you can, try to respond to each item independently. When making your choice, do not be influenced by your previous choices. It is important that you respond according to your actual beliefs and not according to how you feel you should believe.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. Only teachers with extensive special education training can help a child with autism.	1	2	3	4	5
2. Mealtime behaviors of children with autism are disruptive and negatively influence the behavior of children around them.	1	2	3	4	5
3. Schools with both typically developing children and children with autism enhance the learning experiences of typically developing children.	1	2	3	4	5
4. Typically developing children and children with autism should be taught in separate schools	1	2	3	4	5
5. Children with autism can learn from a good teacher	1	2	3	4	5
6. Regular schools are too advanced for children with autism.	1	2	3	4	5
7. I would not want the children in my class to have to put up with children with autism.	1	2	3	4	5
8. Teachers not specifically trained in special education should not be expected to deal with children with autism.	1	2	3	4	5
9. Children with autism are too impaired to benefit from the learning experiences of a general school.	1	2	3	4	5
10. Schools with both typically developing children and children with autism enhance the learning experiences of children with autism.	1	2	3	4	5
11. If I had a choice, I would teach in a school in which there were no children with autism.	1	2	3	4	5
12. A good teacher can do a lot to help a child with autism.	1	2	3	4	5
13. Children with autism cannot socialize well enough to profit from contact with typically developing children.	1	2	3	4	5
14. It's unfair to ask teachers to accept children with autism into their school.	1	2	3	4	5

Appendix E: Student Survey

We are doing a study to learn about friendships in the classroom. We are asking you to help because you can best tell us about the groups in your classroom.

If you agree to be in our study, we are going to ask you some questions about your relationships with classmates.

You can ask questions about this study at any time. If you decide at any time not to finish, you can ask us to stop.

The questions we will ask are only about what you think. There are no right or wrong answers because this is not a test. Your answers will remain a secret; we will not share them neither with your teachers nor friends.

If you continue this sheet, it means that you have read this and that you want to be in the study. Being in the study is up to you, and no one will be upset if you don't want to answer the questions or if you change your mind later. It will take you around 10 minutes to answer the questions. Thank you 😊.

Date: _____

Directions

Please answer the following questions. Put your answers on the lines which follow each question. You don't have to fill in all lines. Write down as much as you want. If you need more space for your answer, please turn the paper over and write on the back.

Some kids have a number of close friends, but others have just one "best friend", and still others don't have a best friend. What about you? Do you have a best friend? Circle the correct response.

YES

NO

If you have a best friend, write his or her first name. If this person is a classmate write "yes" beside his or her name. If this person is not in this class write "no" by his or her name. You may have more than one best friend.

_____	_____
_____	_____
_____	_____

Remember you don't have to fill all the lines.

Read each of the questions below and write the names of 5 students in your class on the lines provided.

Because you might think of the same person or people for a number of the questions, you can use them as often as you need to.

1. Whom do you like the most?

2. Whom do you like to play with?

3. Whom do you like to invite to your birthday party?

4. Whom do you like to sit next to on the bus?

5. Whom do you like to study with?

Appendix F: Matrices

Matrix A. Class A matrix of peer nominations value of choices and acceptability scores.

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A*	Acceptability Score
A1																																		0
A2	11		14	25													7		2				2	10		12					1		84	
A3		2		18																													20	
A4		18	30																														48	
A5						27		13														6								1			47	
A6				7			1				10			4	8												7						37	
A7								6			5		5																	5	12		33	
A8					15	6	6	9													2									8			46	
A9							14	14					5								2									27	30		92	
A10																			4														4	
A11																																	0	
A12													5																				5	
A13																																	5	
A14																4			30		1		18						10		1		64	
A15						1																					30						31	
A16																							6										6	
A17										6							8						1	12	8	23			3				61	
A18																					5												5	
A19				2						14			13	4	8	1					10	16	13	30	3		1		8		1		124	
A20								3										1	2			26											32	
A21				1					3									2	1	30					5								42	
A22				1	1	1	4	2										23	1	5													37	
A23							6			21			2		21	7			6						3				7	1	5		79	
A24									4			1	1	5	13				30		1		1		12	13			12		3		95	
A25								3											6														9	
A26									2							3	22		2				4	23	20				2				78	
A27														25																			25	
A28				8	14			4					5		10													16		15	4		116	
A29				7	17	1	2	4					5		6												13		16	4			105	
A30							11	26																							2		39	
A31							20	23	14				5							2	4												68	
A32								1																						6				7
* 23	21	2	2																															48

Matrix B. Class B matrix of peer nominations value of choices and acceptability scores.

	B1	B2	B3	B4	B5	B6	B*	Acceptability score
B1		7	22	9	30	3	18	89
B2	6		1	5	13	30	15	64
B3		5		14	2	1	1	23
B4	5	4	21		15	2	5	47
B5	19	5	18	20		6	4	53
B6	23	30	1	3	8		16	58
B*	6	15		7	1	5		28

Matrix C. Class C matrix of peer nominations value of choices and acceptability scores.

	C*	C1	C2	C3	C4	C5	Acceptability Scores
C*		5	3	16		4	28
C1	11		6	9	6	2	34
C2	10	7		20	12	30	79
C3	17	21	2			2	42
C4	8		14	14		18	54
C5	7	6	26	5	25		69

Matrix D. Class D matrix of peer nominations value of choices and acceptability scores.

	D*	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	Acceptability Score
	D*		17																	23															40
	D1							5												12			2	5	18										30
	D2	30																																	42
	D3	5																																	5
	D4	4							10					1						4				2	6	12									39
	D5					30							5		2				4			24			5										70
	D6					30									2				2																34
	D7							30												5															36
	D8							30													3														33
	D9	16			5						17	4	3			14									30	5									94
	D10	11			3				4			5			2			3					4				2								34
	D11										6			5		26		8				8	18	12										75	
	D12														2				29																39
	D13											3						5					14												32
	D14						8					1						2						8			3								22
	D15	1								9	5	22						19					14	6				4							80
	D16							6	4									1						4											16
	D17	3										5			10	6							8												38
	D18					1							1														11								13
	D19	6						1	4																										26
	D20							12	10																										22
	D21					10																					1								11
	D22										1	11				15		2							6										35
	D23	2										13		15			17	3									20							70	
	D24						4						15		9				14			2				5									49
	D25	30							30	11				5										1			3								86
	D26					6	5					3			1				12			5			17										49
	D27				2				2					23		5	30	2						25											89
	D28					5							23		3				5			16			7	10									69
	D29												20	18				2				1													41
	D30					4	12						2		30												4								52
	D31	5			30				16	2				1				19					10	1	12			1							97
	D32	10						2									13		8																58
	D33	5						15	17										4	5															46

Matrix E. Class E matrix of peer nominations value of choices and acceptability scores.

	E1	E2	E*	E3	E4	E5	E6	E7	E8	E9	Acceptability Score
E1		12	15			8					35
E2	19				8	23				21	71
E*						7				4	11
E3						2	19	20	10		51
E4				21		4	6	27	30	4	92
E5	21	22		1	12					19	75
E6				4		1			1		6
E7				18	20	1	2		15		56
E8				6		1	18	3			28
E9	8	9	7			8					32