Teachers' perceptions towards inclusive education for Children with Autism Spectrum Disorder (ASD) in Mainstream Primary School in Riyadh, Saudi Arabia

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Abstract

The purpose of this study was to investigate teachers' perceptions towards inclusive education for children with autism spectrum disorder (ASD) in primary mainstream schools in Riyadh City, Saudi Arabia. To examine teachers' perceptions and to answer the two research questions regarding teachers' attitudes towards inclusive education for students with ASD as well as their perceptions of the advantages and disadvantages of the inclusion of students with ASD, a qualitative research approach was designed. Semi-structured interviews were conducted in Arabic and translated to English. Four teachers were interviewed. The results from this research indicated that all the teachers had a general knowledge regarding children with ASD and inclusive education; however, the majority of teachers had positive attitudes towards inclusive education for children with ASD, especially for children with mild autism or high-functioning autism. All teachers agreed that training is needed to increase the effectiveness of inclusive education for students with ASD. This dissertation concludes with recommendations to improve inclusive education for students with ASD in Saudi Arabia and to encourage teachers' positive attitudes for future practice.

Keywords: Autism, Inclusive Education, Attitudes, Teachers, children

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وجهات نظر المعلمين حول دمج الأطفال ذوي اضطراب التوحد في المدارس الحكومية الابتدائية في مدينة الرياض، المملكة العربية السعودية

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الملخـــص باللغـــة العـــربيــــة

هدفت الدراسـة الـى استطلاع وجهـات نظر المعلمين حول دمج الاطفال ذوي اضطراب التوحد في المدارس الابتدائية الحكومية في مدينة الرياض في المملكة العربية السعودية.

تـم اختيـار الطريقة النوعيـة في البحث بهدف التحقق مـن وجهـات نظر معلمين المرحلـة الابتدائية حـول الـدمج بالإضـافة لمعرفة ايجابيـات وسلبيات الدمج التعليمـي مـن وجـه نظر هؤلاء المعلمين.

طبقت المقابلة شبة المقننة باللغة العربية ومن ثم تم ترجمتها الـى اللغة الانجليزية، كانت عينة الدراسة أربعة معلمين يعملون في مدرستين ابتدائية حكومية في مدينة الرياض.

كانت نتائج الدراسة التي اجريت هي ان جميع المعلمين لديهم المعلومات الاساسية والعامة حول الدمج التعليمـي وايضاً معلومات بسيطة حول الاطفال ذوي اضطراب التوحد، غالبية المعلمين لـديهم اتجاهات ايجابيـة نحـو دمـج الاطفال ذوي اضطراب التوحد وخاصـة ممـن هـم مـن الدرجـة البسيطة أو ذوي الأداء العـالي. أتفق جميع المعلمين على حـاجتهم الـى المزيد من التدريب وذلك لزيـادة فاعليـة الـدمج وتطبيقه بشكل فعـال. توصلت الدراسة الـى بعض التوصيات الهامـة لتطوير الـدمج التعليمـي في المملكـة العربيـة السعودية للأطفال ذوي اضطراب التوحد وزيـادة الاتجاهات الايجابية لدى المعلمين في المدارس الحكومية.

الكلمات المفتاحية: التوحد، التعليم الشامل، الاتجاهات، المعلمين، الأطفال.

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Introduction

Inclusion has become an important issue and is often discussed among educators, parents and professionals from different disciplines. A more inclusive environment helps grant children with SEN the right to become part of society (Hasan, Halder, &Debnath, 2018). Recent statistics indicated that a higher percentage of students with special needs are educated in regular schools compared to special schools (Al-Mousa, 2010). Although inclusion in the KSA has been discussed and applied within mainstream schools, there are challenges related to inclusion. Avramidis, Bayliss, and Burden (2000) showed that one of the main barriers to inclusive education for children with SEN is teachers' attitudes; however, in the KSA, few studies have discussed this issue, which highlights the importance of this study.

This study primarily investigated teachers' perceptions towards inclusive education for students with autism spectrum disorder (ASD), which are considered one of the main barriers to inclusion in mainstream primary schools in Riyadh City in the KSA to achieve the Salamanca Statement, which is the KSA followed (UNESCO, 1994). This study also examined the advantages and disadvantages of the inclusion of students with ASD in mainstream schools by examining teachers' perspectives.

Research problem

The inclusion of students with SEN, especially students with ASD, in the KSA is a new concept, and several studies by different researchers in the special education field have discussed and investigated inclusive education to evaluate and improve it. There is a lack of studies that have

investigated both inclusion and teachers' attitudes towards inclusion. Moreover, there are few studies that have evaluated the attitudes of teachers towards inclusive education specifically for children with ASD in mainstream schools in the KSA. As Abed and Alrawajfh (2017) reported, additional research in the special needs field that specifically investigates teachers' attitudes regardless of the type of inclusive education is needed, and they also asserted that the teacher is an important component of the education system and plays an important role in the impacts of inclusion. Thus, investigating teachers' perceptions towards inclusive education for children with ASD was the main aim of this study.

Research questions

Teachers' perceptions towards inclusive education were investigated with a specific focus on students with ASD in mainstream primary schools, including school that implement inclusive education and school that do not implement inclusive education in Saudi Arabia in Riyadh City. The following research questions guided the research:

- What are the teachers' attitudes towards inclusive education for students with ASD in mainstream schools?
- What are the teachers' perspectives of the advantages and disadvantages of the inclusion of students with ASD in mainstream schools?

Aims of the study

The aims of this study were to investigate inclusive education for children with ASD in mainstream primary schools in Riyadh City in the KSA and to examine teachers' attitudes towards inclusive education for

children with ASD. In addition, the study results were expected to determine the advantages and disadvantages of inclusive education for children with ASD from the teachers' perspectives.

Study terminologies

Inclusion

The term 'inclusive education' is used in this dissertation to refer to the process of including children with SEN or ASD in the same mainstream classroom as typically developing children. Inclusive education involves educating children with or without SEN in the same mainstream classroom (O'Connor, 2007). Moreover, 'inclusive education is one education system to fit the needs of all student' (Jokinen, 2018, p. 71).

Attitudes

The meaning of 'attitude' involves the way people think, behave or feel or their opinions about some issue or situation (Oxford Advanced Learner's Dictionary, 2015). The study's focus was teachers' attitudes towards teaching children with ASD in their classrooms because the attitudes of the individuals involved in implementing and planning inclusive education programmes are important to its success (Stafford and Green, 1996).

Autism spectrum disorder (ASD)

Autism spectrum disorder (ASD) is 'a set of heterogeneous neurodevelopmental conditions, characterised by early-onset difficulties in social communication and unusually restricted, repetitive behavior [sic] and interests' (Lai et al., 2014, p. 896). There is no cure for ASD, which means it is a lifelong disability (Fein et al., 2013).

Theoretical background of the study

'Inclusion' is a complex concept that has no specific definition to describe it (Both and Ainscow, 2016). Ainscow (1999, p. xi) stated that 'inclusion is not assimilation; it is not an act of integrating or subsuming difference within the dominant culture of schooling'. Therefore, the main concept of inclusion is teaching all children, including those with special needs, in one class. The goal is to increase their skills by increasing their interactions with all children regardless of their disabilities. Reid (2005, p. 100) proposed that 'the aim of inclusion is to cater for all, it is important that individual needs, are not overlooked'.

Both and Ainscow (2016) defined 'inclusion' as the process of responding to and addressing the diverse needs of all children by increasing participation in culture, communication and learning and by decreasing the separation between children with and without SEN.

There are no data that show the specific percentages of children with ASD in Saudi Arabia (Alnemary et al., 2017); however, there are 925 male students with ASD and 437 female students with ASD served by the education system (Ministry of Education, 2012, cited in Alnemary et al., 2017). Most children with ASD are educated in private schools in Saudi Arabia (Alzahrani, 2013). Until 2010, children with ASD were excluded from regular schools because there was a lack of understanding and knowledge regarding ASD (Almasoud, 2010). Recent studies have indicated that the number of students with ASD has increased in mainstream schools (Alotaibi and Almalki, 2016); however, the services provided to these children in the KSA are insufficient (Alnemary et al., 2017).

Previous studies about teachers' attitudes towards inclusive education

The most essential factor of successful inclusion is teachers' perspectives towards inclusive education because teachers play a critical and primary role in the success of inclusion (Antonak and Larrivee, 1995). Therefore, teachers' attitudes towards inclusive education are closely linked with the acceptance of students with SEN in their schools (Carrington, 1999). The purpose of Saudi educational policies was to offer good education services for all children, including children with SEN, in regular schools, but inclusive education does not occur unless teachers have positive attitudes towards inclusion. As Downing (2008) stated, a basic step that is required before educating all children in the same classroom is a fundamental change in the attitudes of teachers.

There are several barriers preventing the progression of inclusion in countries such as Saudi Arabia. Although Saudi Arabia is one of 92 countries that adhere to the Salamanca Statement (UNESCO, 1994; Al-Mousa, 2010), it still encounters several barriers to success. Mittler (2000) suggested that effective inclusion policies must support inclusion in all circumstances. Rose (2001) asserted that one important factor in developing inclusive education is teacher preparedness; however, several studies have indicated that teachers' attitudes towards inclusion play an important role. Reid (2005) stated that the attitudes of teachers towards inclusive education might be the primary barrier to inclusion. Avramidis et al. (2000) supported this assertion by arguing that the main barrier to inclusive education for children with significant disabilities is the teachers' attitudes; however, few studies have examined teachers' knowledge of

ASD (Stone and Rosenbaum, 1988; Jennett et al., 2003; Schwartz and Drager, 2008).

Some studies showed that males and females have different attitudes towards inclusion and that the level of education can affect teachers' attitudes. Al-Ahmadi (2009) found that male teachers have more positive attitudes than female teachers towards inclusive education. In addition, teachers who hold a master's degree have more positive attitudes towards students with SEN. In contrast, Boyle et al. (2013) found that female teachers have more positive attitudes than males towards inclusive education, and Parasuram (2006) found that gender does not affect teachers' attitudes towards the inclusion of students with SEN.

Moreover, one of the most important factors that might affect teachers' attitudes is the teacher's experience with children with ASD (Gaad and Khan, 2007). Bhatnagar and Das (2013) found that teachers in Delhi had positive attitudes towards inclusive education, especially teachers who had contact with children with disabilities. Thus, if teachers have a good understanding of ASD, positive attitudes towards inclusion may increase. Subban (2005) stated that teachers in Victoria had more positive attitudes towards inclusion as a result of an increased knowledge and awareness of SEN and that teachers who had family members with SEN had an increased understanding of disabilities.

Moreover, providing pre-service and in-service training is essential to supporting increased positive attitudes towards inclusion for teachers, as suggested by Rose (2001) teachers' preparedness is an important factor in implementing inclusion. Avramidis and Kalyva (2007) and Algahtani (2015) they found that all the teachers had positive attitudes; however, the

teachers held different views towards accommodations for different types of SEN, and they found that teachers with more experience teaching children with SEN had more positive attitudes than those with little or no experience. They also emphasised the importance of training in developing positive attitudes towards inclusion. Similarly, Leyser et al. (1994) found that teachers with special education training had positive attitudes towards inclusion. Hammond and Ingalls (2003) they recommended that teachers should have opportunities to collaborate with their schools in developing inclusive programmes and should have additional training to develop their skills to increase collaboration and the application of inclusive services. Forlin and Chambers (2011) they found that training is required to provide knowledge regarding their responsibilities towards children with SEN and to increase teachers' confidence levels in including these children in their classrooms. Teachers also require additional training to develop their skills and strategies used to teach children with SEN to avoid increased levels of stress, and they require training to successfully manage their classrooms with the addition of students with SEN. According to Cater and Hughes (2006), most teachers reported that conferences, workshops and pre-service training were needed.

In addition, the type of the disabilities might affect the attitudes of teachers towards inclusion. According to Cassady (2011), teachers are more welcoming towards students that have ASD than those with behavioural disorders. Dupoux et al. (2005) also pointed out that the degree and the level of the disabilities is an important factor that affects teachers' attitudes, and they found that teachers' attitudes varied based on different types of disabilities. Most teachers felt comfortable including students with

learning disabilities, while few teachers felt comfortable including students with emotional and behavioural problems. They also found that all the teachers believed that inclusion could benefit many students with SEN but may be not realistic for some students with SEN due to the nature of their disabilities (Dupoux et al., 2005). Similarly, Koutrouba et al. (2006) they found that the majority of teachers reported that the category and severity of disability could influence the inclusion process. Mainstream teachers believed that students with emotional and behavioural problems should be educated in special classes in mainstream schools. Alquraini (2011) found that teachers have slightly negative attitudes towards inclusive education for students with severe impairments. The teachers suggested that these students should attend special classes to receive more support and to learn in a better environment. Thus, teachers prefer working with students with mild to moderate disabilities rather than students with severe disabilities.

Advantages and disadvantages of the inclusion of students with ASD

Students with SEN or ASD can benefit from inclusion in regular classrooms by learning from the behaviours of other children in the classroom, and therefore inclusion provides a real atmosphere for modelling behaviours. As Odom et al. (1985) argued, students with ASD who learn in regular classrooms with typically developing children can benefit both socially and academically. McGregor and Campell (2001) found that inclusion allows children with ASD to identify with good role models. As Egel et al. (1981) stated, when children with ASD observe other students performing tasks, it could improve their performance because they imitate their peers' responses. Furthermore, inclusive

education benefits both students with ASD and typically developing students because it supports the development of social skills for all students by increasing their awareness about children with ASD or SEN in general. Kellegrew (1995) found that inclusion has several advantages, such as providing students with ASD with opportunities to develop acceptable behaviours that are modelled by other students, and therefore students with ASD acquire better social behaviours. Moreover, inclusion helps both typically developing children and students with ASD learn to accept others. Copeland and Cosbey (2008) showed that inclusive education helps students without disabilities develop social and behavioural skills, including better self-esteem, personal principles, such as ethics and morals, and decreased fear and prejudices towards students with SEN. According to Cater and Hughes (2006), the environment of classrooms that serve students with and without disabilities also benefits students without disabilities by increasing their understanding of disabilities and increasing their awareness of issues related to disabilities by fostering personal growth; however, few studies have examined the affect of full inclusion on both types of students (Ferraioli and Harris, 2010).

There are also disadvantages of including students with ASD in mainstream classrooms. According to McGregor and Campell (2001), who evaluated the benefits and drawbacks of inclusive education for students with ASD by exploring the attitudes of teachers in Scotland, most problems facing students with ASD who learn in mainstream schools are: a lack of preparation and understanding of mainstream schools' staff and students, insecurity and confusion for students with ASD due to the changes in the classroom environment, issues with concentration and academic progress,

bullying in the classroom by other students, sensory overload and difficulties cooperating, communicating and socialising and isolation. Thus, teachers should develop strategies to overcome these difficulties (Friedlander, 2009). As Ainscow et al. (2006) showed, inclusive education can be academically effective for children with SEN; however, children with SEN in mainstream schools can experience rejection and bullying.

The methodology of the study

Research design, methodology and approach

The selection of the research method should be based on the aims, objectives and the nature of the research questions. A qualitative approach was utilised for this study, as the aim was to obtain information regarding teachers' perceptions towards inclusive education for children with ASD by collecting qualitative data.

Interviews design

Semi-structured interviews were conducted for an in-depth investigation of the pertinent information (Hollway and Jefferson, 2000). The interviews were conducted at a date and time chosen by the interviewees. Telephone interviews were conducted with all participants. The questions were asked, and the responses from the teachers were recorded on paper. Each interview lasted 45 minutes.

Sample

The purpose of choosing the sample was not to generalise the results but rather to obtain information from the sample (Merriam, 2009). The participants were selected specifically based on their levels of experience in teaching children in primary schools. The location of the sample included

mainstream primary schools in Riyadh City, Saudi Arabia, and the study participants included four female teachers from mainstream primary schools. Two teachers worked in inclusive school, and two teachers worked in primary school that did not implement inclusive education. The purpose was to collect data from different educational environments in mainstream primary schools.

Details of the participants of the study

Teacher	Teaching experience	Level of education	Type of school	SEN courses	Relationships with children with ASD	Students with SEN in the classroom
A	23 years	Bachelor	Implementation of inclusion	Yes, before inclusive education for students with ASD	No	One students with ASD
B	10 years	Bachelor	No inclusion implementation	No	Yes	One student with a physical impairment
C	20 years	Diploma	Implementation inclusion	Yes, before inclusive education for students with ASD	No	One students with ASD
D	27 years	Bachelor	No inclusion implementation	No	Yes	No

Data analyses

All interviews were transcribed and then translated from Arabic to English. The results of this study were organised based on the research questions, and then the answers were divided into several themes according to research questions based on their similarities and differences.

Procedure

A pilot test for the interview questions was conducted to evaluate whether the protocol of the interview was effective and realistic and to identify any unexpected problems that could arise. One Saudi teacher from a mainstream primary school in Riyadh City in Saudi Arabia was interviewed. All interview questions were clear, and no issue was observed.

Ethical issues

Several ethical considerations were complied with for this study, including the following: avoid any risk to the participants, preserve confidentiality and clarify all necessary and relevant information. The questions were designed in a way that the teachers could answer them without revealing their identities or any personal details. The interview questions did not ask about confidential information regarding students. The researcher ensured that the participants' answers were transcribed and then translated into English, and the records were kept strictly confidential on Microsoft OneDrive.

Findings

The results of the interviews were divided into sections according to the research questions, and the teachers' views were linked to each interview question, which allowed for dividing the teachers' responses into

two main categories. The first category included teachers' perceptions regarding inclusive education for children with ASD, such as their understanding of the condition ASD and inclusive education, their attitudes towards the inclusion of children with ASD and their perspectives regarding training. The second category included their perceptions of the advantages and disadvantages of inclusion. The following research questions guided the finding of the research:

1. **What are the teachers' attitudes towards inclusive education for students with ASD in mainstream schools?**

Understanding of the condition of students with ASD and inclusive education

Participants were initially invited to share their knowledge of children with ASD. All participants possessed a general information of ASD as a condition, and all participants defined children with ASD as those who have difficulties interacting with other typically developing children and who have behavioural problems. Teachers A and B shared similar views regarding the characteristics of children with ASD, as they defined children with ASD as those who have difficulties with interactions with other children, difficulties in communication with others and repetitive and unique behaviours.

Teachers A and D expressed that children with ASD do not have the same severity of ASD as all other children with ASD and that the degree ranges from mild (high-functioning autism) to severe symptoms (low-functioning autism). Teacher C described children with ASD in a general manner, and she also described the language skills of children with ASD.

Teachers were also asked to provide their definitions of inclusive education. All participants agreed that inclusive education is when children with SEN are educated in the same mainstream primary classroom as other typically developing children. Teachers A, C and D focussed on where the students are placed, which is locational inclusion, whereas teacher B, who had the fewest years of teaching experience, also expressed the need for adaptations.

Attitudes regarding the inclusion of students with ASD

Teachers were invited to express their opinions regarding inclusive education in general. Three of the teachers responded that they supported inclusive education. Teachers A, B and D supported the concept of inclusion because it helps improve the perceptions of teachers and society regarding inclusive education. They also stated that especially for children with ASD, inclusion assists in developing social and communication skills. They believed that inclusion is helpful for students with various types of ASD. Teacher C did not support the concept of inclusion, especially inclusive education for children with ASD.

For example, teacher A discussed inclusive education and linked her attitudes with the severity of the ASD: 'I believe inclusive education is especially good for children with high-functioning autism'. Interestingly, teacher C, who had a diploma, expressed a different view of inclusion: 'I disagree with the idea of inclusion because as a general teacher in a mainstream school, I do not have any knowledge about the best teaching strategies for those students'.

During the interviews, the teachers were asked about their perceptions towards inclusion as a policy in Saudi Arabia. Teachers A, B and D

responded that they supported the inclusion policy. Teachers A and B strongly supported it, teacher D supported it and teacher C did not support inclusion in Saudi Arabia, especially for children with ASD, as conveyed by their comments. Teachers A, B and D supported inclusive education for children with ASD to provide the students with opportunities and the right to receive education and to increase their academic and social skills.

During the interviews, the teachers were also asked to share their perceptions of inclusive education, especially for children with ASD, and whether their attitudes changed based on the severity of ASD. Teachers A and D had positive attitudes towards inclusive education for students with high-functioning autism, while teachers B and C had negative attitudes towards inclusive education for children with ASD; however, all teachers responded that they had negative attitudes towards inclusive education for students with low-functioning autism.

Teachers' perceptions of training

Teachers were asked about their opinions regarding training and what types of training might be needed to support inclusive education for students with ASD.

Interestingly, teachers A and C, who worked at school with inclusive education for children with ASD, only attended one training course before the school implemented inclusive education for students with ASD. The course only lasted two days. After the school implemented inclusion, teachers A and C reported that they needed more training to incorporate children with ASD into their classrooms. On the other hand, teachers B and D, who worked at a school without inclusive education for children with ASD, had no training in the special education field.

All teachers were asked about the training they required to promote inclusion. Teachers A, B, C and D had similar views regarding training. The following list includes the types of training recommended:

- Strategies for teaching students with ASD in mainstream schools.
- Courses about ASD as a developmental disorder, specifically regarding; the definition of this condition, their symptoms and the best interventions for them.
- How to manage and communicate with these students in mainstream classrooms.

2. What are the teachers' perspectives of the advantages and disadvantages of the inclusion of students with ASD in mainstream schools?

Teachers' perceptions of the advantages of inclusion

When the teachers were asked about the advantages of inclusion, they unanimously agreed that inclusive education has advantages for children with ASD. All teachers emphasised the following four main advantages of inclusive education for students with ASD: inclusive education helps improve social abilities, such as communication and interaction skills; it helps create a good environment and improves skills in developing friendships with peers; it supports and improves academic skills; and it promotes inclusion in society as well as in schools.

On the other hand, when asked about the advantages of inclusive education for students without ASD, most teachers responded that inclusion has positive effects on the understanding of autism for students without ASD.

Teachers A, C and D agreed that inclusion promotes the development of social skills for both students with and without ASD. In

addition, teachers A and C responded that there is no clear academic impact on students without ASD. Moreover, teachers C and D noted that inclusion increases the opportunities to develop relationships among both types of students.

Teachers' perceptions of the disadvantages of inclusion

Teachers A, B, C and D agreed that inclusive education for students with ASD has some negative impacts, such as the school's environment and staff being unprepared for the students, which could affect students' academic and social development, especially for students with low-functioning autism. Each interviewee was also asked about the disadvantages of inclusion for students without ASD, and all participants agreed that inclusion might have negative effects on the academic achievement of students without ASD.

Discussion

1.Teachers' perceptions of inclusive education for children with ASD:

Understanding of the condition of student with ASD and inclusive education

The finding of this study did not support previous studies. For instance, this finding is not in line with previous research conducted by Stone and Rosenbaum (1988), which showed that teachers generally have misconceptions about students with autism; however, over the years since that study was conducted, both society awareness and the percentages of children with ASD have increased (Centre for Autism Research, 2015; Alotaibi and Almalki, 2016). Some studies have examined teachers'

general knowledge of ASD, and Jennett et al. (2003) showed that little attention is given to investigating teachers' knowledge of ASD. This assertion is confirmed by Schwartz and Drager's (2008) study, which indicated that many general teachers lack sufficient knowledge of autism that is needed to meet these students' needs in mainstream schools.

Another important finding was that most of the teachers defined inclusive education as occurring when children with ASD are taught in classrooms along with other typically developing peers. This result corroborates the definition of O'Connor (2007), who defined inclusive education as occurring when schools educate children with and without SEN together in the same mainstream classroom. This outcome contradicts the findings of Norwich (2008), who defined inclusive education as not only involving instruction in the same location but also involving the same opportunities for participation for all students. The data collected during this study indicated that there are Saudi teachers who lack sufficient knowledge regarding the differences between mainstream, integration and inclusion education. A possible explanation is that inclusive education for students with ASD in Saudi Arabia is new, as until 2010, children with ASD were excluded from regular schools (Almasoud, 2010). The limited understanding of teachers regarding inclusive education for children with ASD may also be due to a lack of sufficient services for children with ASD in the KSA (Alnemary et al., 2017).

Attitudes regarding the inclusion of students with ASD

Most participants expressed positive attitudes towards inclusive education for students with ASD, which their attitudes are important. These results seem to be in line with a research study by Rose (2001) and

Downing (2008), who asserted that for successful inclusion to take place, it must be supported by teachers.

Because all participants in this study were female teachers, the findings might support previous research that showed that female teachers have more positive attitudes towards inclusion than male teachers. For example, a recent study by Boyle et al. (2013) indicated that female teachers are more positive than male teachers regarding inclusive education. In contrast, Parasuram (2006) found that gender does not have an effect on teachers' attitudes.

Moreover, the research findings indicated a high level of positive attitudes toward inclusive education for students with ASD, especially those with mild ASD. This result is in line with several previous studies conducted in different contexts. Dupoux et al. (2005), Koutrouba et al. (2006), Alquraini (2011) and Cassady (2011) found that the level of disabilities might affect teachers' attitudes towards inclusion.

Three teachers, who all held BA degrees, had positive attitudes towards inclusion. One teacher, who held a diploma, did not support inclusive education, and thus the level of education could have impacted this teacher's opinions. It seems that the higher the level of education, the more positive the attitudes. Al-Ahmadi (2009) found that teachers who held master's degrees are more positive towards inclusive education. Carrington (1999) found that teachers' attitudes towards inclusion are linked to the acceptance of students with SEN. Moreover, if teachers have sufficient knowledge regarding children with ASD, they may also have more positive attitudes towards inclusion (Subban, 2005).

Teachers' perceptions of training

The findings clearly show that teachers require training because it contributes to positive attitudes towards inclusion. Based on an examination of the literature, if teachers receive training about children with ASD and to manage them in the classroom, inclusive classrooms will be positively impacted for students with and without ASD. This result corroborates the findings of Hammond and Ingalls (2003), who suggested that teachers require additional training opportunities to develop effective inclusive education practices.

This study showed that the teachers mostly agreed on the training topics they require, such as teaching strategies, information about ASD, classroom management strategies for students with ASD and strategies to interact with parents. Furthermore, training could improve teachers' attitudes and confidence levels towards the inclusion of children with ASD if teachers are provided with practical knowledge. Moreover, training provides appropriate knowledge, increases teachers' confidence levels and engenders positive attitudes towards inclusive education and towards children with ASD (Avramidi and Kalyva, 2007; Forlin and Chambers, 2011; Cater and Hughes, 2006). In general, it is important that teachers receive pre-service training and in-service training before the implementation of inclusive education for students with ASD, which may increase awareness to make the classroom, and indeed the entire school, autism-friendly. In addition, training or workshops should not only be offered for general teachers but also for special education teachers to keep them up-to-date regarding inclusive education and the special needs field (Avramidis and Norwich, 2002; Hendricks, 2011).

2. Teachers' perceptions of the advantages and disadvantages of inclusion:

Teachers' perceptions of the advantages of inclusion

Based on the findings of this study, most of the teachers believed that inclusive education has a positive impact on students with ASD, as it might help increase social and academic skills. Also, inclusive education provides students with ASD with the right to receive education in mainstream schools, as mentioned in the Salamanca Statements (1994).

The perceptions of the teachers are similar to the findings of several previous studies that inclusive education has many advantages for students with ASD, both socially and academically. For example, Odom et al. (1985) and Rotheram-Fuller et al. (2010) found that students with ASD have benefited from inclusion in mainstream schools both academically and socially. McGregor and Campbell (2001), Kellegrew (1995), and Egel et al. (1981) found that inclusive education improves social and behavioural outcomes for students with ASD.

Moreover, all four teachers were aware of the positive effects of inclusive education for typically developing students. For example, they reported that inclusive education could increase the understanding of ASD for typically developing students, which helps them accept students with ASD. This result is consistent with other research that showed that inclusive education effect for students without ASD develop their social and behaviour outcomes about students with ASD (Cater and Hughes, 2006; Copeland and Cosbey, 2008).

Teachers perceptions of the disadvantages of inclusion

The result is in agreement with McGregor and Campbell's (2001) findings, which showed that inclusive education might negatively affect students with ASD because mainstream schools are ill-prepared and because these students might experience isolation. Ainscow et al. (2006) found that students with SEN in mainstream schools might experience rejection and bullying; however, by increasing typically developing students' awareness of ASD, these issues could be avoided.

Another interesting result is that most of the teachers agreed that inclusive education also has a negative impact on the academic achievements of students without ASD. This could possibly occur because students with ASD, especially severe ASD, make loud sounds or exhibit repetitive behaviours, which can be detrimental to the concentration of students without ASD. This is in agreement with the study by Idol (2006), who found that students without ASD experienced negative outcomes in terms of their academic achievement as a result of inclusive education; however, teachers could develop effective strategies to overcome these difficulties.

Conclusions

This study aimed to investigate teachers' perceptions towards inclusive education for children with autism spectrum disorder (ASD) in primary mainstream schools in Riyadh, Saudi Arabia. The purpose of the study was to obtain and increase an understanding of teachers' attitudes towards the inclusion of students with ASD. Semi-structured interview data from four primary female teachers were used to answer the two research questions regarding the teachers' attitudes toward inclusive education for

students with ASD as well as their perspectives of the advantages and disadvantages of the inclusion of students with ASD.

This study has shown that all participants possessed a general and basic knowledge related to children with ASD, especially for the symptoms of the disorder. The research also showed that most of the teachers defined 'inclusive education' as education for children with ASD in primary schools. In addition, the results of this investigation showed that most of the teachers had positive attitudes towards the concept of inclusive education for students with ASD, especially for those with mild ASD. Moreover, it was found that training teachers to effectively include students with ASD is needed. The second major finding is that all participants indicated that inclusive education has both advantages and disadvantages for students with and without ASD.

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