

## **Self Efficacy as perceived by teachers' of disabilities children according to some demographic variables**

### **In Saudi Arabian Kingdom**

#### **Abstract**

The idea of inclusive education in Saudi Arabia is a recent phenomenon compared to Western countries. Using data from a doctoral study, this paper explores primary school teachers' attitudes towards including students with disabilities and in particular, those diagnosed with Autism Spectrum Disorders (ASD). Findings show that the Saudi primary teachers are highly positive about including students with disability including those diagnosed with ASD in inclusive classrooms. However, they appeared somewhat apprehensive about including students with severe disabilities because of their unique behavioural challenges. While the positive attitudes are to be celebrated, there is need for professional development around curriculum modification to enhance teachers' pedagogical capability for teaching all students with disability in inclusive classrooms in Saudi Arabia.

#### **Introduction**

Inclusive policies internationally draw attention to the need for the equal educational rights for all children and the provision of learning support to all regardless of their individual differences (Dapudong, 2013; Loreman, Deppeler & Harvey, 2010). The idea of inclusive education in Saudi Arabia is a recent phenomenon compared to Western countries, and there are not yet any specific policies on inclusive education reform (Alnahdi, 2012; Alquraini, 2012). Education policy in Saudi Arabia is focused exclusively on students with disabilities; however, there are increasing efforts on the part of the Ministry of Education to include students that have previously been excluded, such as those with ASD (Al-Faiz, 2006). Quality inclusive education programs offer an option for students with disabilities who would otherwise not be successful in mainstream schools (Agbenyega & Klibthong 2012; Loreman, Deppeler & Harvey, 2010). A growing number of inclusive schools across many countries have supported students with disabilities and at-risk students achieve academic success (Montgomery, 2013; Schaefer, 2010; Skuller, 2011). There has been extensive inquiry into a teachers' attitudes towards students with disabilities in western countries (Agbenyega, 2007; Damasco, 2013; Ngonyani & Van der Werf; 2013). There, however, has been little formal inquiry into the attitudes of Saudi Arabian teachers towards inclusive education practice that benefit students with disability, in particular those with Autism Spectrum Disorders. To confirm, and extend the understanding of attitudes of teachers

towards students with disabilities, it is important that a quantitative survey research be conducted to explore the attitudes of teachers with respect to the inclusion of students with disabilities and, in particular, those diagnosed with Autism Spectrum Disorder (ASD) in inclusive primary schools. Saudi Arabia has recently begun to include students with disabilities, specifically those diagnosed with ASD in regular schools (Al-Mubarak, 2010). Given the cultural background and lack of attention for inclusive education in the country, it is important to know how these students will be received by their teachers.

### Literature review

The philosophy that underpins inclusive education is based on the principles of social justice and equity. The purpose is to ensure the full participation of all students in mainstream schools regardless of their disabilities, learning difficulties, gender, ethnicity, socioeconomic status, or cultural or religious differences (Armstrong, Armstrong & Snandagou, 2009; Farrell, Ainscow, Howes, Frankham, Fox & Davis, 2004). The expectation is that, in regular schools, all students should be provided with equitable opportunities for a high-quality education. This means that school principals and teachers must be willing to adapt and change their teaching methods to meet the learning needs of these students, as well as to value their rights to an education (Loreman, Deppeler & Harvey, 2010).

### Equity and inclusive education policy context in Saudi Arabia

Saudi Arabia is among the group of Middle Eastern countries that has made some progress in the area of disabilities, but inclusive education remains at a very early stage of its development. As the context of this study is based on Saudi Arabia, the following sections describe the various policies and legislation in this country that have contributed to improvements in its approach to inclusive education. Social equity and inclusive education policies and practices can provide and support a constructive learning environment where all children have opportunities to learn together and learn to live together in society (UNESCO, 1994). The concept of inclusive education can vary from country to country; however, the purpose of inclusive education is to provide educational facilities for students with disabilities in the classrooms of mainstream schools alongside students without disabilities. Social equity can be ensured when a country takes the initiative to implement this practice (Aljobran, 2011).

The levels of social inclusion in Saudi Arabia cannot be compared to those in Western nations since Saudi Arabia is still an emerging democracy, with ongoing equity and social inclusion issues; however, considerable improvements regarding social inclusion and equity in education have been attained in recent years (Al-Mousa, 2010). Like European and North American societies, social inclusion in Saudi Arabia has emerged in response to the growing social divides that have resulted from the changing needs of the society (Akram, 2006). While a number of international working papers use social inclusion to spur discussions on issues regarding equity in society, the limited research which has been conducted on social inclusion in Saudi Arabia depicts it as having inherent value as both a process and a goal (Al-Mousa, 2010). As such, social inclusion in Saudi Arabia is viewed as a normative concept and an approach to raising the standards and understanding in society, optimising fairness and healthy co-existence among its members (Akram, 2006).

From the perspective of Saudi Arabia, social inclusion encompasses a proactive and human development approach to achieving the well-being of the entire society, which demands more than just the removal of the barriers and risks that impede inclusion (Prince Salman Center for Disability Research, 2004). It is important to note that the government of Saudi Arabia recognises that social inclusion requires a combination of action and investment to bring about implementation of same, particularly with regard to their children's education (Hamdan, 2006). Recognising the significance of the diversity and differences among members of society has become central to the ideological harmonisation and new understanding of identities at national and community levels in Saudi Arabia (Al-Ajmi, 2006). Coupled with the Islamic principles on humanity that guide Saudi society, social inclusion goes a step further and calls for the validation and recognition of the commonalities of the shared aspirations among all members of Saudi society, especially as evidenced among children and their families (Al-Ajmi, 2006).

Research into social equity in Saudi Arabia is weakened by a lack of studies which focus on gender-based inequality. This is part of the social fabric of Saudi Arabia and, unless such discrimination is addressed, it may be difficult to achieve social equity in inclusive education in Saudi Arabia (Hamdan, 2006; MacLeod, 2005; International Service for Human Rights, 2008). These inequalities, according to MacLeod (2005), are deeply embedded in the country's culture and religion, implying that changes are more likely to be slow and gradual. This challenging situation in Saudi Arabia has recently increased concern among educators and researchers about the possibility of finding ways to ensure social justice and equity

## Teachers' attitudes towards inclusion

A large number of studies in the US have reported positive attitudes of teachers towards inclusive education (Elhoweris&Alsheikh , 2006; Evangeline, 2006; Gordon, 2013; Mastin, 2010; Morris, 2013; Otero, 2012; Sutton, 2013; Walker, 2012). For example, Sutton (2013) examined 105 school teachers' attitudes towards inclusive education in Mississippi and found that teachers of elementary and middle schools had positive attitudes towards the inclusion of students with disabilities in regular classrooms as they believed that these students could perform well academically when support, knowledge, and meaningful collaboration were prevalent.

Morris's (2013) study of 132 teachers' attitudes in the South Atlantic US, reported that both special and general education instructors had a more favourable attitude towards the practice of inclusion and that teachers with 16 to 20 years of teaching experience had more favourable attitudes than those with 26 to 30 years. Gordon (2013) argued that teachers who believe that inclusion provides equal educational opportunities to all children tend to be more positive than those who think inclusion is a burden. Otero (2012) reiterated that special education teachers tended to be more positive about including students with disabilities than general education teachers because they perceive their special education knowledge as preparing them to adapt and modify curriculum for students with disabilities. This buttressed the point raised by Mastin (2010) that special education teachers are more positive towards teaching students with disability than general education teachers because of the nature of their training.

Other studies on teachers' attitude reported that teachers with experience in working with students with disabilities often have more positive attitudes towards inclusive education than their colleagues without relevant experience (Kalyva, Gojkovic, &Tsakiris, 2007; Batsiou, Bebetos, Panteli and Antoniou, 2008). Agbenyega (2007) reported that teachers who think including students with disability would lower the quality of their teaching tend to be negative towards inclusion.

Subban and Sharma (2006)'s study in Australia found that primary school teachers held positive attitudes towards the inclusion of students with disabilities in regular settings; however, they had less favourable attitudes towards including students with behavioural and emotional disorders. These authors added that teachers, who were trained to teach students with disabilities, appeared to hold more positive attitudes than teachers who did not have such training. In addition, teachers who had a family

member or close friend with a disability held more positive attitudes than those who did not.

Some studies conducted in Saudi Arabia found that the participants had negative attitudes towards the inclusion of students with intellectual disabilities in regular classroom settings (Alkhalifa, 2001); male teachers had more positive attitudes towards inclusive education than their female colleagues (Al-Ahmadi, 2009). A follow-up study by Alquraini (2012) in Saudi Arabia reported that general education teachers were more positive towards inclusion than special education teachers and teachers who had more experience teaching students with disabilities held more positive attitudes towards inclusive education compared to their counterparts with no or some experience.

### **Teachers' attitudes towards inclusion of students diagnosed with ASD**

Segall (2008) looked at 42 teachers' attitudes towards the inclusion of students diagnosed with ASD in the state of Georgia. He used the "Autism Inclusion Questionnaire" and found that special education teachers had more positive attitudes than general education teachers to include students diagnosed with ASD in general education settings. Segall also reported that general education teachers who were less experienced with teaching students diagnosed with ASD were prone to have less favourable attitudes about including them in regular classrooms.

In 2011, Park and Chitiyo examined 127 teachers' attitudes towards children diagnosed with ASD in the Midwestern states. By applying the "Autism Attitude Scale for Teachers (AAST)", their study found that the majority of teachers had positive attitudes towards children with ASD. They also reported that teachers' attitudes were influenced by variables such as gender, age, school level and workshop experience. In another study, Omar (2011) found that teachers in Egypt had negative attitudes towards inclusive education. He examined 60 teachers' attitudes in Egypt towards inclusion of students diagnosed with ASD in regular schools and found that most teachers held negative attitudes. His study did not observe any significant factor which could negatively influence teachers' attitudes.

A limited number of studies could be located in Saudi Arabia that have been conducted to examine teachers' attitudes towards the inclusion of students with ASD. In 2006, Al-Faiz examined 240 Saudi teachers' attitudes and found that the teachers had positive attitudes towards the inclusion of students diagnosed with ASD. She also reported that primary school teachers who had experience teaching students diagnosed with

**ASD had more positive attitudes towards inclusive education than those who had less experience. In another study,**

**Al-Mubarak (2010) looked at 173 teachers' attitudes and found that they held negative attitudes towards the full inclusion of students diagnosed with ASD, while they had positive attitudes towards partial inclusion of such students. However, the study by Al-Mubarak did not find any significant relationship between teachers' experience and attitude towards including students with disabilities. From the findings of the above studies, it appears that primary school teachers in various countries have mixed attitudes towards the inclusion of students with disabilities and students diagnosed with ASD in regular primary schools. Moreover, there are a number of significant factors which influence teachers' attitudes, and among these, most noticeable are the degree of support and facilities from schools, and adequate training to teach students with disabilities and students diagnosed with ASD.**

**A limited number of research studies have investigated the perceived degree of success in teaching students with disabilities (Sharma & Chow, 2008). For example, three studies conducted by Ahmmed, Sharma & Deppeler. (2012) in Bangladesh, Sharma and Chow (2008) in Hong Kong and in the US by Cox and Washington (2008) found that schoolteachers with more perceived success in teaching students with disabilities had more positive attitudes towards inclusion than those with less perceived success. In contrast, a study conducted by Sharma (2009) found that perceived success in teaching students with disabilities did not influence teachers' attitudes towards the inclusion of students with disabilities. It can be concluded that teachers' attitudes to inclusive education are complex and dependent on several variables.**

## **Method**

**The aim of this study is to examine teachers' attitudes to inclusive education of students with disability, in particular those diagnosed with autism spectrum disorder (ASD). The study was informed by the question: What attitudes do school teachers have towards the inclusion of students with disabilities, in particular those diagnosed with Autism Spectrum Disorder in regular primary schools in Saudi Arabia?**

## Data collection

The results presented and discussed here emerged from data collected using a structured questionnaire known as Multidimensional Attitudes Towards Inclusive Education Scale (MATIES) (Mahat, 2008). This questionnaire was developed for a larger doctoral study that investigated teachers' attitudes towards inclusive education and their perceived efficacy. The questionnaire consisted of three parts. Part 1 included demographic information pertaining to respondents' gender, educational area, highest level of education, years of teaching experience, experience teaching students with disabilities, experience teaching students with ASD, contact with persons with disabilities, training to teach students with disabilities and perceived degree of success teaching students with disabilities. Part 2 measured how cognitive, affective and behavioural variables impact inclusive education programs. Items on cognitive dimensions reflect how teachers' perceptions and beliefs influence their attitudes towards inclusive education (Mahat, 2008). Items on the behavioural dimension seek to measure teachers' intention to act in a particular way (behavioural intent) (Mahat, 2008). The scale originally contained 18 items. Each item is rated on a six-point Likert scale ranging from strongly disagree (1) to strongly agree (6). Higher scores on the scale are indications of favourable attitudes of the participant, while lower scores are indications of negative attitudes of the participating educator. The Cronbach's Alpha value of this subscale was 0.91. An item that investigated educators' attitudes towards the inclusion of students with ASD was added to each of the three parts of the scale. Thus, the three parts—cognitive, affective and behavioural—each had an additional item on the influence of attitude on the inclusion of students diagnosed with ASD. An example of the newly developed item reads: "Inclusion of students with ASD is the best solution to address educational problems in Saudi Arabia". In total, the scale had 21 items. Of the 21 items, 10 items were negatively worded and the remaining 11 were positively worded. The 10 negatively worded items were reverse coded for final analysis.

## Translation and validation of the survey questionnaire

Prior to the implementation of the survey questionnaire, translation and validation of the questionnaires were conducted following several steps

### **Step 1: Translation of the MATIES scale from English to Arabic.**

The research questionnaire was translated into Arabic for use in this study. A conceptual translation method was employed for the translation. First, two independent translators were asked to translate the scales from English to Arabic. One of these translators was a postgraduate special education student at Latrobe University, while the other was enrolled in a Masters in Applied Linguistics program at Melbourne University. After the refinements, the survey questionnaires were given to a professional translator and language experts (the experts were NAATI accredited Arabic-English translators in Australia) to cross-check the two versions. The translator made small changes to the questionnaire; for example, the translator fixed the grammar and used Arabic terms that are clearer in the questionnaire. Drawing on all these versions, the researcher eventually made final changes to the translated versions.

### **Step 2: Review of Arabic draft by experts.**

To improve the validity of the questionnaire, content validation was carried out to ensure that the survey instrument was relevant to the Saudi Arabian context. The survey questionnaire was sent to six experts (academic specialists in the fields of special education or psychology in Saudi universities). They were asked to judge the clarity of the language as well as the appropriateness of the statements for the Saudi Arabian context. They checked the proposed amendments, suggested deletion of irrelevant words and phrases, and refined and suggested words to replace those with more than one meaning.

The reliability of the MATIES was computed through the Cronbach's Alpha test. Table 1 illustrates the number of items in each dimension. The cognitive dimension of the MATIES has 7 items, the affective dimension has 7 items and the behavioural dimension also has 7 items. In total, the MATIES has 21 items.

Table 1. Number of items in each dimension

Scale dimensions	Number of items	Cronbach's Alpha coefficient
Cognitive	7	0.80
Affective	7	0.80
Behavioural	7	0.88
Total	21	0.79

## Participants

All participating teachers were selected randomly using a simple random procedure. A total of 2,831 questionnaires were sent to school teachers, of which 1,529 responded comprising of 974(63.7) males and 555(36.3%) females. The majority of the participants 1107 (72.4%) were below the age of 40 and 422 (27.6%) were above 40 years suggesting that there is a strong and vibrant teacher workforce for inclusive education in Saudi Arabia. Of the total participants 498(32.6%) studied special education, 789(51.6%) had qualification in general education and 242 (15.8%) had other qualifications. The majority of the participants 1355(88.6%) held Bachelor degrees, 157(10.3%) and small number with masters degree 17 (1.1%). Participants also come with various time-spans of experiences ranging from (1-4 years,452, 29.6%); 5-9 years (257,16.8%); 10-14 (278, 18.2%); 15-19 years (274, 17.9); and more than 20years (268, 17.5%) respectively.

## Data analysis procedures

The researcher used the Statistical Package for Social Sciences for Windows (SPSS) version 19 (Pallant, 2010) to analyse the data. Means and standard deviation were calculated for each item. In addition,

## Findings and discussion

The purpose of this study was to measure the attitudes of Saudi primary school teachers towards the inclusive education of students with disability and in particular, those diagnosed with Autism Spectrum Disorder. The table below shows the demographic details of the participants.

Table2. Participant's acquaintance with disability

Items	Yes	No
Experience teaching students with disabilities	802(52.5%)	727(47.5%)
Experience teaching students with autism	309(20.2%)	1220(79.8%)
Family member with a disability	647(42.3%)	882(57.7%)
Friend with a disability	347(22.71%)	1182(77.3%)
Relative with a disability	434(28.4%)	1095(71.6%)
Training to teaching students with disabilities	448(29.3%)	1081(70.7%)

Regarding perceived success level in teaching students with disabilities, the data show the following: very low ability 122(8.0%), Low ability 217(14.2%), Average ability 662(43.3%), High ability 363(23.7) and Very high ability 165(10.8%) respectively.

### Teachers' attitudes towards children with disability

In order to determine the nature of teachers' attitudes, the school teachers' responses on MATIES were examined. The mean and standard deviation for the total MATIES and for the three factors were computed and compared. Results indicated that the Saudi primary school teachers have positive attitudes towards the inclusion of students with disabilities in regular primary schools ( $M = 4.70$ ,  $SD = 0.55$ ). As shown in Table 2 and Figure 1, school teachers had the most positive attitudes towards including students with disabilities in all social activities in the regular classroom (Item 15,  $M = 5.26$ ,  $SD = 0.80$ ).

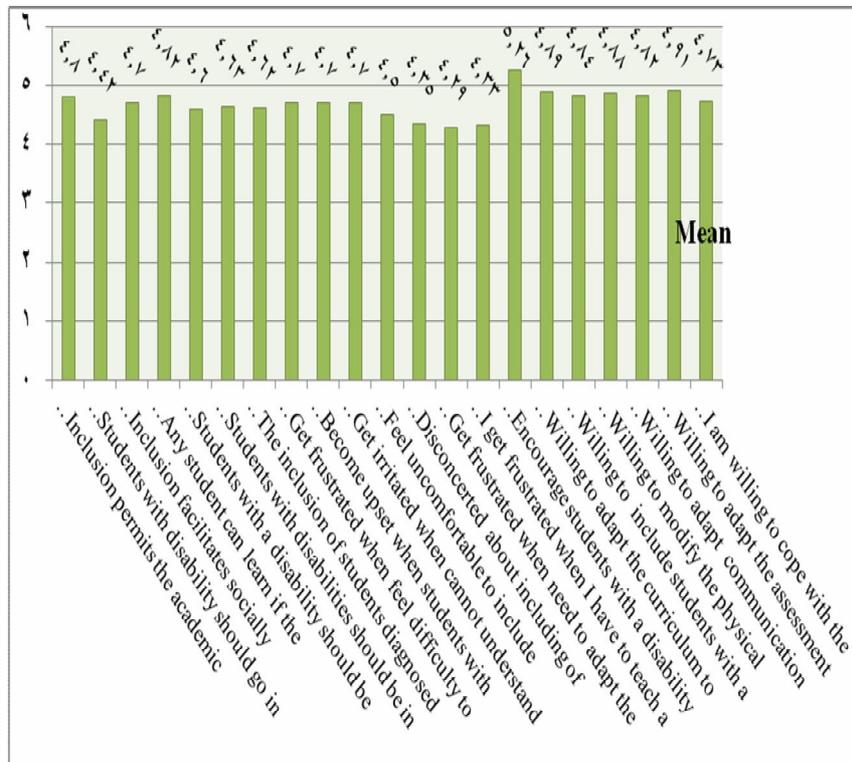


Figure 1. Teachers' mean scores on the 21 items of MATIES.

The results also show that school teachers have positive attitudes towards the three factors (cognitive, affective and behavioural) as shown in Table 3 and Figure 1 As illustrated in the table, school teachers showed the most positive attitudes on the behavioural factor ( $M = 4.90$ ,  $SD = 0.61$ ), with the mean scores for the cognitive and affective factors also being high, at 4.64 and 4.50, respectively.

**Table 3 Descriptive statistics of school teachers' responses on MATIES (N = 1,529)**

	Factor	M	SD
Factor 1	Cognitive	4.64	0.63
Factor 2	Affective	4.50	0.79
Factor 3	Behavioural	4.90	0.61
	Total score	4.68	0.68

**Value 1 = Strongly Disagree – 6 = Strongly Agree**

Pertaining to the attitudes of school teachers towards the inclusion of students diagnosed with ASD in regular primary schools in Saudi Arabia, the mean and standard deviation for the three questions (items 7, 14 and 21) on MATIES were computed. The results indicated that, in general, school teachers had moderately positive attitudes towards the inclusion of students diagnosed with ASD in regular primary schools ( $M = 4.56$ ,  $SD = 0.77$ ). Their positive attitudes demonstrate that they are willing to cope with the disruptive nature of some students diagnosed with ASD ( $M = 4.73$ ). The item with the second highest score was the teachers' belief that the inclusion of students diagnosed with ASD offers the best solution to address educational problems in Saudi Arabia, with a mean of 4.62 and SD of 0.970. The responses of the teachers also indicated a highly positive attitude to the item which measured frustration when teaching a child diagnosed with ASD, with a mean of 4.33 and SD of 1.470.

**Table 4 Teachers' attitudes towards the inclusion of students diagnosed with ASD (N = 1,529)**

	Item	Mean	SD
7	Inclusion of students with ASD is the best solution to address educational problems in Saudi Arabia.	4.62	0.97
14	Get frustrated when have to teach a child with ASD.	4.33	1.47

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21	Willing to cope with the disruptive nature of students with ASD in inclusive classroom.	4.73	0.94
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It can be argued based on the results that the attitudes of the Saudi primary school teachers toward inclusive education of students with disability are generally positive.

The results indicated that school teachers had positive attitudes towards the inclusion of students with disabilities in regular primary schools ( $M = 4.70$ ,  $SD = 0.55$ ). The result of this study showed that the majority of teachers (52.5%) had experience in teaching students with disabilities and this might have contributed to their positive attitudes (Item 15,  $M = 5.26$ ,  $SD = 0.80$ ). It seems that positive past experiences with students with disabilities did affect the teachers' attitude toward inclusive education in a positive way. Ajzen(2006) argues that people develop positive attitudes toward target behaviour when they think they have the capacity to accomplish the behavioural task. This means that it would have been negative had it not been the teachers' previous positive experiences. In addition, the current positive attitudes of the teachers appear to predict their willingness to involve students with disabilities in classroom activities, further signifying a good indication of the successful implementation of inclusive education in Saudi Arabia. On the contrary, the lack of teaching experience and training to teach and communicate with students with severe disabilities might have influenced the teachers' less positive attitudes toward students with severe disabilities. The less positive attitudes are also indicative of how these teachers perceived teaching students with severe disabilities a difficult task.

One of the significant findings of this study was that school teachers demonstrated the least positive attitudes on item 13, which measured willingness to adapt the curriculum to meet the individual needs of students ( $M = 4.30$ ,  $SD = 1.430$ ). It is possible that teachers are not willing to change the way they have been teaching. In addition, adjusting curricula takes time and effort, and many teachers are not trained in this area. It is important to note that moving from general to inclusive education requires the learning of new curricula practices and skills (Otero, 2012). A lack of training and having a little time to adjust to the new learning environments that inclusive education requires can leave teachers overwhelmed, feeding back into their behavioural control and lead to the formation of negative attitudes to inclusive education (Ajzen, 1991). If teachers develop negative attitudes, this will in turn reduce their behavioural intentions toward inclusive education (Gordon, 2013).

To explore teachers' attitudes towards the inclusion of students diagnosed with ASD, mean score on three items (items 7, 14, and 21) were computed. The results indicated that, in general, school teachers had slightly positive attitudes towards the inclusion of students diagnosed with ASD in regular primary schools ( $M = 4.56$ ,  $SD = 0.77$ ). The school teachers of Saudi Arabia showed the most positive attitudes to manage the disruptive behaviours of students diagnosed with ASD ( $M = 4.73$ ). The item with the second highest score was the teachers' belief that the inclusion of students diagnosed with ASD offers opportunity for teachers to develop pedagogical competency to address the educational problems in Saudi Arabia, with a mean of 4.62 and  $SD$  of 0.97. However, the mean of 4.33 and  $SD$  of 1.47 for item 14 revealed that teachers of regular primary schools in Saudi Arabia had less positive attitudes about teaching students diagnosed with ASD in their classrooms.

This finding can be explained that lack of knowledge and understanding about ASD is supposed to be largely responsible for the slight negative beliefs held by teachers. This resonates with what some behavioural scholars have argued that when teachers feel they lack the knowledge and competency to perform a particular task, they direct negative attitude towards that task (Clark, 2002; Collins, 2001). It is significant to argue that if the teacher's lack of knowledge about educational provisions for students diagnosed with autism is allowed to persist, their negative attitudes will also continue to persist and negatively affect students with ASD (Jacobs-Bell, 2014). Therefore Saudi schools should be open about whether their teachers are interested in, supportive of and knowledgeable about, students with ASD. It is useful for Saudi schools and their teachers to know why they are providing inclusive education, what they are aiming to accomplish, and whether they are knowledgeable and willing to be responsible and accountable for the inclusive education of students with ASD and those presenting with different kinds of disabilities (Davis & Rimm, 2004).

### **The impact of demographic variables on the teachers' attitudes**

The results of ANOVA showed that several demographic variables significantly influenced the MATIES score for teachers. These were gender, educational area, experience teaching students with disabilities, having a relative with a disability, and having completed training to teach students with disabilities. The results showed that gender was a significant variable associated with teachers' attitudes towards inclusive education in regular schools in Saudi Arabia, with male teachers having more positive attitudes than female teachers ( $f$ -value = 20.12,  $p = 0.000$ ). Similar findings were reported in several other studies (Al-Abduljabbar,

1994; Alghazo&Gaad, 2004; Boardia, Irmer, & Abusah, 2006; Evangeline, 2006). Nevertheless, three studies conducted in the Saudi Arabian context (Al-Ahmadi, 2009; Alquraini, 2012, Alriwili, 2007) found that male teachers had more positive attitudes towards the inclusion of students with severe disabilities than female teachers. This reinforces what Forlin, Loreman, Sharma and Earle(2009) argue that teachers vary in their needs in terms of teaching students with disability. This means, depending on their level of professional competency and needs female and male teachers may perceive their task of teaching students with disability differently and therefore may vary in their attitudes. According to Costello and Boyle (2013), an understanding of inclusive education is related to more positive attitudes towards inclusive education. Since male teachers and female teachers are trained separately in Saudi Arabia as a result of religious and cultural reasons, it is possible that the Saudi male teachers have more understanding of inclusive education than their female counterparts.

Another significant variable in relation to teachers' attitudes was the school teachers' formal educational area. In this study, teachers with different educational qualifications participated. The categories were 'general education', 'special education', and 'other educational' area. Teachers with general and special education qualifications were those who had completed their degrees within the Faculties of Education. Teachers who were classified with other educational qualifications were those who had completed their degrees outside of the Faculties of Education. For example, there were a number of teachers who completed their higher degrees in history, science, the humanities and the social sciences. It was observed that teachers with special education qualifications were more positive than teachers who had general education qualifications or qualifications in other educational areas (f-value = 6.43, p = 0.002). This finding is similar with the findings of Mastin (2010) and Barco (2007) as they found such a relationship when comparing general and special education teachers' attitudes. It can be explained that studying modules on inclusive education significantly reinforces positive behavioural intentions of teachers toward inclusive education than teachers who do not study modules on inclusive education (Costello & Boyle, 2013). This perspective draws on the volitional control variable concept in the Theory of Planned Behaviour. Volitional control means a person must have the resources, opportunity and support available to perform a specific behaviour (Ajzen, 1991). In this case the training the teachers receive serves this volitional purpose. This draws an important implication for practice and that effective training for inclusive education focus on supporting general and

special education teachers to have a sound understanding of inclusive education and what makes its practice effective (Lambe& Bones, 2006). This is premised on the view that an increased understanding of and knowledge about inclusive education would result from training that is context specific and directed at the specific professional and cultural needs of teachers (Alquraini,2012; Zoniou-Sideri&Vlachou, 2006).

Another variable which significantly influenced the MATIES score was the teachers' experience with teaching students with disabilities. The results show that 52% of teachers had experience teaching students with disabilities and this experience influenced them to have more positive attitudes than teachers who did not have experience teaching students with disabilities (f-value = 3.98, p = 0.046). This outcome has been explored by other researchers who found that teachers who had more years of experience teaching students with disabilities had more positive attitudes than those with less teaching experience (Alquraini, 2012; Al-Zyoudi, 2006; Kalyva et al., 2007). However, another study conducted by Al-Mubarak (2010) in Saudi Arabia, found no significant difference between teachers who had experience teaching students with disabilities and those who did not. Experience teaching students with disabilities plays a significant role in changing teachers' attitudes towards inclusive education. It may be possible that when teachers have more experience teaching students with disabilities, they gain more knowledge about how to teach students with disabilities which positively influences their attitudes. However, it should be noted that depending on its organisation and context, teaching experience can act as a facilitator or barrier to inclusive education (Ahmmed et al., 2012; Costello & Boyle, 2013; Parasuram, 2006). The implication is that experience needs to be relevant to the professional demands of those who are beneficiaries of the program.

This is argued in line with the findings of this study that teachers who had contact with a person with a disability had more positive attitudes than teachers who did not have such contact (f-value = 9.44, p = 0.002). However, this result is inconsistent with the study of Al-Faiz (2006) in Saudi Arabia, who found that teachers who did not have either a family member or a relative with a disability had more positive attitudes towards the inclusion of students diagnosed with ASD than those who did have a family member or a relative with disabilities. Also, Alquraini (2012) and Al-Ahmadi (2009) found (in two Saudi Arabian studies) that there was no significant relationship between teachers' attitudes to inclusion and their contact with students with disabilities.

Finally, the findings of this study indicate that teachers' in-service training to teach students with disabilities was significantly

influential on the MATIES score. School teachers who received in-service training to teach students with disabilities were more positive than teachers who did not receive training (f-value = 18.98, p = 0.000). This result is consistent with a number of studies that have investigated the relationship between teachers' training and attitudes and found that teachers with in-service training were more positive to inclusive education than the teachers who did not receive the training to teach students with disabilities (Al-Hamli 2008; Avramidis&Kalyva, 2007; Chopra, 2008;Hsien, Brown &Bortoli, 2009). The teachers' beliefs which have to do with the perceived presence of factors that may facilitate or impede performance of behaviour (Ajzen, 2006) are implicated in the nature of the teachers' attitudes. In this study, the inservice training the teachers received can be regarded as a control factor that contributes to perceived behavioural control in direct proportion to the teachers' subjective positive attitude (Ajzen, 2006). This raises the need for reframing professional development programs to remove impeding factors and address teachers' specific professional needs.

## Conclusion

This research shows there is goodwill towards inclusive education for students with disabilities and those diagnosed with ASD in Saudi Arabia. The research suggests a great potential for effective inclusive education in light of targeted professional development of teachers to enhance their professional capabilities. Therefore, the first step towards developing a robust inclusive education in Saudi Arabia is enhancing pre-service and professional development. Second, is supporting teachers to develop competencies in designing flexible curriculum and implementing innovative pedagogical approaches. The future of inclusive education in Saudi Arabia needs to begin with the training of teachers and contextualised professional development for those already in service. Quality inclusive instructional practices relate to teachers' pedagogical knowledge: what, why and how they do inclusive teaching (Florian, 2012). Limited professional knowledge, inappropriate training and the lack of resourcefulness of teachers can create a boundary between them and students with disabilities. This illustrates the need for a contextualised professional learning, which provides the appropriate tools, skills and capabilities teachers need to be able to work effectively with students with disabilities (Segall, 2008).The researcher submits that special educators must be trained to offer support to general education teachers in inclusive schools. Working cooperatively with mainstream teachers and special educators as equal would provide opportunity for innovation in inclusive education (Recchia & Lee, 2013).

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