

## **“Autism Spectrum Disorder in Saudi Arabia: Current Issues and Challenges”**

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## Abstract

The aim of the current study was to provide a brief explanation of the education system, and special education' current Issues and challenges for students with autism spectrum disorder (ASD) in Saudi Arabia. Additionally, the paper presents some results from studies that explored perspectives of teachers and families regarding Teaching students with ASD. Moreover, the increasing prevalence rate of ASD calls for an early and effective intervention by teachers, families, stakeholders, and decision makers. As a result, early and effective interventions will reduce costs and provide greater improvements through improved productivity of individuals with ASD.

**Key Words:** Autism Spectrum Disorder, Saudi Arabia, Issues, Challenges.

## Overview of the Kingdom of Saudi Arabia

The Kingdom of Saudi Arabia, also known as Saudi Arabia, is an Arab state and is considered the largest in Western Asia by virtual of its large land area which is approximately 2,250,000 kms<sup>2</sup>. The Kingdom of Saudi Arabia is also the second largest such state in the entire Arab world just behind Algeria. Founded in 1932, the Kingdom of Saudi Arabia has a governance system based on the monarchy, following the Sharia law and the precepts of the Quran. With a per capita income of US\$ 55.125, the Saudi people are some of the richest people in the world with an ability to afford the amenities of a modern society. A 2016 report ranked Saudi Arabia in the 38 of 188, in the UNDP's Human Development report. Such an advanced state and quality of life means that the Saudi's have got an estimated life expectancy of 74.1 years.

The people of Saudi Arabia are expected to spend an average of 7.8 years in school according to 2016 Human Development report. The economy of Saudi Arabia largely depends on the export of oil as the country has the largest oil reserves in the region with the largest such concentration in the country's Eastern province. Furthermore, The Kingdom of Saudi Arabia ranks number six amongst the countries with the largest resources of Natural gas.

The Kingdom of Saudi Arabia is also characterized by the two Islamic holiest sites of Mecca and Medina, Kingdom of Saudi Arabia is often called the Land of the two Holy Mosques. The official language of Saudi Arabia is Arabic.

## Education System in Saudi Arabia

The education system in Saudi Arabia has undergone a series of transformations. Recent data indicates that in Saudi Arabia, education ranks sector amongst the sector funded by the government with the State spending more than 8% of the GDP compared to the global 4.6%. Although centered around the study of Islam, it is increasingly getting more diverse. In Saudi Arabia, education is free at all the different levels of learning with a special program in place for those that would wish to study overseas under the King Abdullah education program. Today, the education system in the Kingdom of Saudi boosts of more than forty-two Universities. Although the study of Islam is core, modern Saudi education also provides quality education in several other fields like the arts and sciences so as to prepare the Saudi's for the world of work in global economy (Embassy of Saudi Arabia, 2020). Saudi Arabia embraced and started focusing on higher education after the country entered a new rapid development era. This fostered the formation of the ministry of education that launched a long-term plan aimed at making the Saudi educational system capable of providing highly skilled manpower to run its increasingly sophisticated economy.

The Kingdom of Saudi places a great deal of emphasis on the overall value of education because that is considered a field that prepares the future generations, the nation's fortune. Generally, education entails the whole process of changing and evolving societies by providing new knowledge as long as life continues to attain new dimensions. In the last century, education has drastically transformed into a series of stages of change the world over, often learning from

experiences and failures of the past for a better future. Thus, the education officials in Saudi Arabia have too keenly followed and studied the major stages world-over with a desire to elevate the education standards of Saudi Arabia to international standards. As a response to the different demands for developing inclusive educational curricula that are aimed at keeping pace with social-economic developments, the Ministry of Education formed a series of committees for reviewing emerging trends. These committees were established to ensure that the learning outcomes of the curricula in Saudi Universities are consistent with the new and emerging trends in the education sector. Such committees also encouraged the Saudi ministry of education to revise its education goals to embrace a new vision and paradigm in education reform. The education system was re-oriented towards being more flexible, balanced and sophisticated but designed in such a way that it meets the needs labor market, national development plan, emphasize Islamic principles and orient students towards new and emerging technologies (The Ministry of Education of Saudi Arabia, 2007).

Consequently, the Saudi Arabian government embarked upon a mega project worth billions of dollars in 2010. The King Abdullah Abdul Aziz education development project (KAAPEDP) was developed to further increase access to modern education for the Saudi's. Under this program, the Saudi students would have access to overseas education (KAADDP, 2020). Additionally, the KAAPEDP program would also to equip teachers with practical skills and updated knowledge so as to fulfill the modern and new requirements of teaching and to also classify the mechanisms by which such a process would be accomplished.

### **Special Education in Saudi Arabia:**

The system of education in Saudi Arabia has undergone a series of transformations from the time it was established in 1932. The overall progress in the country has been closely accompanied by a growth in policy which now mandates free education to all the citizens of Saudi Arabia in a bid to improve the literacy level as well as skilling the population. The education system is developed and modelled with an objective of ensuring that the students are trained for life and work in a contemporary world while at the same time preserving the country's social, economic and religious heritage.

With this backstop, the Saudi Ministry of education has set in place a series of education reforms and policies that are aimed at addressing the needs of the students with disability. That has seen an increase in the enrollment of all Saudi children of primary school age. It has also fostered overseeing and enabling a series of special education programs for persons with disabilities, detection of disabilities early and compilation of data on persons with disabilities early. Identification of this information at an early stage has enabled designing specially tailored education programs for such persons easy and specialized library programs to aid their progress have also been initiated.

Despite the fact that these have been developed, a series of concerns exist regarding goals and policies as well as strategies for implementation of these policies in an effective manner. These concerns mainly arise in relation to communication between the families of children with disabilities and the school personnel (Al-Qarni, 2010; Al-Shammary, 2018). The significance of the Saudi educators as well as the families' overall access to these established practices that are designed for successful implementation of the education reforms has not been overlooked. Several programs have been envisaged by the government aimed at ensuring that an all-inclusive education for all the citizens is developed.

The Saudi overall historical timeline of the special needs education services is more modern than that of several countries in the Asia region. Al-Mousa (2010) described several efforts of an educator in 1958 who introduced the Braille system to some few students that are blind but attended regular school. Several teachers became accustomed with the Braille system and also began scheduled teaching of its use to other students outside the regular school sessions. Eventually, several students learned how to read and write with the use of the Braille even before the centralized government efforts to roll it out to all schools were sought. Al-Noor, an institute for persons that are visually impaired was established in 1960 and this further improved special needs education. The government further recognized the overarching

need for a centralized agency and thus saw the establishment of a Department of Special needs education in the Ministry of Education in 1962.

That led to the creation of the educational administrations for students that are visually impaired, deaf and those that have intellectual disabilities (Alsloom, 1995). Following the 1987 Legislation of the Disabled, a foundational statute that clearly identified the rights of persons with disabilities, a step towards improving education for people with disabilities was reached. In addition to defining and classifying disabilities and eligibility criteria, the law also identified education, training and rehabilitation programs that are suitable for such persons (Alquraini, 2011; Al-Jadid, 2013).

As more efforts to meet the unique educational needs of persons with disability further gained traction, a Department of Special Education was established at King Saudi University in 1984. Currently, there are at least 24 public Universities in Saudi Arabia with special Education Departments further highlighting the strides towards an inclusive education for persons with disabilities (Ministry of Education, 2019). A further global emergence of inclusion philosophy coupled with recognition of rights of students with disabilities led to the enactment of the PCPD ACT in 2000 to guarantee habilitation and welfare for students with special needs. The PCPD modified pre-existing codes that are related to disability and resulted into a unified code designed to address the educational needs of the individuals that have got disabilities.

#### Autism Spectrum Disorder (ASD) in Saudi Arabia:

Autism spectrum Disorder (ASD) is a development disorder that impacts the cognitive growth of children. It is a very prevalent development disorder affecting so many children around the world. In Saudi Arabia, information on ASD is largely inadequate owing to the fact that limited empirical studies on the subject have been on this disorder. That presence of limited research and studies on the subject has greatly impacted how the pediatricians undertake the envisaged treatment regimen for children with autism in Saudi Arabia. Furthermore, with the presence of inadequate information about autism in KSA, access to services and identification of empirically validated treatments for individuals with autism can be a very challenging task to the parents (Hess et al., 2008; Thomas et al., 2007). The inadequate information is also a recurrent problem within the other countries in the Arab and they equally struggle to find the right treatments for their children with autism (Elsabbagh et al., 2012; Taha and Hussein, 2014).

The number of children diagnosed with Autism Spectrum Disorder (ASD) in Saudi Arabia has been on the rise in the past decade. The estimate of children with ASD has been increased from 2 - 4/10.000 in the 1940s as Pervasive Developmental Disorders to 4 - 5/10.000 in the 1960s and 1970s (Onaolapo & Onaolapo, 2017). However, in 1970 the prevalence of ASD was 2.4 in 10.000 as an infantile Autism (Treffert, 1970). According to The Center for Disease Control in the United States (CDC) (2018) estimated that 1 in 59 children in the United States has ASD with a rate of 1 in 37 boys and 1 in 151 girls. Based on a study done by Zablotsky, Black, Maenner, Schieve, and Blumberg (2015), the estimated ASD prevalence is (1 in 45) in 2014. This could be attributed to the increased awareness among teachers, parents and other stakeholders. In KSA, several efforts have been made towards advancing ASD research and progress has been made coupled with a series of recent studies. In fact, the prevalence of ASD in Saudi Arabia is anonymous as a result of the lack of connections between diagnosis centers and educational system in Saudi Arabia (Alanazi, 2019).

Prestigious Universities and other service providers have all undertaken research in the area of ASD, with a view of generating information to aid an informed course of action. The government has also invested money in scholarship programs and research aimed at providing more updated information about the extent of ASD in KSA. And yet, despite all these efforts, available services on ASD are limited and any information about them is rather not detailed enough. A 2015 study undertaken by the Ministry of Education report that out of all the students served by the KSA education system, up to 925 males and 437 females have ASD (Ministry of Education, 2015). Further studies indicate that most of the children with ASD in KSA that has access to services received such services from private institutions where the parents bare the entire cost of the treatment (Zahrani, 2013). Fahad *et al.*, (2016) reports that on average the children in KSA begin receiving

ASD treatment by 3 years and that most a great portion of parents utilize the non-medical treatments in conjunction with biomedical and religions treatments.

Due to the inadequacy of treatment in the KSA, some parents seek intervention from the neighboring countries mainly in Jordan as well as in the UK and the US. Whereas majority of the families pay for their travel expenses and treatment, some of them also receive contributions from government towards either travel or medical fees. A 2013 report indicated that the KSA government funded more than 800 children with disabilities with 10% of these children autistic, to receive special education services and respite care from Jordan (Saudi Arabian Cultural Mission in Jordan, 2013). Currently, there is not enough information about the Saudi children with ASD in other countries.

### Causes of ASD

Autism is generally a chronic development disorder that is characterized with an individuals' inability to properly communicate socially of their ability to respond to some environmental stimuli in an effective manner. Some of the characteristics depicted by autistic patients may include a breakdown in their social skills, nonverbal and verbal communication and a series of other repeated behaviors. The term Autism spectrum disorder (ASD) is used to refer to the long term disorder in the brain development characterized by challenges in behavioral and social communication. Some of the challenges that are specific to autistic patients may include impaired development of their social skills. Autism is not a single disorder in its own right but rather a collection of a several disorders that may vary in severity or presentation of the symptoms. Medical doctors often use autism as an encapsulation of several medical conditions that affect the proper mental and behavioral development of an individual. ASD may be caused by a series of factors ranging from biological mutations to environmental factors. Some of the environmental factors can serve to reduce the likelihood of being autistic. For example, some medications, viral infections and complications during pregnancy increase the likelihood of ASD.

Research indicates that majority of autistic children will be diagnosed at the age of 4 to 8 years. Abid *et al.*, (2020) reports that the males are more likely to suffer from autism with a Female: Male ratio of 1:3 and that the advanced parental age poses a significant risk to autism among children. Furthermore, Abid *et al.*, (2020) reports that mothers who smoke are more likely to have autistic children compared to those that do not smoke. Further evidence also suggests that the critical symptoms occur before, during and also immediately after a child is born. Meta-analysis studies done at the Harvard School of Public Health, Department of Epidemiology in which more than 60 neonatal and perinatal factors were examined discovered a strong association between autism and the factors immediately before, during and after birth (Gardener, Spiegelman and Buka, 2009). A case-control study that was carried out in Jamaica showed that there is an association between both paternal and maternal age in the instances of autism (Rahbar, 2012). A similar study done in Finland also came to a similar conclusion (Lampi, 2012).

In addition to the maternal lifestyle patterns like nutrition and substance abuse may not be unique to autism but rather associated with other neurodevelopment diseases. A study conducted in Oman regarding the relationship between breastfeeding and incidences of autism came to a conclusion that there is an increased risk of developing autism when breastfeeding is delayed or when no colostrum is introduced to the breastfeeding child. It also indicated that with exclusive breastfeeding for two years, there is a significant reduction in the risk (Lyall, Schmidt & Hertz-Picciotto, 2014). Despite the several studies that have been conducted on the autism worldwide, there is inadequate information regarding its nature.

### Laws and regulations related to people with ASD in Saudi Arabia.

Just like several other countries like the US, UK, Spain, Australia and South Korea, the Kingdom of Saudi Arabia has instituted a series of policies and legislation reforms that are aimed at promoting an inclusive education even for people with disabilities like those with ASD. Available literature indicates that implementation of inclusive education by the KSA began back in the 1980's and has gradually been improving to further cater for the unique needs of ASD children in the

country (Aldabas, 2015). However, despite the increased number of inclusive schools in KSA, general education teachers are often reluctant to include children with ASD and other disabilities in their classes possibly due to their lack of training in handling students with special needs and those with disabilities. The KSA ministry of education also formally began the special needs program during the 1960's primarily targeting the students that are visually impaired but was rolled out to include other groups like those with ASD (Al-Mousa, 2010). The focus of this kind of special training in KSA has extensively grown especially following the establishment of a general Directorate of Special needs education (DGSE) in 1974.

The DGSE was specially charged with studying the various needs of the students that have disabilities and to also spear head the development of policies that would address the special needs to such persons. Furthermore, in the 1990's, the Ministry of Education also implemented inclusive education protocols in the public schools, that mandated the integration of students that have got disabilities with the other student population in schools (Alnahdi, 2014). That mandate was also accompanied with requiring schools to set-up special classes within the mainstream schools' structures as a way of assisting the students that have disability in addressing their special learning needs. As such, there are two different education placement types available for students with intellectual disabilities in KSA. Whereas the students that have intellectual disabilities may generally enter the KSA mainstream education system, those that have got severe disabilities usually have the option of going to institutions that are specialized to cater for intellectual disabilities (Al-Mousa, 2010).

Such inputs show that the KSA has considerable developments in place to handle students with special needs in Saudi Arabia. The legislation of Disability (LD) that was passed in 1987 was also aimed at addressing the challenges faced with people that have disabilities. It has provisions that guarantee equal access to social services for individuals that have disabilities. It also requires the public agencies to provide rehabilitation services as well as training programs that are aimed at supporting independent living. The Disability code developed in 2000 was also aimed at guaranteeing that persons with disability have got unlimited access to medical, social, psychological, education and rehabilitation services without payment.

### **Current Services for people with ASD:**

In the past decade, there has been a significant improvement in the practice of special education services targeting students that have got disabilities including ASD in KSA by enabling them attain high-quality education like the other children but in a least restrictive environment. However, despite these efforts, a lot needs to be done on the side of institutions and government to further improve these services. The students that have mild to moderate disabilities tend to receive their education in typical classes coupled with support from special needs services. These students are also allowed to fully participate in the general curriculum of education activities albeit with some modifications to cater for their special needs. However, the students with mild to moderate cognitive disabilities continue to receive their education in separate classes in public schools. They only interact with their typically developing peers during the school co-curricular activities and during lunch or recess.

The schools tend to offer special education curriculum to these students which is different from the general population of students. Students with mild to moderate disabilities attend elementary schools from the ages of 6 years up to 14 years, and then followed by middle school until the age of 18 years. Unfortunately, upon completion of their elementary and middle school, majority of them have no opportunity to proceed further in mainstream employment except enrolling for vocational training (Al-Ajmi, 2006). The main purpose of these vocational centers is to provide these students with vocational training as well as employment skills that can help them support independent living. For the students that have severe symptoms, they receive their education in entirely separate institutes. They are typically segregated from their normal peers. Such institutions provide residence, financial aid, food and assistance to students with mild, moderate and severe intellectual and multiple impairments and autism. Such category of students remains at school all week and only returns home on weekends.



#### Current issues in education system for students with ASD:

Despite the fact that there is a developed structure for provision of services to the students with special needs in KSA, several authors have raised a number of questions regarding the overall quality of the current quality of education offered to the students with special needs. Whereas Al-Moussa (2010) characterized the special education in Saudi Arabia is largely successfully, there are several identified shortfalls. Alquraini (2017) discusses that the large amounts of resources, the time as well as the amount of effort expended by the Ministry of Education to support this endeavor is yet to yield any evidence of optimal outcomes.

For instance, while there are facilities and programs designed to address the different educational needs of the students with autism, little research has been conducted to properly examine the efficacy of these programs to the intended recipients. Al-Quraini (2007) also pointed out that there is a shortage of impact studies to properly validate the programs that are currently running for a lot of time as well as positing a cultural rationale to such activities. Given that KSA is a very high culture power based on Hofstede's cultural dimension index, the efficacy of the programs for the disabled and autistic children can be challenged. Such is also further evidenced by studies done by Al-Zoubi and Rahman (2013) that was supposed to evaluate the special education programs in KSA Universities but did that study from a perspective of the heads of such programs. A similar study by Al-Ahmadi, (2009) examined one aspect of special education quality from the perspective of teachers. The study concluded that special education teachers have a negative perception towards their efficacy in the provision of transitional services to the students.

#### Perspectives of Teachers Regarding Teaching Students with ASD in Saudi Arabia:

The perspectives of the teachers are very important in successful implementation of any education program aimed for the persons with disability. As such, positive teacher attitudes are a very important indicator for successful implementation of programs for children with disabilities including those that are suffering from autism spectrum disorders (ASDs) (Robertson, Chamberlain & Kasari, 2003). However, the severity of ASD often makes teaching as well as inclusion of this group of children a very complicated process (Simpson, de Boer-Ott & Smith-Myles, 2003). Studies also indicate that even the teachers from recognized professional competence often consider themselves not able to deal with the ASD students than those that suffer from other forms of special needs. That implies that training of the teachers has got a very powerful influence on the overall development of teacher attitudes towards inclusion especially when such incorporates profession and related abilities (Al-Shammari, 2006).

A study conducted from 1430 teachers indicated that at least three different resources were necessary including training, expert support as well as support in the classrooms (Tan *et al.*, 2013; Jennett, Harris, & Mesibov, 2003). Through teacher training, orientation about the specific nature of student needs of the children with special needs as well as prevailing misconceptions regarding autism. To further improve how the teachers, handle the ASD students, it is important that they are trained to expand their knowledge base on matters to do with autism. Furthermore, Simpson, Boer-Ott and Smith-Myles (2003) and Alsaleh (2019) also indicate that when the teachers are properly prepared to teach the student that have ASD using the context of group effort with special education teachers together with other additional resources, it will serve as another relevant factor to developing positive attitudes of teachers towards children with ASD.

#### Perspectives of Families of children with ASD Regarding Education Setting for their children in Saudi Arabia:

A study by (Alshaigi *et al.*, 2019) was conducted amongst parents that have autistic children regarding the perceptions of other people towards them and their autistic children. The results of the study indicated that at least 33.7% experienced some form of stigmatization. The study also showed that the mothers felt more stigmatized usually when compared to the fathers. As a result, they felt so uncomfortable having autistic children. The study however also discovered that due to public awareness in Saudi Arabia, negative stigmatization of the parents with ASD children is generally going

down. The parents who are stigmatized because of having autistic children suggest a need for a form of psychological intervention to help them deal with the issue of stigmatization.

Due to the stigma from society, the parents of the autistic children also tend to experience self-stigma and thus posing a negative pressure on their overall mental health that also makes them feel so uncomfortable about the state of their children (Baxter, 1989). Parents agree that ASD is a disability amongst their children though with limited knowledge and sensitization, majority does not know how children suffering from this problem can be handled properly. They also agree that such children need to be treated in a special way from the other children. That explains why the parents agree with the Ministry of Education decision of having such children, especially those with severe cases, residents in schools so as to receive specialized attention.

### Conclusion

The prevalence rate of ASD in Saudi Arabia is highly variable but is continuously increasing. ASD symptoms may be different for each individual and they can be classified from mild to moderate to severe. Generally, individuals with ASD exhibit deficits in social skills, communication skills, and behavioral skills. In Saudi Arabia, the increasing prevalence rate of ASD calls for an early and effective intervention by teachers who are well equipped in relation to behavior management. Failure to implement effective interventions will facilitate the development of disruptive behaviors in children with ASD and this may aggravate in the later stages of life transforming them into antisocial individuals who face challenges living a normal life. Early and effective interventions will reduce costs and provide greater improvements through improved productivity of individuals with ASD.



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## "اضطراب طيف التوحد في المملكة العربية السعودية: القضايا والتحديات الحالية"

### ملخص الدراسة

هدفت الدراسة الحالية الى تقديم شرح موجز لنظام التعليم، والقضايا والتحديات الحالية لطلاب للتربية الخاصة يعانون من اضطراب طيف التوحد في المملكة العربية السعودية. بالإضافة إلى ذلك، تقدم الورقة بعض النتائج من الدراسات التي استكشفت وجهات نظر المعلمين والأسر فيما يتعلق بتعليم الطلاب ذوي اضطراب طيف التوحد. علاوة على ذلك، فإن معدل الانتشار المتزايد لاضطراب طيف التوحد في المملكة العربية السعودية يستدعي تدخلاً مبكراً وفعالاً من قبل المعلمين والأسر وأصحاب المصلحة وصناع القرار نتيجة لذلك، ستؤدي التدخلات المبكرة والفعالة إلى تقليل التكاليف وتوفير تحسينات أكبر من خلال تحسين إنتاجية الأفراد ذوي اضطراب طيف التوحد..