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Perepa, Prithvi; Benson, Sarah

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# Mapping teachers' preparedness to teach and support children on the autism spectrum in Ras Al Khaimah

Sarah Benson and Prithvi Perepa  
University of Birmingham

## Executive Summary

According to the World Health Organization, autism is one of the most common disabilities in the world. The number of children with a diagnosis of autism continues to rise globally, including in the United Arab Emirates (UAE). Research has established that appropriate educational provision is one of the best ways to support children and young people on the autism spectrum, and that teacher attitudes have a significant influence on the inclusion of these students in school. However, very little research has been undertaken in the UAE. To address this gap, this study was conducted in Ras Al Khaimah to understand the current knowledge and attitudes of teachers toward students on the autism spectrum. Using an online questionnaire, thirty-nine responses were collected from Ras Al Khaimah teachers. The results show that teachers have a mixed knowledge of autism; they demonstrate a good understanding of autism in some areas but also lack information or knowledge in others. Similarly, while they are in favor of inclusive education as a concept, they also expressed concerns about including students who may need additional support because of their communication or behavioral differences. Based on the research findings, this paper recommends steps that can be taken to increase inclusive educational practices for students on the autism spectrum in the emirate.

## Introduction

Autism, also known as Autism Spectrum Disorder (ASD), is a developmental disability which impacts how an individual communicates, interacts, and thinks (American Psychiatric Association, 2013). It is a lifelong condition with no known cure, although with appropriate support individuals on the autism spectrum can make significant progress and some are able to live independently (Boucher, 2022). While the exact prevalence rates are not available for Ras Al Khaimah, the World Health Organization (2023) estimates that, on average, one in 100 children could have autism across the world, making this one of the most common disabilities.

The Ministry of Education (MoE) in the United Arab Emirates (UAE) set out its vision to include all children

of determination into mainstream schools in Ministerial Resolution No. 647 of 2020 and specifically referred to children on the autism spectrum (MoE, n.d). The Federal Law No. 29 of 2006 also identified developing appropriate human resources as part of its vision to support individuals of determination (MoE, n.d). However, previous studies in the UAE have suggested that lack of teachers' knowledge and skills are a main barrier to inclusive education (Alborno, 2017; Baker, 2015). None of these studies specifically explored the provision for students on the autism spectrum.

Much of the research conducted in the field of autism has been carried out in Western countries (Durkin et al., 2015). While there is growing research on autism in the Middle East and Gulf countries, most of it focuses on the diagnosis of autism, the presentation of autism features in children, and parental experiences (Alawalli

et al., 2020). Most studies conducted within the Gulf Cooperation Council (GCC) countries draw more context-specific conclusions, providing medicalized accounts of diagnosis, treatment or other non-educational interventions (Al Qahtani, 2023; Kelly et al., 2023). Furthermore, some scholars argue that autism-related research is not representative of all Arab countries, and while there are some cultural and social similarities among these nations, there are also unique differences (Alawalli et al., 2020). The predominate conclusion from these studies is that more regional research on autism is necessary.

To address this gap, specifically on teachers working with students of determination within Ras Al Khaimah schools, this study examined teachers' preparedness for including students on the autism spectrum within mainstream schools in the emirate. The key areas of focus were to gather insights into how teachers understand autism and its causes, their perceptions of including students on the autism spectrum in their classrooms, and how prepared they considered themselves to be to teach such students.

## Research Methodology

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To meet the linguistic needs of teachers from various backgrounds working in Ras Al Khaimah, an online questionnaire was developed in both Arabic and English. Thirty-nine teachers completed the questionnaire. This included 10 male teachers and 29 female teachers. Most of the participants (72%) were from private schools, and 28% worked in government schools. This is not representative of educational provision in Ras Al Khaimah, where there are more public schools than private schools. Although different methods of recruitment were tried, such as contacting schools directly and through the Ras Al Khaimah Teachers Network (RAKTN), we were unable to recruit sufficient teachers from public schools. However, a representative range of school settings was included: 28% worked in primary schools, 7% in a primary school with an inclusion hub, 26% worked in secondary schools, a further 18% worked in a secondary school with an inclusion hub, and 21% stated that they worked in other types of educational settings, including early years settings and all-age schools.

The questionnaire covered a range of areas such as:

- (1) What teachers consider inclusion to be;
- (2) Their knowledge of autism characteristics;
- (3) Their perceptions about the cause of autism;
- (4) Their attitudes toward specific autism-related interventions;
- (5) Their willingness to work with children on the autism spectrum within a mainstream school;
- (6) What they consider to be important to improve inclusive education provision in Ras Al Khaimah.

In addition to the survey, two individual qualitative interviews were conducted with teachers to explore some of the recurring themes that emerged from the questionnaire. Descriptive statistics and thematic analysis were used to analyze the collected data from both methods.

## Findings

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To contextualize the results of the survey it was important to understand the teachers' experience of working with children on the autism spectrum and whether they had any qualifications in autism or special education. Twenty-one (54%) teachers reported that they were currently working with students on the autism spectrum. However, most were relatively new to working with students with autism, with 35% having less than a year's experience and 52% with less than five years' experience. Very few teachers possessed specific qualifications in special education or autism, although most teachers (77%) stated that they had received some special education training, with 70% having received it within the past five years. This indicated that most teachers had up-to-date knowledge of special education, although this was not autism specific, and had limited practical experience of working with students with autism. Some previous studies (such as Alharabi et al., 2018) have found that teachers with experience of working with students on the autism spectrum had better knowledge than those who only studied it. It is possible that this lack of experience of the teachers in this study impacted their responses.

## Knowledge About Autism

Responses regarding knowledge of autism characteristics were categorised under two dimensions as per current diagnostic criteria: social communication and interaction, and repetitive and ritualistic behavior (American Psychiatric Association, 2013).

With regard to social communication, 77% of the teachers believed that children with autism were good communicators and 69% considered that these children had a good understanding of language. This is contrary to what the diagnostic criteria for autism suggests: that difficulties in communication are considered a core feature of the disorder (American Psychiatric Association, 2013). Teachers seemed to be aware of some aspects of the criteria though, as 69% of teachers also stated that children on the autism spectrum understand language literally, and 82% identified lack of eye contact as a feature of autism. Difficulties in non-verbal communication and in understanding indirect language, such as sarcasm, are considered to be part of the diagnostic criteria for autism (American Psychiatric Association, 2013).

In terms of social interaction, the dominant view was that children on the autism spectrum want to be alone (92% respondents), do not want to make friends (77%) and therefore cannot work in a group (79% held this view). This is contrary to the prevalent understanding of autism in the West, where it is considered that some individuals on the autism spectrum would like to interact with others (Jordan, 2019). The perceptions of the teachers with regards to social communication skills, as reported in the previous paragraph, suggests that they might assume that the children are able to socially interact. While this was not the case, their view possibly reflects the embedded meaning of the Arabic word for autism (توحد), which is a derivative of the word 'one' or 'on their own'. This linguistic and cultural context may have influenced the teachers' viewpoint and does not align with the current knowledge of autism that generally stems from the Western world.

In terms of repetitive and ritualistic behaviors, a common perception shared by 90% of the teachers was that children on the autism spectrum perceive sensory information differently. Sensory processing

differences were added to the diagnostic criteria in 2013 (American Psychiatric Association). This familiarity with the diagnostic criteria was also noted in responses regarding repetitive behaviors such as rocking or flapping, which were considered to be common in students on the autism spectrum by 87% of the teachers. The main concern for these teachers was behavior, with 82% believing that aggression is common in these children – a stereotypical view held about individuals on the autistic spectrum.

Based on analysis of these results, the participant teachers had a certain understanding of autism, but some of their perceptions were stereotypical, and some differed from Western views. This could be a result of the diagnostic procedures used to identify children on the autism spectrum in Ras Al Khaimah or UAE. Notably, it has been argued that the differing prevalence rates of autism across the world is perhaps because of how autism is conceptualized within different societies (Perepa, 2019).

## Views on Causation and Interventions

Although the exact cause of autism is unclear, it is suggested that personal theories of causation will have an impact on the approaches used to support children (Dardennes et al., 2011) and their families. Therefore, to understand teachers' knowledge, the questionnaire presented several variables with regard to causation and the teachers were asked to select the causes that they agreed with. Several teachers stated that they were unclear as to what causes autism. Genetic factors, considered by some research as a possible cause (Boucher, 2022), were considered as a potential reason for autism by 69% of the teachers. The second most commonly held view (64%) was that it is an act of God. This is not a view that research in the field of autism generally attributes causation to, and suggests that the culture and religion of the participants might have played a role in their understanding of autism. Some teachers who chose genetics or other biological factors also considered that supernatural powers had an influence. The variation in viewpoints shows that the participant teachers appear to hold multiple causation theories at the same time. This highlights the importance of understanding disabilities such

as autism, which do not have an identified cause or a biological test, within cultural contexts to better understand how the conceptualization of the condition and its causes might vary across the world.

The third most commonly held view (54%), was that autism is a result of environmental causes. Some teachers thought that factors such as lack of stimulation at home (36%), lack of the mother's emotional response (28%), and poverty (23%) could lead to autism. Current autism research does not consider parenting skills and lack of home stimulation as a cause for autism (Boucher, 2022). While this view was shared by only a minority of participants, holding such views could have an impact on parent-teacher relationships and the strategies that teachers consider as necessary to help students. Such views were perhaps a reason for 67% teachers stating that if they suspect a child has autism they would inform their school management, while only 31% said they would discuss it with the child's parents.

Regarding interventions for autism, research suggests that educational support and behavioral interventions are evidence-based practices (Wong et al., 2015). A majority of teachers in this study, 89%, considered education to be the most useful intervention for students on the autism spectrum, although 90% thought there was a need for specialist strategies as conventional ways of teaching might not work and 64% thought these students should be educated in special schools.

These results suggest that even though the MoE is encouraging an inclusive education agenda, the teachers who participated in this study considered that students on the autism spectrum benefited from specialist approaches and 84% thought behavioral interventions would be useful. This is not surprising considering that a high proportion of the teachers believed children on the autism spectrum to be aggressive, so managing behavior would be a high priority for them.

Finally, in regard to questions about a cure for autism, 84% thought it was a lifelong condition, 64% thought that autism could be cured, and a further 20% were indecisive. The conflicting views that the teachers hold about the long-term impact of autism could

influence what they expect from students on the autism spectrum, the strategies for teaching they use, and the way they counsel family members.

## Perceptions of Inclusive Provisions

Understanding teachers' conceptualization of inclusion is important as it will influence their practices in their classrooms. When the participants were requested to choose a definition of inclusion, the description that was chosen by almost half (49%) of the teachers was:

'Children with ASD should be in their local regular school with support, and the curriculum should be adapted for them.'

This is the position of the MoE (n.d) and indicates that a number of teachers hold a view that is in alignment with the federal policy. This positive view of inclusion was also evident in some of the other responses that the participants provided, with 92% stating all students on the autism spectrum should be included in learning and 89% considering that these children would benefit from playing with their non-autistic peers. This suggests that participant teachers considered inclusion not only in an educational context, but also in a social context. Most of the teachers (87%) thought that students on the autism spectrum could be academically successful, and 81% thought they could be educated alongside their peers. It is understandable that with such positive views a high proportion (92%) stated that students on the autism spectrum should be attending mainstream schools.

While the above views presents a positive picture of attitudes toward inclusion, there was a duality of viewpoints as 64% responded that students on the autism spectrum should be educated in separate schools. Furthermore, the teachers specified criteria with regard to the eligibility of a child to be included in mainstream education: children exhibiting aggressive behavior (72%) and/or limited communication skills (54%) were considered to be better suited for a special school. This appears to suggest that although they will include students of determination to their classrooms, these teachers believe the onus to fit into the mainstream education system is entirely on the student and do not feel that they need to adapt their

teaching or the school structure to accommodate such students. Similar views were noted in a previous study by Alborno (2017) and it seems that these views may not have changed.

## Perceptions of Preparedness

The teachers rated a range of statements that reflected how equipped they felt to teach students on the autism spectrum. 72% commented that only specialist teachers should teach students on the autism spectrum. While this implies that some teachers might not feel equipped to teach students on the autism spectrum, 85% felt that the strategies they use for teaching are useful when teaching students on the autism spectrum and 79% thought they had the knowledge and skills to teach such pupils. It was unclear why these teachers felt that students should be in special schools if they felt equipped to teach them. This is perhaps a reflection of their lack of confidence in the capacity of mainstream schools to provide inclusive education, as has been suggested by DeCarlo and Ammar (2023). Full details of the teachers' responses can be found in Table 1.

## Teachers' Suggestions for Improvement

Training was a key suggestion provided by the teachers for improving inclusive education in Ras Al Khaimah, both for new teachers (95%) and ongoing training for those in the profession (92%). This was a surprising finding considering that most participant teachers felt confident in their teaching abilities as seen in Table 1. However, as mentioned in the previous section, 64% teachers also thought students on the autism spectrum should attend special schools. Suggestion for more training is perhaps a reflection of the teachers' awareness that their current skills and knowledge do not fully equip them to support all the students on the autism spectrum. A high proportion of teachers (95%) also identified that training should be provided to parents and family members. The teachers indicated that they would prefer for short-term training opportunities as opposed to studying for a specific educational qualification (such as an undergraduate or postgraduate degree) in autism, although 77%

**Table 1.** Questionnaire Results of Teachers' Perceptions of Preparedness

	Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree
I believe that the strategies I use for teaching are useful while teaching students with ASD	23 (59%)	10 (26%)	5 (13%)	1 (2.5%)	0
I feel confident in teaching students with ASD	17 (43.5%)	16 (41%)	6 (15%)	0	0
I think only specialist teachers can teach students with ASD	12 (31%)	16 (41%)	5 (13%)	4 (10%)	2 (5%)
I believe that specialist strategies are required to teach students with ASD	29 (74%)	7 (18%)	2 (5%)	1 (2.5%)	0
I feel that I have the knowledge and skills to teach students with ASD	15 (38%)	16 (41%)	4 (10%)	2 (5%)	2 (5%)
I feel I had sufficient training to teach students with ASD	13 (33%)	15 (38%)	7 (18%)	3 (7%)	1 (2.5%)
I have appropriate sources of support within the school to help me teach students with ASD	16 (41%)	9 (23%)	9 (13%)	3 (7%)	1 (2.5%)
If I am unsure, I can also approach other teachers in the school to provide me strategies for teaching students with ASD	19 (49%)	11 (28%)	6 (15%)	1 (2.5%)	2 (5%)
I feel comfortable in working with shadow teachers (or learning support assistants)	25 (64%)	7 (18%)	3 (7%)	1 (2.5%)	0
I have access to regular training in ASD and other special educational needs	17 (43.5%)	13 (33%)	5 (13%)	2 (5%)	2 (5%)
I have sufficient time to prepare for my lessons to meet the needs of students of determination in my class, such as those with ASD	13 (33%)	13 (33%)	8 (20.5%)	2 (5%)	3 (7%)

suggested they might be interested to pursue a degree course in autism.

Better access to diagnostic and specialist services was the second main suggestion. A significant percentage (90%) considered that diagnostic processes and early intervention (92%) should be improved and 87% identified a need for more specialist schools and rehabilitation centers in the emirate.

Access to specialist advice from speech and language therapists and occupational therapists, and availability of these services within the schools, was identified as one of the most important supports by 98% of the participants. 92% also considered that the government should fund shadow teachers. Shadow teachers support students of determination in a school setting, usually by providing individual support. At present most schools in the UAE expect parents to fund and employ shadow teachers when sending their children to mainstream schools.

## Policy Recommendations

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**Develop early intervention provision:** Based on the results and a previous study by Wentz (2020), it is evident that early intervention for children with autism is limited in the emirate. Since research in autism suggests that early intervention has positive effects on students' skill acquisition and their ability to navigate mainstream schools (Ribeiro, Barreto and Sousa-Gomes, 2022), early intervention provisions should be expanded.

**Training for parents:** Providing training to parents has been shown effective in supporting their children (Kamiyama and Noro, 2020). Parent training should be an integral part of the government's inclusive education provision.

**The MoE should provide training to educators to ensure they stay abreast of best practices:** Parent-teacher partnership is considered to be an important aspect of good practice in working with students on the autism spectrum (Guldberg et al., 2019). Believing parents to be the cause of their child's autism, as some teachers did in this study, could negatively influence the

nature of support offered by the teachers. Therefore, it is important to provide up-to-date knowledge of autism causations to teachers to encourage positive attitudes toward family contributions to helping their children.

Teachers' knowledge and skills are vital to enabling inclusion in general classroom and school provision. Pre-service and in-service training should provide teachers with the principles of inclusive education and opportunities to practice these with students with a range of needs. This would build their confidence to support students of determination in mainstream schools. The teachers in this study seemed to be particularly concerned about student behavior. A focus of training, therefore, should also be on understanding reasons for specific behaviors and on how to best manage and support these students.

The MoE could develop specific training modules (in-person and online) for in-service teachers at zonal level as well as encourage universities to include autism and inclusive education as part of their teacher training curriculum.

**The government should fund schools to employ and train shadow teachers:** The current UAE policy shares an aspiration toward inclusion, but does not provide clear guidance on how to achieve this at classroom level. As a result, most schools expect parents to employ, and sometimes manage, shadow teachers for their child to attend a mainstream school. This makes inclusive education inequitable in the country. The government needs to fund these roles to make access equitable for all children and young people living in Ras Al Khaimah. This will also ensure that the employed staff are appropriately trained to support the students.

**Strategic plan for developing specialist support services:** While the MoE (2010) states the importance of special education support services such as speech and language therapists and occupational therapists, there is no guidance on how this is provided. Lack of access to specialists was mentioned as the most common barrier for inclusion by the participants in this study. The MoE should develop a strategic view

in terms of access to specialist support for mainstream schools. The lack of support is leading to a situation where, as teachers in this study indicated, teachers feel that only children who can fit into the existing school system should be included in a mainstream school.

## **Conclusion**

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Teachers play a key role in providing successful outcomes for students on the autism spectrum. Their attitudes toward children of determination will influence the success of inclusive education in the UAE. These attitudes can be influenced by sharing examples of good practice via training, as well as providing opportunities to develop their knowledge and skills. Until this is provided, along with sufficient resources for schools, realization of inclusive education from policy into practice will be challenging.

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Tel: +971 7 233 8060 • Fax: +971 7 233 8070, P.O. Box 12050, Ras Al Khaimah, United Arab Emirates

E-mail: [info@alqasimifoundation.rak.ae](mailto:info@alqasimifoundation.rak.ae)