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Attitudes of Saudi Arabian Elementary School Teachers Toward the Inclusion of Students with Autism Spectrum Disorder in the General Education Classroom

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Abstract

This qualitative instrumental case study explored the attitudes of in-service special and general education teachers toward the inclusion of female students with autism spectrum disorder (ASD) at three elementary schools in Riyadh, Saudi Arabia. The study included semi-structured interviews with six teachers and classroom observations. Some discrepancies were observed between teachers' statements during the interviews and their classroom practices. The teachers indicated that inclusion in the classroom was affected by lack of training, barriers created by schools, and parental attitudes. Implications and practical recommendations are offered to improve inclusive education practices and policies for students with ASD in Saudi Arabia.

Keywords: autism spectrum disorder, inclusion, Saudi Arabia, elementary school, teacher attitudes, teacher practices

المستخلص:

هذه الدراسة النوعية الأداة، هدفت إلى الكشف عن اتجاهات معلمات التربية الخاصة والتعليم العام، أثناء الخدمة، حول دمج الطالبات الإناث من ذوي اضطراب طيف التوحد في ثلاث مدارس ابتدائية في الرياض، بالمملكة العربية السعودية. شملت الدراسة مقابلات شبه مقننة، مع ست معلمات، وعلى ملاحظات صفيه. تم ملاحظة بعض الاختلافات بين تصريحات المعلمات خلال المقابلات وبين ممارساتهم الصفية. ومن خلالها أشرنّ المعلمات إلى أن الدمج في الصفوف الدراسية هو متأثر بقلة التدريب، وبالعوائق التي تخلقها المدرسة، وبمواقف أولياء الأمور. وقد تم تقديم توصيات عملية لتحسين ممارسات الدمج وسياسته، للطلاب ذوي اضطراب طيف التوحد بالمملكة العربية السعودية.

الكلمات الرئيسية: *اضطراب طيف التوحد، الدمج، المملكة العربية السعودية، المرحلة الابتدائية، اتجاهات المعلمين، ممارسات المعلمين.*

Autism spectrum disorder (ASD) now affects a significant number of students in Saudi Arabian schools, and the different and unique learning characteristics of this population require teachers to possess specialized skills (Haimour & Obaidat, 2013). The success of inclusive practices for all students with disabilities, including those with ASD, is strongly related not just to teachers' abilities and training but also to their attitudes toward inclusion itself (Alnahdi et al., 2019). The partial inclusion of children with ASD in the general education (GE) classroom has increased dramatically in Saudi Arabia (Al Jaffal, 2022; Alotaibi & Almalki, 2016). However, researchers have found that Saudi teachers face certain challenges when working with these children, including some related to this population's characteristic delay in social skills development (Almasoud, 2010). Other researchers have cited issues with the preparation of educators and school staff to successfully support students with ASD, such as poor training, lack of knowledge and understanding of ASD, and difficulties teachers encounter when attempting to adjust their classroom environments to integrate students with ASD (Sulimani & Gut, 2019). Furthermore, studies have found that many GE teachers are more resistant to the inclusion of students with moderate to severe disabilities or disorders that might involve behavioral challenges, such as ASD, than they are toward the inclusion of students they perceive as having mild disabilities that do not involve behavioral challenges (Al-Zyoudi, 2006). This can manifest in a generally negative attitude toward the inclusion of students with ASD (Haimour & Obaidat, 2013). There is also research that indicates teachers' attitudes toward the inclusion of students with ASD vary by the grade level taught (Alhudaithi, 2015; Al-Zyoudi, 2006).

Other issues have also been found to impact teachers' attitudes toward inclusion, such as class size (Alhudaithi, 2015). This is a factor that must be considered when examining inclusion of those with ASD in the Saudi context, given that the average class size can vary widely from just 25 to a high of 45. All these factors indicate the needs of students with ASD are not being fully met, nor is inclusion being fully implemented in Saudi schools (Alhudaithi, 2015; Alnemary et al., 2017).

In an effort to bring the education of Saudi students with disabilities into the modern era, the Ministry of Education of Saudi Arabia (2016) developed the Regulations of Special Education Programs and Institutes (RSEPI), which cover different types of disabilities, including ASD, and stress the importance of integrating these students in the least restrictive environment. In the last decade, the Saudi educational system has taken

practical steps to begin the implementation of inclusive education, but the practice is still new to the country (Alkeraida, 2021). This also means that most Saudi teachers have a limited understanding of inclusive education for children with disabilities, including ASD (Al-Saleh, 2019). As Krischler et al. (2019) noted, confusion regarding the definition of inclusion is a key reason why the practice is so inconsistently implemented in Saudi Arabia. In fact, other researchers have recommended that the Ministry of Education "establish special task forces to review and revise special education laws periodically" to confirm that inclusion is being correctly and successfully implemented (Alotaibi, 2016, p. 235).

According to Binmahfooz (2019), like other developing nations, Saudi Arabia is endeavoring to bring the education of students with disabilities into the 21st century. To accomplish this, the country has increased allocations to fund appropriate education for all students with disabilities, established training programs for in-service teachers, and developed and adapted curricula for this student population. For example, Saudi Arabia spent the equivalent of $2.2 billion on public education in 2015 (Binmahfooz, 2019). One issue that researchers have identified is the lack of training and professional development for teachers regarding ASD as a whole. Addressing this could be key to changing the implementation of inclusive education in Saudi Arabia. For example, Alharbi et al. (2019) used a cross-sectional study to assess 248 teachers in Al-Qassim, Saudi Arabia, on their knowledge and awareness of students with ASD, and found that teachers who had direct contact with students with ASD or other previous experience with ASD had a significantly better understanding of the characteristics of ASD than those who had no contact with the disorder. Al-Saleh (2019) reached the same conclusion, namely that teachers with any previous experience with individuals with ASD had better knowledge of its characteristics than did teachers who had no contact with individuals on the spectrum.

Some studies have found that teachers are extremely resistant to the implementation of inclusive classrooms. Alhudaithi (2015) conducted a mixed-methods study that included interviews regarding the attitudes of female elementary school teachers toward the inclusion of students with ASD. All the teachers expressed a lack of support for the general concept of inclusion and stated that they did not feel the GE classroom was appropriate for children with ASD.

Moreover, although the Saudi Ministry of Education has directed that students with disabilities, including ASD, be educated in inclusive

settings with their peers without disabilities, attitudes of educators are not yet aligned with this directive, due in part to the previously described factors. This necessitates additional investigation into teachers' attitudes and perceptions about inclusion (Alsedrani, 2018). Such research can aid in driving changes to university teacher education curricula, pre-service training, and professional development opportunities (Alsedrani, 2018).

Researchers who focus on ASD in Saudi Arabia are few; additionally, most existing research on teachers' attitudes toward inclusion of students with ASD has been quantitative in nature. This has been noted by several previous researchers in the field, including Ahmed (2021), Alamri and Tyler-Wood (2015), Alqahtani (2020), Haimour and Obaidat (2013), and Khalil et al. (2020). In addition, past research has been limited in scope (Alotaibi, 2015; Alqahtani, 2020; Haimour & Obaidat, 2013) and only a few studies have examined the impact of factors that might affect teachers' attitudes positively or negatively (Al Jaffal, 2022; Alquraini, 2012; Alsedrani, 2018).

Purpose of the Study

Therefore, this qualitative research study was undertaken to investigate Saudi GE and special education (SE) teachers' attitudes and beliefs toward the inclusion of students with ASD and obtain insights into how to overcome existing barriers to the implementation of successful inclusive practices. To accomplish this, the following research questions were established:

1. What are the attitudes of Saudi SE and GE teachers toward inclusion for students with ASD?
2. What factors affect the attitudes of SE and GE teachers toward the inclusion of students with ASD in Saudi Arabia?

Methodology

Research Design

Qualitative case study research is a useful methodology when the goal is to obtain strong insights into the perceptions of a small group of representatives of a large population, such as GE and SE teachers in Saudi Arabia (Baxter & Jack, 2008; Butler, 2007; Zainal, 2007). Yin (2003) defined a case study as an "empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). Therefore, in this study, to deeply understand the phenomenon of inclusion of students with ASD in Saudi schools, SE and GE teachers who taught students with ASD were interviewed and observed.

To this end, approval from the Institutional Review Board at Majmaah University was obtained. Then, a simple Internet search was undertaken to identify elementary schools for girls in Riyadh that had implemented inclusive practices for students with disabilities including ASD. Specifically, the identified schools had students with ASD who were taught in GE classrooms with their typical peers for at least part of the school day. Next, the appropriate permissions were obtained to proceed with the study: principals at each of the three schools were contacted by phone and email regarding the details of the investigation. After each principal had agreed to cooperate in the study, they were asked to nominate one SE teacher and one GE teacher at their school who met the inclusion criteria, which are described in the next section. The principals then obtained these teachers' permission for me to contact them with more information about the study. Each of the six individuals nominated by their principals agreed to participate in the research when I contacted them via WhatsApp.

Participants

The participants in this case study were purposively selected utilizing the following inclusion criteria: (a) currently an active in-service teacher; (b) 3 or more years of experience working with students with ASD; (c) teaching at one of the three schools identified for the study; and (d) certified to teach either general or special education to elementary school students. These criteria allowed for the establishment of a group of participants from whom in-depth insights could be obtained regarding the research topic (Reybold et al., 2013).

The identified teachers were then fully informed of the exact nature of the study. Each of the six nominated teachers—three SE teachers and three GE teachers, one pair at each school—agreed to participate in the study and signed the provided consent form. All the study participants were female; all of their students were female. Demographic data obtained from the study participants are presented in Table 1.

Table 1

Demographic and Other Data of the Participants

#	Identifier code	School	Degree	Years of experience	Grade taught	ASD level of students
1	SE I	A	BA in Special Education with specialization in ASD	3	First	ASD - mild
2	GE II	A	MA - Religious Studies	7	First	ASD - mild
3	SE R	B	BA - Intellectual Disability	23	Second	ASD - mild to moderate
4	GE NM	B	BA - Social Studies	4	Second	ASD - mild
5	SE MN	C	BA in Special Education with specialization in ASD	10	Third	ASD - mild to moderate
6	GE MNH	C	BA - History	13	Third	ASD - mild

Note. ASD = autism spectrum disorder; BA = bachelor's degree; GE = general education; MA = master's degree; SE = special education.

Setting

This case study took place at three public elementary schools for girls in the city of Riyadh in Saudi Arabia, referred to in Table 1 as School A, School B, and School C. Education in Saudi Arabia is segregated by gender. These schools were deemed appropriate for this study because each had implemented a partial-inclusion program, where students with ASD (and certain other disabilities such as dyslexia, mild intellectual disabilities, learning disabilities, emotional behavioral disorders, physical disabilities that did not affect learning, language and speech disorders, and attention deficit hyperactivity disorder) were educated in a SE classroom for part of the day and then in a GE classroom with their peers without disabilities for select subjects.

Data Collection

Data can be collected in a variety of ways in a qualitative research study, including semi-structured interview and observation, which were the two methods utilized in this study. The interviews were conducted in person and consisted of 22 open-ended questions that were developed to allow follow-up questions to obtain additional insights from the interviewees. Sample questions included "What does the word 'inclusion' mean to you?"; "How do you define 'inclusion'?"; and "Have you had any previous employment experiences related to individuals with disabilities, individuals

with ASD, or the practice of inclusion? (If yes, please describe)." The questions were designed to support obtaining the data necessary to fully address the research questions/research objective and were informed by the literature review. Each question was reviewed by a professor with a doctorate in SE and more than 3 years of experience teaching curriculum on educating students with ASD in a university SE program. This expert provided significant feedback that was used to modify some of the interview questions.

Each interview lasted 25–35 min and was recorded—with the permission of each interviewee—using the Simple Recorder computer software program, so that the content could be reviewed later and "to allow comparison of data across participants" (Reybold et al., 2013, p. 240). Notes were taken during the interview process to support my recollections during data analysis.

The observations in each school setting were done after the interviews with teachers had been completed. Each pair of teachers (SE/GE) team-taught in an inclusive GE classroom for some part of the day, in which there was at least one student with ASD. Due to restrictions established by the school principals in each school, it was not possible to observe the SE teachers in the dedicated resource rooms where only students with disabilities were taught during part of the school day. Therefore, while each in-person observation focused on only one teacher, the colleague with whom they co-taught was also present. Each observation lasted 35 min.

Notes were taken during each observation session regarding the interaction of the GE or SE teacher with the student(s) with ASD in the classroom, with certain specific factors being considered. These included (a) classroom size; (b) number of students in the classroom with disabilities (and the nature of their disabilities) and number without disabilities; and (c) the types of inclusive practices for students with ASD that were employed by the observed teacher and the ability of the observed teacher to implement those strategies. The teacher's interactions with the students with ASD in the classroom were particularly noted.

When employing observation in research, it is important to consider the Hawthorne effect, which is the potential that the behavior of one's subjects/participants will be impacted in some way by the awareness that they are being observed (McCambridge et al., 2014). In an attempt to mitigate the impact of the observation on the teachers and students, I observed from the back corner of each classroom.

Data Analysis

The data from the interviews were collected using audio recordings and field notes; the data from the observations were collected using field notes. The recommended first step of data analysis in qualitative research that involves interviews is to listen to the recordings during the process of transcription; reviewing the field notes is also recommended (Maxwell, 2005). After these items were reviewed, the recording of each interview was transcribed into Arabic, after which each transcription was translated into English. Next, a member check was conducted by having each teacher review the Arabic transcript of her interview to confirm that it was accurate and to obtain any necessary clarifications (Baxter & Jack, 2008). All the participants indicated that their transcripts accurately reflected their responses to the interview questions.

To confirm the accuracy of the transcriptions into Arabic and the English translations, a native Arabic speaker who is fluent in English was recruited to review both. This individual, who has a degree in education, first listened to the recordings of the interviews and confirmed the accuracy of the transcripts. Next, the individual compared the English translations of the Arabic transcripts and confirmed that these, too, were accurate.

The MAXQDA 12 qualitative data analysis software program was utilized to code the text of the responses obtained during the interviews to identify themes (O'Gorman et al., 2009). This program also allowed for the creation of a visual overview of the code distribution throughout the data. Codes were then grouped into themes, and themes were interrelated and compared to find those related to the research question. Thus, themes were divided into subthemes under which participants' quotes and perspectives were grouped. Qualitative findings were represented through visuals that showed major themes and their related subthemes, as well as the interrelationships among them.

To ensure the validity of the research, an independent expert was recruited to review the research data and processes. This independent expert, who is a university professor of education and fluent in Arabic and English, was provided with the recordings of the interviews, the interview transcripts, the field notes from the observations, and the Excel files of the lists of codes, coding categories, and coded quotations from both the interviews. This review resulted in 100% agreement between reviewer and researcher regarding the accuracy of the code labels, themes, and quotations.

Establishing Trustworthiness and Validity

As previously described, this study utilized a number of measures to ensure that the findings were trustworthy, including (a) obtaining the data through multiple methods (interview, observation, and field notes); (b) the use of independent experts to review processes and practices; (c) fully informing participants regarding the nature of the study; and (d) member checking to confirm the accuracy of interview transcripts. Researcher bias—the idea that a researcher might ignore findings that do not agree with their personal perceptions or expectations—was a possibility in this study. Therefore, during the coding of the interview transcripts, I attempted to include everything that each participant shared to further confirm the validity of the study (Maxwell, 2013).

Results

First, the data obtained from the interviews were coded and analyzed to identify themes that arose from the participants' answers to the interview questions. These themes and their related subthemes will be presented first. Following this section, the data obtained from the observations will be presented, after which an analysis of these data as compared to the two themes and seven subthemes will be described.

Theme 1: Attitudes Toward Inclusion

Subtheme 1a: Understanding of the Meaning of Inclusion

The first subtheme that emerged under the main theme "Attitudes Toward Inclusion" was how the participants defined inclusion. In their definitions of the term, none of the teachers mentioned critical concepts like adaptations, accommodations, and modifications required to make classrooms accessible for students with ASD. Instead, the participants all focused on broad descriptions, such as the idea that inclusion means to include all students with disabilities along with their typical peers. Moreover, all of the interviewed SE teachers felt that students with ASD Level 3, who are those requiring the greatest amount of support in the school setting, should not be educated in the GE classroom. For instance, SE I said, "If we find that students have an IQ of 75 and have no problems in their behavior, then we can include them full-time in the regular classroom." SE R indicated that for those with severe autism accompanied by low academic achievement, "full inclusion is not the best practice and is a waste of time." Along this same line, GE NM stated that severely autistic students who also exhibited behavioral issues were not suited to the inclusive classroom, adding that same concern that "it's a waste of time."

Subtheme 1b: Knowledge of Characteristics of ASD

The second subtheme identified under this main theme was the level of knowledge each of the teachers exhibited regarding traits associated with ASD. Five of the participants showed some knowledge of the characteristics of ASD. For example, one GE teacher (GE II) replied, "Students with autism are those who have lack of function, have repeated behavior, have eye contact problem, communication problems, some of them have high IQ test, and some of not, and some [of] them have aggressive behavior. This is what is in my mind."

Subtheme 1c: SE Teachers' Opinions and Beliefs About the Inclusion of Students With ASD

Two of the SE teachers interviewed—SE MN and SE R—expressed positive attitudes toward the inclusion of students with ASD in the GE classroom setting. These two teachers attributed their attitudes to having seen positive outcomes for students with ASD through inclusion, specifically in the area of improved communication skills. SE R noted that the student for whom she had seen the positive effects of inclusion had a high IQ, which she felt contributed to the child's success in the inclusive classroom. Both also stated that the success of inclusion for students with ASD depended upon how well practices were implemented by the school. Specifically, SE MN said inclusion was not appropriate if the full services required for the student with ASD were not provided in the inclusive setting. She also stated that she felt inclusion was not as successful in larger GE classrooms, those with 30 or more students. SE R emphasized the importance of the classroom environment and accurate diagnosis in determining whether inclusion was appropriate. When clarifying her response, she added a list of factors that she felt indicated inclusion would not be successful, such as large class size (e.g., 50 students without disabilities), students with incorrect diagnoses of ASD, a lack of well-trained teachers, and a lack of multidisciplinary teams.

Conversely, SE I's responses during her interview indicated she had a negative attitude toward inclusion for students with ASD based on: (a) expectations of GE teachers; (b) the lack of assistive technology, appropriate educational materials, and adjusted curriculum for these students in the GE classroom; and (c) what she perceived as the negative emotional impact on students with ASD of being educated alongside their typical peers. SE I also expressed concerns about other teachers in her school refusing to cooperate on inclusive practices, as well as her perception

that some students with ASD were negatively affected "when they see these [typical] students as better than them."

Subtheme 1d: GE Teachers' Opinions and Beliefs About Inclusion of Students With ASD

During the interviews, all three GE teachers stated they were positive about the implementation of inclusion for students with ASD. GE II stated that she hoped the practice would become the norm throughout Saudi Arabia. She also emphasized that one of the benefits she saw to inclusion was that it supported those with ASD in developing social skills.

Although GE NM responded to the general question about inclusion positively, she later stated she had mixed feelings toward the idea based on a few factors, including whether there were well-trained teachers in the GE classroom and whether parents wanted their children to be in the GE classroom when the children were not ready for the inclusive setting.

GE MNH expanded on her initial response supporting inclusion by saying that certain factors were necessary for inclusion to be successful, such as (a) collaboration between SE and GE teachers; (b) collaboration between the school administration and teachers/therapists; (c) smaller classroom size; and (d) more breaks and shortened class periods/lesson plans for students with ASD. Both she and GE II stated that in the inclusive GE classroom, students with ASD were the responsibility of the SE teachers.

Theme 2: Factors That Impact Inclusion

Subtheme 2a: Lack of Trained Teachers and Need for Professional Development

All the teachers acknowledged that they were not formally trained or prepared in how to create and manage an inclusive classroom. Instead, they all reported that their knowledge of how to teach in the setting had been obtained through their years of teaching experience. When the six teachers were asked if they felt adequately prepared to teach students with ASD, they all stated they had not felt ready their first year. SE I said that her pre-service field training working with students with ASD had only lasted one semester. Similarly, GE II said she had no experience working with students with ASD until she started her current job. SE MN said that she felt teacher preparation and training were the most important factors affecting her attitudes and perspectives toward inclusive education. In addition, she felt that along with training in inclusive practices, it was important for SE teachers to be trained in teaching a diversity of subjects—i.e., math, social studies, Arabic—so they could effectively support students with disabilities,

including ASD, in the inclusive classroom. The teachers all stated that, in order to become more familiar with teaching students with ASD in the inclusive setting, they had prepared themselves by attending workshops conducted at their schools and reading books on the topic.

Subtheme 2b: Parents' Attitudes

Another subtheme that arose under this main theme was the impact of parental attitudes toward the implementation of inclusion. The teachers stated that the attitudes of both parents of children with disabilities and parents of children without disabilities affected the success and implementation of inclusion. Regarding this, SE I mentioned that a parent of a child without disabilities had specifically told her that she did not want her child educated alongside children with ASD; this parent thought ASD was a disease that her child might "catch" from the other child. GE MNH echoed this idea, saying, "Sometimes parents complain that all the teacher's focus is on students with disabilities," which they thought meant their children without disabilities were being ignored. GE II described a parent of a child with ASD stating that she did not want her daughter to attend class in the GE setting because the teacher had said the daughter would not receive all the same services that she received in the SE setting. This mother felt that inclusion would therefore not benefit her daughter.

Subtheme 2c: Barriers to Inclusion Caused by Schools

The final subtheme of the second main theme was all the factors created by schools that the teachers perceive to hinder their ability to provide appropriate and effective support for students with ASD in the inclusive GE classroom. For example, most of the interviewees indicated that school principals did not adequately support teachers or listen to their concerns. SE I stated she had voiced concerns regarding the need for an appropriate environment and services to meet the needs of students with ASD, but felt that nothing had come of her communications. GE II stated that teachers needed special, modified curriculum designed for students with ASD to teach this population in the inclusive classroom. SE MN said that her students had the most difficulty with the subjects of math and Arabic, and the national curriculum was too rigid because it did not provide any accommodations for students with ASD. She felt that she should have the freedom to adjust the curriculum based on her students' needs.

Five of the interviewees stressed the importance of having a multidisciplinary team in the school to support the inclusion process. SE R described a situation where the school was asked to provide a psychologist to obtain a diagnosis for a particular student. A psychologist was provided,

but only for 2 weeks. During that time, the student was absent, and when she returned, the school did not attempt to have the psychologist come back. This meant that the child never had a formal evaluation to determine her needs and how to best meet them. SE R described the multidisciplinary team as critical to successful implementation of inclusion. This thinking was echoed by SE MN, who stated that she wanted the school to provide a behavior modification specialist, speech and language therapists, and a SE principal. GE NM also noted that there was no psychologist in her school to help with behavioral challenges, no speech therapist to help with communications delay, and no SE teacher with specialization in ASD.

Findings of the Classroom Observations

As previously stated, all the observations occurred in GE classrooms during team-taught lessons where both the GE and SE teachers participating in the study were present. During the classroom observations, it was noted that all three GE teachers in each school setting used the traditional or rote-memorization method when teaching, which was not an inclusive teaching practice. Additionally, in each school setting, all three GE teachers used the national curriculum textbooks and used lecture-with-question strategies, regardless of the individual differences of the students in their classrooms.

Although GE II had stated that she was positive toward inclusion in her interview, during the observation she exhibited a lack of understanding of the nature of the disabilities of the students in her classroom, which indicated she might not know what interventions and accommodations were appropriate for her students with ASD. In general, the observations indicated that none of the three GE teachers provided appropriate strategies, tools, or assistive technologies the research has established as necessary for supporting learners with ASD in the GE setting.

During the observations, the students with ASD were seated in the same area in each of the three classrooms, meaning they were grouped together. This seemed to have been done so that the SE teachers could provide support to these students during the class without disruption to the students without disabilities. All three GE teachers seemed to avoid the areas where the students with ASD were grouped during the observations, which related to the statements by GE MNH and GE II that in the inclusive classroom, their SE co-teachers were responsible for the students with disabilities.

I noticed that the SE teachers in all three classrooms sat the ASD students in their seats and helped them to open their books, and when the GE teachers were asking questions, they were helping the students answer

the questions. All three SE teachers did not offer support resources to those students with ASD inside the regular classroom. They only offered them with additional support during the individual classes in the resource classroom, as they explained. I also observed that on numerous occasions, all three GE teachers could not intervene with ASD students. Finally, the classroom observations showed that the GE and SE teachers did not work collaboratively to provide the best services possible to their students with ASD in the inclusive setting.

Discussion and Implications of the Research

The data obtained from the interviews and observations demonstrated the broad range of changes needed in Saudi schools for successful inclusive education of students with ASD. Teachers first need to understand the meaning of inclusion; in their definitions of inclusion, the SE and GE teachers in the study did not mention classroom adaptations, accommodations, or modifications to meet the needs of ASD students. The participants also used the terms "integration" and "placement" interchangeably with "inclusion," which Amor et al. (2018) mentioned might indicate confusion regarding what inclusion involves. Such vague definitions may also indicate that teachers think students with ASD can be taught using traditional methods (Amor et al., 2018; National Center on Educational Restructuring and Inclusion, 1995).

Most of the teachers interviewed considered inclusive education of students with ASD to be valuable, but they all had concerns about its implementation. Both SE and GE teachers qualified that they felt inclusion was appropriate for students with mild (Level 1) to moderate (Level 2) ASD, but not for those with severe ASD. This was similar to the findings of Al-Saleh (2019) that teachers preferred working with students with mild to moderate disabilities rather than students with severe disabilities. However, through the RSEPI, the Ministry of Education has directed that GE schools must move toward accommodating all students with ASD (Alkeraida, 2021).

Teachers in the current study also reported having an inadequate understanding of ASD when they began teaching students with the disorder. Previous studies have highlighted that a lack of past experience with ASD in general and students with ASD in particular can impact teachers' ability to successfully teach these students (Al Saleh, 2019). This also reflects the finding of Alharbi et al. (2019) that teachers' degree of past experience with ASD correlated with their understanding of the characteristics of ASD.

Similar to the participants in studies by Alkeraida (2021) and Al-Saleh (2019), the teachers in this study felt students with ASD benefited from inclusion because they learned social skills from classmates without disabilities. Most of the SE teachers in this study also agreed with GE teachers that inclusive education was intended to improve the communication and social skills of those with ASD.

The SE and GE teachers in the study identified well-trained GE teachers and support from school administration as factors impacting their attitudes toward inclusion. Both SE and GE teachers felt their class size was too large for them to successfully support the students with ASD, an issue noted in other research (Alhudaithi, 2015). The classroom observations revealed limited collaboration between GE and SE teachers, which would affect the successful implementation of inclusive education for students with ASD, as stated by Ormrod (2006).

The study demonstrated a current lack of inclusive teaching practices, as GE teachers were using traditional teaching methods without modifying the national curriculum for students with ASD and without providing evidence-based practices or supportive materials, such as visual schedules, picture communication exchange systems, and digital technologies (Wong et al., 2015). This finding contradicts the work of Ahmed (2021), who surveyed 120 teachers in Riyadh and found that GE teachers did not know how to apply different teaching methods for students with ASD. Fleury et al. (2014) also explained that the number of students with ASD accessing the GE setting continues to grow. Thus, many educators may be unprepared to adapt their instruction to meet the full spectrum of students' diverse needs, which has implications for inclusion success.

As Alhudaithi (2015) suggested, future research must further identify and evaluate issues preventing successful inclusive education in Saudi schools, as well as practices that support it at specific schools. The findings of this study suggested that collaboration among teachers, administrators, and policymakers is necessary and requires additional investigation. In-depth studies are needed on variables related to instructional technologies, curriculum, and school environments (e.g., building structures and arrangements, class size, availability of school materials). Additionally, the findings of this study suggested, following Fleury et al. (2014), that educators should be able to both align educational programming with grade-level content and adapt their instruction to the needs of individuals with ASD. Therefore, further research into improving

academic achievement for individuals with ASD is needed in order to move the field forward, especially in the inclusive setting.

The participants agreed that teacher preparation and training were among the most important factors affecting their attitudes toward students with ASD. This corroborates the findings of other studies (Ahmed, 2021; Al Jaffal, 2022; Al-Saleh, 2019) that teachers in the Saudi context lacked training to successfully create an inclusive setting for ASD students. As mentioned above, the GE teachers in this study did not interact very well with their students with ASD, and one GE teacher lacked knowledge about the disabilities of students in her classroom. The limited effective teaching practices, lack of understanding, and reticence to work with students with ASD that GE teachers demonstrated in this study could be due to their lack of qualifications and training.

Some research has found that more pre-service and in-service training regarding students with ASD can have a positive impact on both GE and SE teachers' attitudes and ability to effectively teach in the inclusive classroom (Al-Saleh, 2019). Feiman-Nemser (2001) emphasized professional development as a factor promoting the success of any inclusion program. Professional development can provide in-service teachers with valuable and timely information on evidence-based practices and interventions, classroom management strategies, and working with parents of this student population (Al-Saleh, 2019).

Another barrier often identified by research is parents' attitudes toward inclusive education. For example, Alrawkan (2022) found that negative parental attitudes might arise from a lack of understanding of the purpose of inclusion and its benefits for students with and without disabilities. However, it is important that parents have the chance to give their perspectives (Alrawkan, 2022). Studying parents' perspectives can contribute to the growth and success of inclusive education in the Saudi context.

Praisner (2003) found that the attitudes of principals could also directly impact the success of inclusion. Similarly, the teacher SE I in this study reported that she felt her principal did not listen to teachers. Other teachers, as in the study by Nwoko et al. (2022), criticized the Ministry of Education for ineffective policies that did not meet the needs of ASD students. The majority of the teachers studied suggested, as Nwoko et al. outlined, that policymakers should visit their inclusive classrooms to enhance their understanding of the challenges. They also called for school leadership to work proactively with them. Teachers need to be engaged with

policymakers to create more understanding about inclusive practices and generate innovative solutions and strategies to improve the school community.

Researchers have reported insufficient support for providing an appropriate curriculum for children with ASD in mainstream classrooms (Nwoko et al., 2022). Teachers in the current study also reported insufficient support for providing appropriate services to ASD students. Most of the teachers in this study confirmed that there were no multidisciplinary staff such as psychologists, occupational therapists, or speech pathologists on site at their schools to help with the diagnosis and evaluation of ASD students. This emphasizes the need for support from the Ministry of Education: according to Alotaibi (2016), the Ministry could establish interdisciplinary teams that could involve and train teachers, parents, and experts. These teams could provide courses and workshops at schools to train teachers in using specialist resources and customizing resources for students' educational needs.

Limitations and Recommendations for Future Research

The study had a very small sample size of just three pairs of female GE/SE teachers at three different public elementary schools for girls in one city in Saudi Arabia. Therefore, the findings cannot be generalized to the rest of the country, to all elementary schools in the city of Riyadh, or to private schools. The duration of the interviews and observations was also limited, due to the teachers' availability; with more time, more data could have been obtained.

The three school principals would not allow observation of the SE teachers in their dedicated classrooms where the students with ASD received SE services. These teachers therefore had to be observed in the inclusive GE setting with their GE colleagues present, and I was visible to the teachers and students during the observations, which might have impacted their behavior. The timing of the study might also be a limitation, as it was conducted toward the end of the school year. It would be beneficial to observe GE and SE teachers from the beginning of the school year to determine whether they provide effective strategies to meet the needs of students with ASD. In addition, this study did not apply a validated template for the classroom observations.

Due to these limitations, the following recommendations are made for future research. First, such research should involve a larger participant pool, and be conducted in private schools as well as in other areas of the country. It would also be constructive to conduct companion studies at

schools for boys. Interviews and observations conducted at different times of the academic year might obtain important insights into practices and the evolution of teacher behaviors over the course of the school year. Longer interviews and multiple, longer observations might also obtain more in-depth data on the study topic. The expansion of interview participants to include school principals might help researchers understand how principals' views affect GE and SE teachers as well as students with ASD.

Conclusion

The findings of this study offer in-depth insight into instructors' attitudes toward and readiness for incorporating children with ASD into GE classrooms in Riyadh. The study indicates that for Saudi schools to implement effective inclusion, a number of changes must occur. First, pre-service training for both SE and GE teachers must involve in-depth study of ASD and evidence-based practices for supporting students with ASD in the inclusive classroom. Accommodations that serve the needs of students with ASD, including assistive technologies and alternate curricula, must be made available in all Saudi public schools. Next, schools must recognize that multidisciplinary teams including SE managers, psychologists, and occupational therapists are needed to support students with ASD. Furthermore, principals should regularly meet with all teachers who work closely with ASD students to obtain insights regarding necessary changes for successful inclusion. Collaboration between SE and GE teachers must be emphasized at all levels, from college teacher education programs and pre-service field training to professional development for in-service teachers. It is also clear from this and past studies that the Ministry of Education should conduct regular reviews of its recommendations and requirements for the provision of SE services in the inclusive GE setting. Finally, the importance of parents in the implementation of inclusion cannot be underestimated. Therefore, public education programs should be developed for parents and the greater school community to dispel misconceptions about the practice of inclusion and communicate its benefits for all students.

The findings of this study send a strong message that policymakers and the Saudi Ministry of Education must place a premium on pre- and in-service teacher preparation for inclusive education. Due to the growing number of Saudi Arabian students with ASD who need general education, Saudi universities should restructure their educational programs to better prepare future GE teachers. Additionally, GE teachers need to raise their awareness about including ASD students and should be prepared to teach ASD students in their inclusive settings.

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