



TEACHERS' PERSPECTIVES ON BARRIERS OF INCLUSION OF AUTISTIC STUDENTS IN SAUDI ARABIA SCHOOLS

 **Fayza Ibrahim
Abdullah Ahmed**

*Associate Professor of Special Education, Department of Special Education, Faculty of Education in Al-Kharj, Prince Sattam bin Abdul-Aziz University, Saudi Arabia.
Email: dr_fayza@hotmail.com Tel: 0966548304689*

ABSTRACT

Article History

Received: 27 August 2020
Revised: 21 September 2020
Accepted: 10 December 2020
Published: 4 January 2021

Keywords

Autistic
Barriers
Inclusive education
Students
Saudi Arabia
Teacher education.

The study aimed to identify barriers to achieve inclusion goals for Autistic students in the regular schools in KSA, from the teachers' point of view according to variables (teacher gender, teacher qualification, and the stage at which he or she teaches). This study was based on a sample of (120) teachers (70 male and 50 female) of autistic children in inclusion programs for children with autism in regular schools in Riyadh. The questionnaire was applied through survey delivered via email and its results revealed that school administration barriers came in first place, followed by the barriers related to the families of students with autism disorder, then barriers related to autism, and last place was barriers related to society. There were differences of autistic students' teachers in the first domain "barriers related to autism" and in the third domain "barriers related to school administration" in favor of females teachers. However, in the fourth domain "barriers related to society" were in favor of male teachers.

Contribution/Originality: This study contributes to identifying barriers to achieve inclusion goals of autistic students in regular schools from teachers' perspectives taking variables like teacher's gender, teacher's qualification, and stage at which he or she teaches. The study relied on four axes, viz. barriers related to school administration, autism, family, and society.

1. INTRODUCTION

A number of countries around the world are committed to sign a Convention on the Rights of the Child (CRC) and a Convention on the Rights of People with Disabilities (CRPD) that would grant all children the right not to discrimination. The CRC and CRPD both focus on inclusion on whole and not merely inclusive educational practices to create equal opportunity for all children (Aljafari, 2019). While inclusion involves bringing children with autism into a pre-existing standard framework, inclusion is only possible if schools have to be designed and managed (Alqahtani, 2017) so that all the children work together in a qualitative learning environment. Moreover, inclusion requires a large amount of change in the education systems of most countries (Majoko, 2016). Inclusion of students with Autism within regular education has been a global phenomenon for at least 30 years (Amor et al., 2019). In Saudi Arabia, students with serious Autistic problems still receive training in segregated special education institutions that do not allow them to interact in an inclusive setting with their typically developing partners where their social, communication and academic skills can be improved (Alquraini, 2012). These institutions support students with moderate, severe or profound intellectual disabilities, multiple disabilities and autism providing

shelter, nourishment, and financing. Another important issue is to have individual educational programs (IEPs) based on special education programs for students with disabilities at these institutes (Ahmed, 2020).

Indeed, many barriers play an important role as to why these student groups continue to be placed in a separate school in Saudi Arabia to receive education. Teachers' view on inclusive education for autistic students is one of the main barriers to including students with severe autism (Holmes, 2020). It is also necessary to consider this viewpoint to predict potential actions of teachers and to give students with autistic a better picture of their current behavior (Hassanein, Adawi, & Johnson, 2020). A successful inclusive education is driven by positive teachers' perspectives and attitudes towards autistic students (Al-Zboon, 2020). In comparison, negative teachers' perspectives may lead to low performance and limit acceptability for autistic students (Liu, Holmes, & Albright, 2020).

It is therefore important to consider the experiences of teachers to establish effective, inclusive education, and recommendations for teachers preparation in the regular education environment of Autistic students (Mónico et al., 2020). For this reason, the problem of including students with autism in regular schools with their ordinary mates is one of the most significant current issues in education.

The main objective of inclusion of autistic student is to find the place that is most productive for them, so that a student is given the maximum possible assistance (Garrad, Rayner, & Pedersen, 2019). Despite the importance of inclusion of autistic student into a regular school with ordinary mates, there are some difficulties and challenges that obstruct the achievement of the inclusion process goals (Wilson & Landa, 2019). In spite of their efforts and sacrifices, standard school teachers are under pressure and challenge because the students with disability may not adapt rapidly and easily to situations that can create a feeling of frustration, insufficiency and disappointment (Ostmeyer & Scarpa, 2012).

There are studies that have investigated attitudes of teachers towards inclusive education for high school children with disabilities in economically poor countries and what challenges they face in making academic improvements. The result showed that teachers had a generally optimistic view towards inclusive education though participants did not know how inclusive education could be applied (Daughrity, 2019; Priyanka & Samia, 2018). Other studies have found that teachers of autistic students compared to general education teachers have a positive attitude towards achieving and accepting the objectives of inclusion of autistic students. They have accepted their profession depending on they are teachers capable of teaching their students, and that they are effective in interacting with them in a positive way and with other teachers in the mainstream school (Evans, 2016; Sulek, 2019).

What makes matter more difficult for teachers of autistic students is that a specific curriculum for these students is generally absent from the domain of special education. Many of these students' educational aspects rely on the individual curriculum as model, while the choice of curriculum within the individual educational plans is completely differentiated and lacks continuity (Zuki & Rahman, 2016). This makes these students exposed to fragmented programs, and this increases the burden on the teacher of autistic students a responsibility that may exceed the teacher's tolerance, especially when he or she finds in one classroom students who are clearly distinguished in their characteristics (Agran et al., 2017; Tonnsen & Hahn, 2016). The political environment has also created regulations regarding schools and student inclusion practices with contemplation to encourage inclusive education in regular schools (Harmuth et al., 2018). Other research believes that teachers themselves may need constant assistance to renew their skills and capabilities in an integrated environment (Lorenz, Frischling, Cuadros, & Heinitz, 2016).

Studies have shown that changes in inclusiveness laws and policies have not resolved teachers' fears or feeling pressures toward inclusive education in their schools (Rowan, Kline, & Mayer, 2017). This means that changing teacher perceptions about inclusion in educational is not only related to external factors such as school policies and promotion, but also to internal factors such as true inclusion in education that requires a teacher's mindset to

successfully influence in practice. However, studies reveal that teachers may link barriers and external factors to inclusive education (Morgan et al., 2018).

Hence, in order to achieve goals of including autistic students in a regular school, several basic elements are indispensable when working with autistic students such as planning and preparing each school or class, each teacher or specialists who work with the autistic student, to teach, prepare, and guide student's family. The school program ought to achieve the partnership between all elements of the educational or rehabilitative process. Planning and implementation must also extend to the local environment which is the one from where student comes and returns after completing the program (Clark, Adams, Roberts, & Westerveld, 2020).

As a result, the current study attempted to figure out the barriers to achieving inclusion goals of autistic students in a regular school from teachers' point of view.

2. RESEARCH OBJECTIVES

Understanding teachers' perceptions about inclusion in education is crucial for future developments and to address their concerns accurately and ultimately help to implement inclusion. The purpose of this study is to identify and explore barriers to achieving inclusion goals of students with autism in a regular school from teachers' point of view, taking into account certain variables (teacher gender, teacher qualifications and the stage at which they teach). It is expected that the teacher will have strong values and comprehensive behaviors that will in fact affect the openness and flexibility required for the introduction of inclusive learning policies. The study also aims at improving the professional development of teachers especially teachers of autistic students in the context of the application of inclusion in schools of Kingdom of Saudi Arabia.

The research questions guiding this study are as follows:

Question 1: What are the major barriers to achieving goals of including autistic students in a regular school?

Question 2: What are differences between the mean scores of teachers of autistic students, barriers to achieving inclusion goals, due to teacher gender variable?

Question 3: What are differences between the mean scores of autistic students' teachers, of barriers to achieving inclusion goals in regular schools due to the teachers' qualification variable?

Question 4: What are differences between the mean scores of autistic students' teachers, barriers to achieving inclusion goals in regular schools due to stage variable at which teachers teach?

3. METHODOLOGY AND PROCEDURES

3.1. Method

The descriptive survey method was adopted to identify barriers to achieving inclusion goals of autistic students in regular schools, in the city of Riyadh, Saudi Arabia. The study was carried out from teachers' point of view based on variables like teacher gender, teacher qualifications and the level at which they teach. the descriptive approach is appropriate for collecting, classifying and tabulating data and facts to obtain significant conclusions and reach generalizations regarding the phenomenon under study (Kothari, 2004).

3.2. Sample

The study sample consisted of (120) teachers (70 males, 50 females) teachers of autistic students in inclusion programs in regular schools in Riyadh, Saudi Arabia. The sample study was randomly chosen from the study community during the second semester in April 2020 through an e-mail questionnaire for the teachers. The sample was distributed according to the variables: the teacher's gender (male, female), the teacher's qualifications (bachelor's, graduate studies), and the academic stage in which the teaching is conducted (primary, preparatory, secondary).

Table -1. Sample distribution according to variables: Teacher gender, teacher qualifications, the stage at which they teach. (N= 120)

Variable	Level	Frequency	Percentage
Gender	Male	70	58%
	Female	50	42%
	Total	120	100%
Scientific qualification	Bachelor	100	83%
	Postgraduate	20	17%
	Total	120	100%
Academic stage	Elementary	50	42%
	Preparatory	40	33%
	Secondary	30	25%
	Total	120	100%

Source: Ministry of Education in Saudi Arabia.

3.3. Building the Study Tool

The researcher used a questionnaire as a study tool for the purpose of reaching the study objectives and answering questions as a means of collecting data from the study sample. This tool was designed to understand the domains and expressions of scale of barriers in achieving the inclusion goals of autistic students in regular schools.

The following procedures were adopted for building the study tool:

- 1- Reviewing the special education literature and related previous studies.
- 2- Preparing the design of an exploratory study on a sample of (85) teachers of autistic students. This was done to understand teachers' views about barriers in achieving inclusion goals of autistic students in regular schools.
- 3- Identifying the scale domains, namely: The first domain: "barriers related to autism spectrum disorder (12) items; the second domain: " barriers related to autistic students families"(10) items; and the third domain: " barriers related to school administration"(11) items; and the fourth domain " barriers related to society" (10) items.

3.4. Validity of the Tool

The study tool was presented in its initial form containing (43) statements to an arbitration group of (10) professors, to examine the suitability of each statement to the domain which it belongs to. They were asked to modify or delete any statement that did not agree with the domain, and add any statement that served the objectives of the study. The arbitrators deleted (4) statements and the tool ultimately had (39) statements.

3.5. Reliability of the Tool

To ensure the reliability of the tool, (39) statements were applied to the chosen sample that consisted of (85) teachers of autistic students in Riyadh, Saudi Arabia. The correlation coefficients of each statement were calculated to the total degree of the domain which it belonged to, and the values of the coefficients came between (0.778 - 0.523) which are statistically significant coefficients at the level of (0.01) which confirms that the scale had significant stability indications. The reliability coefficients of the scale were calculated as a whole using Cronbach's alpha, and the coefficients were measured as: the first domain: barriers related to autism spectrum disorder (0.962), the second domain: barriers related to the family (0.965), the third domain: barriers related to the school (0.985) the fourth domain: barriers related to society (0.974), the overall score of the scale (0.968).

3.6. Scale Correction Method

The questionnaire in its final form of (39) statements was divided into four domains, the first domain (10) statements, the second domain (10) statements, the third domain (11) statements, and the fourth domain (8)

statements. The 5-point Likert scale was used for respondents to choose one of the five responses (Highly agree - agree - somewhat agree - not sure - disagree) based on a study by Khalil, Salman, Helabi, and Khalid (2020).

4. RESULTS AND DISCUSSION

Question 1 results: What are the major barriers to achieving inclusion goals of autistic students in regular school?

To answer this question, averages and standard deviations were used for each of scale statements, as well as for each domain, and the results were as follows:

Table-2. Arithmetic means and standard deviations of the participants' responses to statements of Barriers to achieving inclusion goals of autistic students in regular school scale.

No.	Item	N	Mean	Standard deviation	Standard error	Order
The first domain: Barriers related to autism spectrum disorder						
1	Difficulty of self-dependence	120	4.39	0.11	1.2	4
2	Lack of information to help him understand himself.	120	4.47	0.11	1.16	3
3	His feeling of inferiority compared to others.	120	4.65	0.1	1.07	2
4	His desire to withdraw from life.	120	3.71	0.12	1.28	10
5	Unwillingness to interact with others.	120	3.72	0.11	1.24	9
6	His desire of aggression against others.	120	3.96	0.11	1.18	8
7	Developing a feeling of fear of others.	120	4.26	0.11	1.19	6
8	Carelessness in performing his duties.	120	4.27	0.11	1.22	5
9	Forgetting what he learned because of his short memory.	120	4.85	0.09	1	1
10	Feeling frustrated as a result of his disability	120	4.04	0.11	1.23	7
The second dimension: Barriers related to the family of autism spectrum disorder						
1	The family's lack of interest in him.	120	4.56	0.09	1.04	3
2	Lack of cooperation between the family and the school.	120	4.56	0.1	1.14	3
3	The family does not understand the circumstances of his disability.	120	4.46	0.11	1.17	5
4	The family stops thier child from inclusion with others.	120	4.23	0.13	1.32	7
5	The family believes that teaching a child with disability is useless.	120	4.05	0.13	1.37	9
6	Parents do not listen to teachers 'instructions regarding their children.	120	4.3	0.12	1.27	6
7	Failure of parents to direct their children to perform the duties required of them at home.	120	4.69	0.11	1.19	1
8	Parents' carelessness to attend parent councils to discuss some of problems that stand in the way of achieving inclusion.	120	4.67	0.1	1.11	2

9	Parents' dissatisfaction of inclusion programs for their children with autism disorder.	120	4.13	0.12	1.29	8
10	The family's lack of awareness about the importance of inclusion.	120	4.48	0.11	1.12	4
The Third domain: Barriers Related to School Administration						
1	Failure of the school administration to provide appropriate educational media	120	4.51	0.13	1.31	2
2	The school does not have a media specialist	120	4.41	0.14	1.46	5
3	Discouraging the school administration to use multimedia	120	4.22	0.13	1.37	8
4	Unavailability of multimedia in the classroom	120	4.74	0.11	1.2	1
5	The school does not have an equipped resource room	120	3.94	0.14	1.5	11
6	The lack of safety factor in the school building	120	4.36	0.13	1.42	6
7	The lack of staff with the ability to deal with students' needs	120	4.47	0.13	1.32	4
8	The absence of communication channels between the student and the school administration	120	4.1	0.13	1.37	10
9	School environment discouraging the inclusion process	120	4.21	0.12	1.29	9
10	The lack of activities that help the students to interact with each	120	4.27	0.11	1.21	7
11	The school does not have workshops or training laboratories	120	4.5	0.13	1.34	3
The fourth domain: Barriers related to society						
1	Unavailability of the financial resources needed for social	120	4.74	0.11	1.2	6
2	Lack of auxiliary means and devices for the social inclusion	120	4.76	0.09	0.99	5
3	Unavailability of programs and activities assisting the process of social inclusion.	120	4.71	0.09	1	8
4	Lack of professionals specializing in community inclusion.	120	4.74	0.11	1.21	7
5	Lack of training courses for inclusion workers.	120	4.94	0.09	0.94	3
6	Lack of media attention to autistic issues	120	4.81	0.11	1.19	4
7	The community is not prepared for process of inclusion of students with autism	120	4.1	0.09	1	1
8	Failure of community institutions to play their role towards inclusion of autistic students	120	4	0.09	1.04	2
Domain	Domain Title					
First	Barriers Related to School administration	120	46.78	9.11	0.87	1
Second	Barriers Related to The Autism Spectrum Disorder Family	120	44.17	9.18	0.88	2

Third	Barriers Related to Autism Spectrum Disorder	120	42.36	7.78	0.74	3
Fourth	Barriers Related to Society	120	30.85	5.53	0.53	4

It is clear from [Table 2](#) that one of the most common expressions of barriers to achieve inclusion goals of students with autism spectrum disorder is as follows

- 1- In the first domain (forgetting what he learned because of his short memory).
- 2- In the second domain (parents carelessness to attend parent councils to discuss some of problems that stand in the way of achieving inclusion).
- 3- The third domain (failure of the school administration to provide appropriate educational media).
- 4- The fourth domain (the community is not prepared for process of inclusion students with autism).

Regarding the arrangement of the domains, its data are as follows:

- 1- Barriers related to school administration.
- 2- Barriers related to the family of autism spectrum disorder
- 3- Barriers related to autism spectrum disorder.
- 4- Barriers related to society.

This result is consistent with the findings of studies ([Alnasser, 2020](#); [Rodden, Prendeville, Burke, & Kinsella, 2019](#); [Vaz et al., 2015](#); [Wilson & Landa, 2019](#)) which also found that there were barriers related to administrative and technical aspects, and weak school capabilities block up the process of achieving inclusion goals of students with autism in regular education schools.

The researcher explains this result that mainstreaming schools are unable to achieve goals of inclusion, due to failure to prepare school environment, lack of activities that help students interact with each other, school's poor provision of training programs for families, poor communication between those families with school's administration, and lack of families participation in implementing educational programs and school activities.

Question 2 results: What are differences between the mean scores of teachers of autistic students on scale of barriers to achieve inclusion goals due to teacher gender variable (male - female)?

To answer this question, the T-test was used, and the results were as follows: [Table 3](#).

Table-3. Differences between the mean of the participants' responses to teacher gender variable "male-female".

Dimensions	Sex	N	Mean	Standard deviation	Std. Error	D Freedom	T Value	Sig
Barriers Related to School Management	Male	70	3.0814	0.70069	0.09343	108	2.853	0.005
	Female	50	3.5075	1.02408	0.11079			
Barriers Related to The Autism Spectrum Disorder Family	Male	70	3.4100	0.70754	0.12240	108	0.109	0.913
	Female	50	3.4300	0.85973	0.11187			
Barriers Related to Autism Spectrum Disorder	Male	70	3.2104	0.72217	0.10276	108	2.277	0.025
	Female	50	3.5773	0.68735	0.11419			
Barriers Related to Society	Male	70	3.9536	0.67105	0.08215	108	1.993	0.049
	Female	50	3.6844	0.61880	0.10610			
Total scale	Male	70	3.3810	0.54939	0.07396	108	1.380	0.170
	Female	50	3.5436	0.78173	0.08687			

It is clear from [Table 3](#) that:

- 1- The presence of statistically significant differences at the level of (0.05) between the mean scores of male and female teachers of students with autism on the first domain "barriers related to autism spectrum disorder" is in favor of female teachers.

This result is consistent with studies (Balubaid, 2017; Pineda, 2010; Roberts & Simpson, 2016) which also found out that the opposition of male and female teachers to system of inclusion students with autism in the UAE was due to their belief that it is not beneficial for the disabled and the ordinary. The current study findings have revealed that female teachers are higher than male teachers in their estimation of the barriers that prevent the achievement of inclusion goals, and this is due to the differences between the nature of women and men. In many cases what women consider to be a problem the men do not consider a problem, due to their ability to endure and their psychological and biological composition different from that of the woman's. The women often lack endurance and patience that males do not care about. Moreover, female teachers are aware more of the barriers to inclusion goals that relate to autism, because of the difficulty of dealing with student at especially the primary stage. Some of the challenges found in this study include the lack of desire in autistic students to social interaction, their dependence on others, and their lack of eagerness to perform their duties, and the unwillingness of female teachers to work towards a comprehensive inclusion.

2- The presence of statistically significant differences at the level of (0.05) between the mean scores of male and female teachers of autistic students on third domain, "Barriers related to school administration," in favor of female teachers.

This result is consistent with the result of studies (Boitumelo, Kuyini, & Major, 2020; Hridi et al., 2020; Lindsay, Proulx, Thomson, & Scott, 2013; Sabayleh & Alramamneh, 2020) which concluded that the barriers faced by female teachers are lack of resource rooms and educational materials for running educational programs. Other studies (Locke et al., 2016; Page & Ferrett, 2018) indicated that schools providing special education programs for autistic students are not funded by special devices and means, and current schools are not compatible with the conditions of autistic students. There are also lack of opportunities for communication and interaction between the school and similar educational and educational institutions in the same region. In addition, other barriers include a discouraging school environment for the inclusion process, and lack of staff having ability to deal with the needs of autistic students. A few other studies (Saloviita, 2020; Schultz, Able, Sreckovic, & White, 2016; Young, McNamara, & Coughlan, 2017) have found lack of educational technology in centers and schools, and fewer teacher training programs on how to use and produce educational technologies during learning process. This is the evidence that female teachers are aware of the barriers and they coexist with the students with autism, amidst such challenges. They are required to face them to achieve goals of teaching which makes them more aware of these barriers.

3- The presence of statistically significant differences at the level of (0.05) between the mean scores of male and female teachers on the fourth domain, "Barriers related to society," in favor of male teachers. This result is consistent with the results of a study that showed that male teachers of autistic students did not receive sufficient support to implement and practice appropriate inclusion in their society.

4- There are no statistically significant differences between the mean scores of male and female teachers on the second domain "Barriers related to the family" and the overall score of the scale of Barriers to achieving inclusion goals of students with autism in regular schools.

This can be explained by the fact that male and female teachers of students with autism are aware that the family in many cases does not understand the case of autistic students. This stands in the way of achieving inclusion goals. To support this argument, the study found a number of reasons including lack of interest from family toward students with disability, lack of cooperation between the family and the school, and the family's prevention of their disabled child from inclusion with others, and the family's lack of awareness of the importance of inclusion.

Question 3 results: What are differences between the mean scores of autistic students' teachers, of barriers to achieving inclusion goals in regular schools due to the teachers' qualification variable?

To answer this question, One-Way ANOVA was used, and the results were tabulated in Table 4: The results indicate the significance of the differences between mean scores of responses of Autistic students' teachers on scale of Barriers to achieving inclusion goals of Autistic students in regular schools, due to teacher qualification variable "Bachelors of Special Education, Bachelors of Education and Diploma of special Education, Bachelor of Education".

Table-4. One-way ANOVA for the differences in the participants' responses due to the teacher qualification variable.

	Domain	Sums of squares	df	Mean square	F	P value
Barriers Related to School Management	Among groups	1.326	2	0.663	1.98	0.337*
	Within	64.609	107	0.604	---	
	Total	65.935	109	--	---	
Barriers Related to The Autism Spectrum Disorder Family	Among	4.331	2	2.166	2.64	0.076*
	Within	87.566	107	0.818	---	
	Total	91.897	109	--	---	
Barriers Related to Autism Spectrum Disorder	Among	3.439	2	1.720	2.58	0.081*
	Within	71.327	107	0.667	---	
	Total	74.767	109	--	---	
Barriers Related to Society	Among	3.116	2	1.558	3.41	0.037*
	Within	48.890	107	0.457	---	
	Total	52.006	109	--	---	
Total scale	Among	2.337	2	1.168	3.42	0.036*
	Within	36.529	107	0.341	---	
	Total	38.866	109	--	---	

Note: *insignificant at the significance level of 0.05.

It is clear from Table 4 that:

- 1- there is an absence of statistically significant differences between the mean scores of teachers of autistic students on three domains of scale of barriers to achieving inclusion goals of autistic student in regular school, namely, "barriers related to autism spectrum disorder, barriers related to the family, barriers related to school administration" due to teacher qualification variable.

Our study reveals that all teachers of autistic students agree that barriers prevent the achievement of inclusion goals for all categories in regular schools, regardless of difference in teacher's academic qualifications, whether the teacher holds bachelors of special education, bachelors of education and diploma of special education, bachelor of education.

This result is consistent with the result of the studies (Abu, 2019; Khalil et al., 2020; Ntalindwa, Soron, Nduwingoma, Karangwa, & White, 2019) regarding the absence of significant differences in the responses of teachers of autistic students toward barriers using educational technologies in teaching autistic students according to scientific qualification variable.

The absence of differences in teachers' responses about specific barriers to autism disorder, autistic student family and the school in which he receives the educational process can be explained further in linking the student with his family and school. It is often seen that the family or educational context is affected by the inclusion program's services and it contributes to achieving the goals of inclusion in the regular school.

- 2- the presence of statistically significant differences between the mean scores of autistic students' teachers in fourth domain, "barriers related to society" and total score of the scale. To find out the differences a Schiff's test was used and the results are shown in Table 5.

Table 5 elucidates the following:

- 1 - There are statistically significant differences between the mean scores of teachers of autistic students on fourth domain, "barriers related to society", between teachers who obtained a bachelors of special education and bachelors of education and diploma of special education, in favor of teachers with a Bachelor's Of Special Education.

Table-5. Schiff's test for dimensional analysis to find out the direction of the differences of the fourth domain and the overall score

Independent Variable	(I) A2	(J) A2	Difference averages	Std.	P value
			(Chen, Lee, & Lin)	Error	
Barriers Related to Society	1	2	-0.11393	0.16838	0.796
		3	0.57411	0.29685	0.159
	2	1	0.11393	0.16838	0.796
		3	0.68804*	0.26604	0.039
	3	1	-0.5711	0.29685	0.159
		2	-0.68804*	0.26604	0.039
Total marks	1	2	0.238	0.14554	0.267
		3	0.65788*	0.25659	0.041
	2	1	-0.238	0.14554	0.267
		3	0.41988	0.22996	0.194
	3	1	-0.65788*	0.25659	0.041
		2	-0.41988	0.22996	0.194

This result is consistent with result of studies (Saloviita, 2020; Sobeck & Robertson, 2019) which concluded that special education teachers have positive attitude towards inclusion, and that they accept their profession based on their role of being teachers of students with autism and therefore they must interact with them in a positive way., this shows that they are aware of the societal barriers that stand in the way of achieving inclusion goals of autistic students, so they feel more responsible due to their awareness of these barriers.

the researcher explains this result that teachers with bachelors in special education are more aware of the barriers to achieving inclusion goals of autistic students related to societal barriers. This is because they know well the extent of the needs of the students with autism and their knowledge that community institutions do not play a positive role in meeting needs of the intellectually disabled students. They also understand that training workers in the field of inclusion, prepare the community for inclusion process, provide the means and assistive devices, and in return the community institutions play the positive role towards the inclusion of that category, in order to achieve goals of inclusion process.

2- There are statistically significant differences between the mean scores of teachers of autistic students who have Bachelors of Education, a Bachelors of Special Education, Bachelors of Education and Diploma of special Education on fourth domain "Barriers related to society" and total score of the scale is seen in favor of teachers who have Bachelors of Education.

This result suggests that general education teachers do not believe that inclusion of students with autism in regular schools contribute to achieving education of that group. In contrast, they believe that it adds to their difficulty in dealing with them, due to the lack of experience they have in dealing with a group. The reason is that they do not know their characteristics, their needs, and how to deal with them.

Question 4 results: What are differences between the mean scores of autistic students' teachers, barriers to achieving inclusion goals in regular schools due to stage variable at which teachers teach?

To answer this question, One-Way ANOVA was used, and the results are shown in Table 6 :

Results of One-Way ANOVA indicate the significance of differences between the mean scores of responses of autistic students' teachers on scale of Barriers to achieving inclusion goals of autistic students in regular school, based on the variable of school stage "Elementary, Preparatory, and Secondary."

It is clear from Table 6 that:

- 1- The absence of statistically significant differences between the mean scores of autistic students' teachers on three domains of the scale of Barriers to achieving inclusion goals of autistic students in regular schools "Barriers related to the family, Barriers related to school administration, Barriers related to society" and the overall score of the scale, are based on variable of stage at which the teachers teach.

Table-6. One-way ANOVA for the differences in the participants' responses due to the school stage variable.

	Domain	Sums of squares	df	Mean square	F	P value
Barriers Related to School administration	Among groups	5.922	2	2.961	5.280	0.007
	Within groups	60.012	107	.0561		
	Total	65.935	109	--		
Barriers Related to The Autism Spectrum Disorder Family	Among groups	0.142	2	0.071	0.083	0.921
	Within groups	91.756	107	0.858		
	Total	91.897	109	--		
Barriers Related to Autism Spectrum Disorder	Among groups	1.929	2	0.964	1.417	0.247
	Within groups	72.838	107	0.681		
	Total	74.767	109	--		
Barriers Related to Society	Among groups	0.833	2	0.417	0.871	
	Within groups	51.172	107	0.478		
	Total	52.006	109	--		
Total scale	Among groups	0.589	2	0.295	0.823	0.421
	Within groups	38.277	107	0.358		
	Total	38.866	109	--		

Note: *insignificant at the significance level of (0.05).

This result suggests that all teachers agree that there are Barriers in achieving inclusion goals for students with autism in regular schools, and therefore all teachers see these Barriers in all educational stages for students with autism. This is in consistent with the results of studies (Amant, Schragger, Peña-Ricardo, Williams, & Vanderbilt, 2018; Garrad et al., 2019; Grenier, Miller, & Black, 2017) which show the lack of special education schools educational technologies, the lack of computers in the classroom, the lack of educational software, and the lack of training courses for teachers and workers in the field of inclusion. This is in addition to the failure of community institutions to play their role towards the including of students with autism.

- 2- The existence of statistically significant differences between the mean scores of autistic students' teachers in first domain "Barriers related to with autism spectrum disorder, on scale of Barriers to achieving inclusion goals of autistic students in regular school. To identify the differences, the Schiff's test was used, and the results were as follow:

Table 7 presents Schiff's test Results for Dimensional Analysis to identify Direction of Differences in First domain Of Scale of Barriers to Achieving inclusion goals of autistic students in regular School.

Table-7. Schiff's test, for dimensional analysis to find out the direction of differences in the first domain.

Independent Variable	(I) A2	(J) A2	(Chen, Lee, & Lin)	Std. Error	P value
Barriers Related To Autism Spectrum Disorder ASD	1.00	2.00	0.46984*	0.14912	0.009
		3.00	0.52558	0.32637	0.278
	2.00	1.00	-0.46984*	0.14912	0.009
		3.00	0.05574	0.32042	0.985
	3.00	1.00	-0.52558	0.32637	0.278
		2.00	-0.05574	0.32042	0.985

Table 7 shows that there are differences between the mean scores of autistic students' teachers at elementary and intermediate school stage, in favor of primary school stage teachers. This result can be interpreted in the light of barriers faced by primary school teachers who in order to achieve goals of inclusion compared to other educational stages. Since this is the foundational stage that requires many needs, because these teachers cannot meet all needs, the barriers further get bigger making it more difficult achieve education goals for students with autism spectrum disorder.

5. DISCUSSION

Studies have shown that autism spectrum disorder teachers lack knowledge of ASD features and do not know how to apply different teaching methods to students with ASD (McGillicuddy & O'Donnell, 2014; Merry, 2020; Shoham & Kupferberg, 2020). In the context of the results of the current study and the existence of many barriers that prevent the achievement of the inclusion goals, it is essential to This may contribute to breaking the isolation restrictions that they suffer even in the boundary of regular schools. Likewise, it is necessary to introduce the concept of Universal Design for Learning (D'Agostino, Douglas, & Horton, 2020; Murshed & Imtiaz, 2020; Van Tran, Pham, Mai, Le, & Nguyen, 2020) which is defined as the design of all products, buildings and environments. Such designs are easy to use by all individuals in society regardless of their ages and abilities. They are easily accessible to everyone after overcoming physical barriers in societies.

The item 13 of Article 40 of the Regulations for Special Education Institutes and Programs, Kingdom of Saudi Arabia precisely contribute to achieving the goals of inclusion (Alotaibi, Dimitriadi, & Kemp, 2016). The Act stipulates "taking into account individual differences among students, and working to use strategies and methods that enable the teacher of dealing with all students of different kinds for the benefit of the child with autism." Effective inclusion therefore means allowing autistic children to have personal wellbeing, clothes, protection and interpersonal skills, and develop life skills. It is also important to develop social skills which involves communicating, playing, initiating or holding conversations, asking and talking, and sharing a game or an activity with their colleagues (Haine-Schlagel, Rieth, Dickson, Brookman-Fraze, & Stahmer, 2020; Stone, Mills, & Saggars, 2019). Since socially disabled autistic students are more likely to develop impairments in social life, academic success and verbal delay. As a result they may also have issues with eye contact, mutual interest, interactions, ability to solve problems, empathy and the understanding of their body language (Ahmed, 2020). Daneshvar, Charlop, and Berry Malmberg (2019); Kodak, Cariveau, LeBlanc, Mahon, and Carroll (2018) Studies (Brignell et al., 2018; Syriopoulou-Delli & Gkiolnta, 2020) confirm that comprehensive inclusion improves social, communication, and behavioral skills for students with autism. Thus the inclusive inclusion focused on providing social stories and play strategies for students as well as teaching playing role in conversation (Alotaibi et al., 2016; Lüddeckens, 2020). There were a few limitations of this study. The study population was small and chosen from one of the schools in the Riyadh region, so it was difficult to generalize the results. Secondly, addressing these barriers may affect the continuing professional development of teachers, school administration, availability of qualified teachers, and community awareness. Future studies may include identifying barriers to transportation services for Autistic students from different areas, as global trends seek to comprehensively inclusion children with autism early in kindergarten and then into regular schools.

6. CONCLUSION

The results of the current study lead to the following conclusions; The barriers related to school administration came in first place, followed by the barriers related to the families of Autistic students, the barriers related to Autistic, and the barriers related to society. This may be summed up as under:

- There is a presence of statistically significant difference between the mean scores of Autistic students' teachers on the first domain, "barriers related to autism." Their average scores on the third domain, "barriers related to school administration," are in favor of female teachers, and their average scores on the fourth domain, "barriers related to society" are in favor male teachers. There are no differences between the average scores of male and female teachers of Autistic students on the second domain, "barriers related to family" and total score of the scale.
- There were also no statistically significant differences between the mean scores of teachers of Autistic students in the three domains of scale of barriers to achieving inclusion goals of autistic students in

regular school "barriers related to autism, barriers related to the family, barriers related to school administration" due to variable of teacher qualification.

- There were no statistically significant differences between the mean scores of teachers of Autistic students in the three domains of scale of barriers to achieving inclusion goals of autistic students in regular school "barriers related to the family, barriers, related to school administration, barriers related to society" and the overall score of the scale, based on the stage variable which the teacher teaches.

Teachers do not however have the capacity to engage in workshops and educational programs for their professional growth and comprehension by new improvements in management for Autistic students..

7. RECOMMENDATIONS

Based on results of the current study, a few recommendations can be stated:

1. School teachers can teach Autistic students in comprehensive classes with a wide variety of skills and characteristics. For this purpose, all school teachers must be qualified to effectively teach this category of students regardless of relevant qualifications.
2. There is a need for the professional development in the field of comprehensive education and training of educators to teach Autistic students.
3. Inclusion of Autistic students educational services should be made into curricula for teachers of either special or general education, with frequent encouragement through in-service training.
4. The Ministry of Education needs to take a more constructive approach by developing and implementing advanced in-service training courses for school teachers about Barriers to inclusion Autistic students
5. For future studies, a similar analysis of large samples should take place taking in consideration teachers' gender, which could find out more barriers to achieving inclusion of autistic students.
6. Introduce modern concepts and practices into the educational and social process for students with autism spectrum disorder.

Funding: This study received no specific financial support.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

REFERENCES

- Abu, A. K. M. (2019). *The use of assistive technology with students with severe intellectual and developmental disabilities in Saudi Arabia: Teachers' perspectives*. PhD dissertation, University of South Florida.
- Agran, M., Wojcik, A., Cain, I., Thoma, C., Achola, E., Austin, K. M., & Tamura, R. B. (2017). Participation of students with intellectual and developmental disabilities in extracurricular activities: Does inclusion end at 3:00? *Education and Training in Autism and Developmental Disabilities*, 52(1), 3-12.
- Ahmed, F. I. (2020). The effectiveness of the illustrated PEX program in developing some communication skills for children with autism spectrum disorder. *Journal of Arts, Literature, Humanities and Sociology*, 50(5), 131-156.
- Al-Zboon, E. (2020). The inclusion of disability issues and concepts in the Jordanian national curriculum from the perspective of curriculum planning experts. *European Journal of Special Needs Education*, 35(4), 1-10.
- Aljafari, R. (2019). *The perceptions of elementary school teachers about using E-Mail as method of communication with parents for children with autism spectrum disorder (ASD) in Saudi Arabia Saint Louis University*. PhD Dissertation, Saint Louis University in Partial Fulfillment.
- Alnasser, Y. A. (2020). The perspectives of Colorado general and special education teachers on the barriers to co-teaching in the inclusive elementary school classroom. *Education*, 3-13, 1-14. Available at: <https://doi.org/10.1080/03004279.2020.1776363>.

- Alotaibi, F., Dimitriadi, Y., & Kemp, A. E. (2016). Perceptions of teachers using social stories for children with autism at special schools in Saudi Arabia. *Journal of Education and Practice*, 7(11), 85-97.
- Alqahtani, M. (2017). *Teacher perspectives on full inclusion of students with learning disabilities in Saudi Arabia high schools Indiana State University*. PhD Dissertation, Indiana State University, Terre Haute, Indiana.
- Alquraini, T. A. (2012). Factors related to teachers' attitudes towards the inclusive education of students with severe intellectual disabilities in Riyadh, Saudi. *Journal of Research in Special Educational Needs*, 12(3), 170-182. Available at: <https://doi.org/10.1111/j.1471-3802.2012.01248.x>.
- Amant, H. G. S., Schragar, S. M., Peña-Ricardo, C., Williams, M. E., & Vanderbilt, D. L. (2018). Language barriers impact access to services for children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 48(2), 333-340. Available at: <https://doi.org/10.1007/s10803-017-3330-y>.
- Amor, A. M., Hagiwara, M., Shogren, K. A., Thompson, J. R., Verdugo, M. Á., Burke, K. M., & Aguayo, V. (2019). International perspectives and trends in research on inclusive education: A systematic review. *International Journal of Inclusive Education*, 23(12), 1277-1295. Available at: <https://doi.org/10.1080/13603116.2018.1445304>.
- Balubaid, R. (2017). *Autism and the experience of transition from childhood to adulthood University of Reading*. PhD Dissertation, University of Reading.
- Boitumelo, M., Kuyini, A. B., & Major, T. E. (2020). Experiences of general secondary education teachers in inclusive classrooms: Implications for sustaining inclusive education in Botswana. *International Journal of Whole Schooling*, 16(1), 1-34.
- Brignell, A., Chenausky, K., Song, H., Zhu, J., Suo, C., & Morgan, A. (2018). Communication interventions for autism spectrum disorder in minimally verbal children. *Cochrane Database of Systematic Reviews*(11), CD012324. Available at: [10.1002/14651858.CD012324.pub2](https://doi.org/10.1002/14651858.CD012324.pub2).
- Chen, C.-H., Lee, I.-J., & Lin, L.-Y. (2016). Augmented reality-based video-modeling storybook of nonverbal facial cues for children with autism spectrum disorder to improve their perceptions and judgments of facial expressions and emotions. *Computers in Human Behavior*, 55, 477-485.
- Clark, M., Adams, D., Roberts, J., & Westerveld, M. (2020). How do teachers support their students on the autism spectrum in Australian primary schools? *Journal of Research in Special Educational Needs*, 20(1), 38-50. Available at: <https://doi.org/10.1111/1471-3802.12464>.
- D'Agostino, S., Douglas, S. N., & Horton, E. (2020). Inclusive preschool practitioners' implementation of naturalistic developmental behavioral intervention using telehealth training. *Journal of Autism and Developmental Disorders*, 50(3), 864-880. Available at: <https://doi.org/10.1007/s10803-019-04319-z>.
- Daneshvar, S. D., Charlop, M. H., & Berry Malmberg, D. (2019). A treatment comparison study of a photo activity schedule and Social Stories for teaching social skills to children with Autism Spectrum Disorder: brief report. *Developmental Neurorehabilitation*, 22(3), 209-214.
- Daugherty, B. L. (2019). Parent perceptions of barriers to friendship development for children with autism spectrum disorders. *Communication Disorders Quarterly*, 40(3), 142-151. Available at: <https://doi.org/10.1177/1525740118788039>.
- Evans, S. D. (2016). *General education teachers' perceptions about teaching students with autism in urban schools*. PhD Dissertation, Walden University. Retrieved from <https://scholarworks.waldenu.edu>.
- Garrad, T. A., Rayner, C., & Pedersen, S. (2019). Attitudes of Australian primary school teachers towards the inclusion of students with autism spectrum disorders. *Journal of Research in Special Educational Needs*, 19(1), 58-67. Available at: <https://doi.org/10.1111/1471-3802.12424>.
- Grenier, M., Miller, N., & Black, K. (2017). Applying universal design for learning and the inclusion spectrum for students with severe disabilities in general physical education. *Journal of Physical Education, Recreation & Dance*, 88(6), 51-56. Available at: <https://doi.org/10.1080/07303084.2017.1330167>.
- Haine-Schlagel, R., Rieth, S., Dickson, K., Brookman-Frazee, L., & Stahmer, A. (2020). Adapting parent engagement strategies for an evidence-based parent-mediated intervention for young children at risk for autism spectrum disorder. *Journal of Community Psychology*, 48(4), 1215-1237.

- Harmuth, E., Silletta, E., Bailey, A., Adams, T., Beck, C., & Barbic, S. P. (2018). Barriers and facilitators to employment for adults with autism: A scoping review. *Annals of International Occupational Therapy, 1*(1), 31-40. Available at: <https://doi.org/10.3928/24761222-20180212-01>.
- Hassanein, E. E. A., Adawi, T. R., & Johnson, E. S. (2020). Barriers to including children with disabilities in Egyptian schools. *Journal of International Special Needs Education, 1*(20), 1-11. Available at: <https://doi.org/10.9782/19-00001>.
- Holmes, S. (2020). *Creating an inclusive climate for students on the autism spectrum*. PhD Dissertation, Abilene Christian University. Retrieved from https://digitalcommons.acu.edu/school_ed_leadership/5.
- Hridi, A. P., Ahmed, S., Abeer, I. A., Saha, A., Sinha, A., Hossain, M. S., & Sharmin, M. (2020). *Understanding the educational landscape of children with autism in Bangladesh*. Paper presented at the International Conference on Information.
- Khalil, A. I., Salman, A., Helabi, R., & Khalid, M. (2020). Teachers' knowledge and opinions toward integrating children with autism spectrum disorder in mainstream primary school in Jeddah, Saudi Arabia. *Saudi Journal of Humanities and Social Sciences, 5*(6), 282-293. Available at: [10.36348/sjhs.2020.v05i06.004](https://doi.org/10.36348/sjhs.2020.v05i06.004).
- Kodak, T., Cariveau, T., LeBlanc, B. A., Mahon, J. J., & Carroll, R. A. (2018). Selection and implementation of skill acquisition programs by special education teachers and staff for students with autism spectrum disorder. *Behavior Modification, 42*(1), 58-83. Available at: <https://doi.org/10.1177/0145445517692081>.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques* (Vol. 13, pp. 1-401): New Age International (P) Ltd., Publishers.
- Lindsay, S., Proulx, M., Thomson, N., & Scott, H. (2013). Educators' challenges of including children with autism spectrum disorder in mainstream classrooms. *International Journal of Disability, Development and Education, 60*(4), 347-362. Available at: <https://doi.org/10.1080/1034912x.2013.846470>.
- Liu, T., Holmes, K., & Albright, J. (2020). Teachers' perceptions of educational inclusion for migrant children in Chinese urban schools: A cohort study. *Education and Urban Society, 52*(4), 649-672. Available at: <https://doi.org/10.1177/0013124519868291>.
- Locke, J., Beidas, R. S., Marcus, S., Stahmer, A., Aarons, G. A., Lyon, A. R., & Mandell, D. S. (2016). A mixed methods study of individual and organizational factors that affect implementation of interventions for children with autism in public schools. *Implementation Science, 11*(1), 1-9. Available at: <https://doi.org/10.1186/s13012-016-0501-8>.
- Lorenz, T., Frischling, C., Cuadros, R., & Heinitz, K. (2016). Autism and overcoming job barriers: Comparing job-related barriers and possible solutions in and outside of autism-specific employment. *PloS one, 11*(1), e0147040. Available at: <https://doi.org/10.1371/journal.pone.0147040>.
- Lüddeckens, J. (2020). Approaches to inclusion and social participation in school for adolescents with autism spectrum conditions (ASC)—a systematic research review. *Review Journal of Autism and Developmental Disorders, 1-14*. Available at: <https://doi.org/10.1007/s40489-020-00209-8>.
- Majoko, T. (2016). Inclusion of children with autism spectrum disorders: Listening and hearing to voices from the grassroots. *Journal of Autism and Developmental Disorders, 46*(4), 1429-1440.
- McGillicuddy, S., & O'Donnell, G. M. (2014). Teaching students with autism spectrum disorder in mainstream post-primary schools in the Republic of Ireland. *International Journal of Inclusive Education, 18*(4), 323-344.
- Merry, M. S. (2020). Do inclusion policies deliver educational justice for children with autism? An ethical analysis. *Journal of School Choice, 14*(1), 9-25.
- Mónico, P., Mensah, A. K., Grünke, M., Garcia, T., Fernández, E., & Rodríguez, C. (2020). Teacher knowledge and attitudes towards inclusion: A cross-cultural study in Ghana, Germany and Spain. *International Journal of Inclusive Education, 24*(5), 527-543.
- Morgan, L., Hooker, J. L., Sparapani, N., Reinhardt, V. P., Schatschneider, C., & Wetherby, A. M. (2018). Cluster randomized trial of the classroom SCERTS intervention for elementary students with autism spectrum disorder. *Journal of Consulting and Clinical Psychology, 86*(7), 631-644. Available at: <https://doi.org/10.1037/ccp0000314>.

- Murshed, S. M., & Imtiaz, M. (2020). Inclusive practices in Bangladesh: Multilingual education for indigenous children. In *Moving towards Inclusive Education* (pp. 159-174): Brill Sense.
- Ntalindwa, T., Soron, T. R., Nduwingoma, M., Karangwa, E., & White, R. (2019). The use of information communication technologies among children with autism spectrum disorders: Descriptive qualitative study. *JMIR Pediatrics and Parenting*, 2(2), e12176.
- Ostmeyer, K., & Scarpa, A. (2012). Examining school-based social skills program needs and barriers for students with high-functioning autism spectrum disorders using participatory action research. *Psychology in the Schools*, 49(10), 932-941.
- Page, A., & Ferrett, R. (2018). Teacher aides' views and experiences on the inclusion of students with Autism: A cross-cultural perspective. *International Education Journal: Comparative Perspectives*, 17(2), 60-76.
- Pineda, V. S. (2010). *The capability model of disability: Assessing the success of UAE Federal Law No. 29 of 2006 in the Emirate of Dubai*. Los Angeles: University of California.
- Priyanka, S., & Samia, K. (2018). Barriers to inclusive education for children with special needs in schools of Jammu. *The International Journal of Indian Psychology*, 6(1), 93-147.
- Roberts, J., & Simpson, K. (2016). A review of research into stakeholder perspectives on inclusion of students with autism in mainstream schools. *International Journal of Inclusive Education*, 20(10), 1084-1096. Available at: <https://doi.org/10.1080/13603116.2016.1145267>.
- Rodden, B., Prendeville, P., Burke, S., & Kinsella, W. (2019). Framing secondary teachers' perspectives on the inclusion of students with autism spectrum disorder using critical discourse analysis. *Cambridge Journal of Education*, 49(2), 235-253. Available at: <https://doi.org/10.1080/0305764x.2018.1506018>.
- Rowan, L., Kline, J., & Mayer, D. (2017). Early career teachers' perceptions of their preparedness to teach "diverse learners": Insights from an Australian research project. *Australian Journal of Teacher Education*, 42(10), 71-92.
- Sabayleh, O. A., & Alramamneh, A. K. (2020). Obstacles of implementing educational techniques in special education centres from autism teachers' perspective. *Cypriot Journal of Educational Sciences*, 15(2), 171-183. Available at: <https://doi.org/10.18844/cjes.v15i2.4485>.
- Saloviita, T. (2020). Attitudes of teachers towards inclusive education in Finland. *Scandinavian Journal of Educational Research*, 64(2), 270-282.
- Schultz, T. R., Able, H., Sreckovic, M. A., & White, T. (2016). Parent-teacher collaboration: Teacher perceptions of what is needed to support students with ASD in the inclusive classroom. *Education and Training in Autism and Developmental Disabilities*, 51(4), 344-354.
- Shoham, K. D., & Kupferberg, I. (2020). Experienced mainstream teachers and student teachers position themselves explicitly and implicitly in relation to inclusive classrooms: Global and local implications. *Journal of Education for Teaching*, 46(3), 379-394. Available at: <https://doi.org/10.1080/02607476.2020.1756692>.
- Sobeck, E. E., & Robertson, R. (2019). Perspectives on current practices and barriers to training for paraeducators of students with autism in inclusive settings. *Journal of the American Academy of Special Education Professionals*, 21(1), 131-151.
- Stone, B. G., Mills, K. A., & Saggars, B. (2019). Online multiplayer games for the social interactions of children with autism spectrum disorder: A resource for inclusive education. *International Journal of Inclusive Education*, 23(2), 209-228. Available at: <https://doi.org/10.1080/13603116.2018.1426051>.
- Sulek, M. R. P. (2019). *Improving outcomes for children with autism spectrum disorder in mainstream schools Griffith University*. PhD Dissertation. Retrieved from <http://hdl.handle.net/10072/386569>.
- Syriopoulou-Delli, C. K., & Gkiolnta, E. (2020). Review of assistive technology in the training of children with autism spectrum disorders. *International Journal of Developmental Disabilities*, 1-13. Available at: <https://doi.org/10.1080/20473869.2019.1706333>.
- Tonnson, B. L., & Hahn, E. R. (2016). Middle school students' attitudes toward a peer with autism spectrum disorder: Effects of social acceptance and physical inclusion. *Focus on Autism and Other Developmental Disabilities*, 31(4), 262-274. Available at: <https://doi.org/10.1177/1088357614559213>.

- Van Tran, C., Pham, M. M., Mai, P. T., Le, T. T., & Nguyen, D. T. (2020). Inclusive education for students with autism spectrum disorder in elementary schools in Vietnam: The current situation and solutions. *International Electronic Journal of Elementary Education*, 12(3), 265-273.
- Vaz, S., Wilson, N., Falkmer, M., Sim, A., Scott, M., Cordier, R., & Falkmer, T. (2015). Factors associated with primary school teachers' attitudes towards the inclusion of students with disabilities. *PloS one*, 10(8), e0137002. Available at: <https://doi.org/10.1371/journal.pone.0137002>.
- Wilson, K. P., & Landa, R. J. (2019). *Barriers to educator implementation of a classroom-based intervention for preschoolers with autism spectrum disorder*. Paper presented at the Frontiers in Education.
- Young, K., McNamara, P. M., & Coughlan, B. (2017). Authentic inclusion-utopian thinking?—Irish post-primary teachers' perspectives of inclusive education. *Teaching and Teacher Education*, 68, 1-11. Available at: <https://doi.org/10.1016/j.tate.2017.07.017>.
- Zuki, N. H. M., & Rahman, N. (2016). Challenges Malaysian teachers face in the inclusion of autistic students in the normal classroom. *Journal of Education and Social Sciences*, 4(1), 33-41.

Views and opinions expressed in this article are the views and opinions of the author(s), International Journal of Education and Practice shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.