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Suliman S. Alothaim

Department of Special Education, College of Education, Qassim University, Buraydah, Saudi Arabia,
sothaim@qu.edu.sa

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Sight Words in the Field of Teaching Saudi Students with Autism Spectrum Disorder

Suliman S. Alothaim

Department of Special Education, College of Education, Qassim University, Buraydah, Saudi Arabia

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Abstract: Like all students with special needs, those with ASD are unique. To help them develop their skills and capacities, they need specialized programs and interventions. The main purpose of this study was to understand teachers' knowledge about sight words intervention. In addition to that, the study was intended to discover teachers' perspectives on the use of sight words to enhance reading skills of Saudi students with ASD. 89 male and female teachers of students with ASD participated in this study. The result showed that teachers have a high level of knowledge about sight word strategy in teaching reading to their students with ASD. In addition, teachers see that the use of sight words is moderately effective in enhancing on other aspect of literacy of students with ASD.

Keywords: Autism Spectrum Disorder (ASD); acquisition; sight words; reading fluency; reading Rate.

1 Introduction

According to Randi, Newman, and Grigorenko (2010), individuals with autism spectrum disorder (ASD) often have difficulty with social and emotional interactions, which is one of the most debilitating features of this disorder. However, Oatley, (2011) suggested that reading fiction may actually improve person's social and emotional abilities. Espin, Shin, and Busch, (2005) found that learning new words help students to improve their comprehension, critical thinking, problem-solving abilities, and ability to follow instructions. Mastropieri and Scruggs, (1997) reported that the ability to understand what is read is the most important intellectual skills that can be learned from school. Nation and Norbury, (2005) found that reading comprehension is the most important factor in determining academic success, as well as communication and learning possibilities.

However, Smith, Mirenda, and Zaidman-Zait, (2007) reported that children with ASD do not learn new words quickly or naturally like other children. Huemer and Mann, (2010), heighthed that reading is often a challenge for students with ASD. Decoding and understanding text might be challenging for students with ASD. The vocabulary of children with disabilities is much weaker and lower than that of their typically developing classmates (Bryant, Goodwin, Bryant, & Higgins, 2003). Illand (2011) reported that, "the limited general fund of knowledge, facts, concepts, and vocabulary often seen in individuals with [autism] can be a decided disadvantage in reading comprehension" (p. 41). Deshler et al., (2001) reported that a significant number of students who have disabilities have limited vocabularies, which has a detrimental effect on their reading abilities and their genuine capacity to comprehend. Katims, (1996) reported that it is common to see people with intellectual disabilities reading at a level that is below their mental age. Literacy courses aren't given as much attention as social, vocational, and personal components in special education programs for individuals with intellectual impairments, which may explain why it's typical to see them read below their mental age. Kluth, and Darmody-Latham, (2003) reported that there is a lack of literacy teaching for children with ASD since they are frequently excluded from activities such as participating in plays, sharing stories, or writing in journals.

Children with ASD learn in a unique way that is different from children without disabilities. (Volkmar, Lord, Bailey, Schultz, & Klin, 2004). Iovannone, Dunlap, Huber, and Kincaid, (2003) reported that teachers must be aware of the strengths and limitations of each student. So they can choose the right intervention for each child. To give successful education, structured classes, methodical delivery, and a specific curriculum are suggested to improve the abilities of each student. Iovannone et al., (2003) reported that every child diagnosed with ASD requires individualized teaching method that is created to suit the child's specific requirements. Randi et al., 2010 reported that effective instructional interventions are the key to helping students with high-functioning levels of ASD improve their reading comprehension. Hiebert, & Fisher, (2005) reported that an important part of a school improvement plan is getting students to read better and understand what they are reading. This was a big step toward solving many educational and behavioral problems of these students. Stahl, (2005) found that the number of vocabularies that students can read has an effect on all aspects of their language skills and knowledge. Biemiller, (2003) reported that students who know a big number of words will be

*Corresponding author e-mail: sothaim@qu.edu.sa

able to read better, which will also benefit them academically. When a student's reading abilities develop, he or she will likewise enhance and modify many other areas. This is because the student's knowledge level increased.

Flavell, (2004) reported that vocabulary development in students begins with teachers realizing just how important language is in terms of how people express their feelings, thoughts, and ideas. Yu and Ballard, (2003) reported that symbols are the foundations upon which language is built, and the development of these symbols begins in infancy. Symbols are then saved and put into groups based on how they connect to other symbols. The classification of these symbols is determined by the relations and connections between these symbols (Johnson, Hetzel, & Collins, 2004). Shaywitz, (2003) reported that learning how to read well requires developing skills in four main areas. (a) develop a reader's ability to understand words by hearing them out (decoding) them, (b) develop a reader's ability to visualize and remember the correct letter sequences in words in order to make reading sight words easier, (c) develop a reader's ability of retrieving words from memory in a precise, speedy, and unthinking manner automatically, so allowing the reader to improve their reading fluency, and (d) increase a reader's ability to understand what they are reading. Pearson, Hiebert and Kamil, (2007) found that students can increase their vocabulary development by using analogies and similarities between words. Once children first start to acquire new words, they begin to establish a visual lexicon, which correlates to the student's reading vocabulary (Goswami, 2004). Rupley and Nichols (2005) found that learners enhanced their vocabulary by using both in-text strategies and supplementary interventions that assist in the learning of new vocabulary.

Conners, (1992) reported that reading for meaning is emphasized in regular education, but word recognition and vocabulary building are often emphasized in special education. Freeman and Dake, (1997) found that a significant number of children who have ASD struggle to learn a new vocabulary and may not ask for meanings of unfamiliar words. These children do not inquire about the meanings of terms that are unknown words. Therefore, to assist these students who have difficulty learning new words, explicit interventions is required (Biemiller, 2003). Coleman, Cherry, Moore, Park, and Cihak (2015) found that the ability to recognize and comprehend sight words is an important factor of being a proficient reader. They affirmed that to be a successful reader, you need to be able to read sight words. Blackwell and Laman (2013) reported that learning to read by sight is a way to read words quickly without having to figure out what they mean. Reading by sight was characterized as a way of learning to read words without the need to decode them. Frith and Snowling, (1983) reported that children with ASD employ rote memory, sight word identification, and pattern recognition instead of decoding and phonological awareness in order to assist them with reading. Miles, Rubin, and Gonzalez-Frey (2017) emphasized that reading words by sight is the method that is both the quickest and most effective for students. Coleman et al. (2015) confirmed that sight words are strong words that an excellent reader is able to rapidly identify, which enables the reader to focus more on gaining an understanding of the material being read. Cunningham and Allington, (1999) noted that there are six critical elements that must be followed in order for a word wall to be effective: updating the wall by adding an average of five new words every week, ensuring that the words are shown to the children in a sizable enough print and in a variety of colors to prevent them from becoming confused, carefully selecting the words to be placed on the wall. To be clear children should only taught words that are common and those they will use while writing, putting in practice words by chanting them and writing them down, participating in a wide variety of review activities, and ensure that both adults and children are writing and spelling the words correctly.

1.1 Statement of the Problem

Students with ASD are different, just like other students with special needs. They need special services and interventions to help them develop their skills and abilities. According to Rogers (2010), students with ASD struggle with social connection and communication, as well as repeated behaviors and activities, as well as a limited focus on a single subject or activity. Teaching or changing inappropriate behavior of students who have ASD is not an easy task. Teachers need to use many unique strategies that work for each student. According to Hadley and Addison (2016), students who have ASD struggle in the classroom with a range of challenges, including challenges with time management, academics, and engaging with others. Buggley (2012) found that the majority of students who have ASD struggle with a variety of academic skills, including problem-solving, sequencing, self-regulation, and planning, all of which have a detrimental impact on their academic performance.

However, students with ASD will be able to reach their academic goals more easily and more quickly if their teachers implement effective interventions with them. Teachers use a variety of interventions to help students reach their academic goals each semester. Literacy is one of the goals that teachers of students with ASD try to reach each semester. More specifically, there are many interventions to help students with ASD learn how to read. Sight words are one of the most significant interventions that teachers use while teaching individuals with ASD how to read.

Even though it has been shown that teaching children with ASD how to read by using sight words is effective, there hasn't been a lot of research or studies done on how teachers have really used this method to help students with ASD

improve their reading skills. Also, there are no studies that look at how this strategy affects other reading skills, such as reading fluency and comprehension. The researcher decided that it is important to understand the teachers' knowledge about sight words intervention, as well as what other aspects of reading skills sight words can improve.

1.2 Purpose of the Study

The main purpose of this study was to understand teachers' knowledge about sight words intervention. In addition to that, the study was intended to discover teachers' perspectives on the use of sight words to enhance reading skills of Saudi students with ASD.

1.3 Specific Research Questions

- 1- What is the level of teachers' knowledge of using sight words in teaching reading to their students with ASD?
- 2- What is the teachers' perspective on the effectiveness of using words to enhance reading skills of students with ASD?

1.4 Importance

- 1- This study helps people who are interested in teaching students with ASD about the importance of using sight words to enhance their reading ability.
- 2- Educating teachers of students with ASD about the impact of sight words on other aspect of literacy, such as fluency and comprehension, in students with ASD.

1.5 Rationale

As an autism specialist, I believe there is an urgent need to understand the impact of interventions that employed in schools with students with ASD. One of the most essential tactics used with students with ASD is the sight words strategy. The goal for conducting this research was to learn in depth how Saudi teachers who teach students with ASD employ sight words, as well as whether this intervention promotes other areas of reading for these students.

1.6 Objectives of the Study

- 1- Understanding teachers' knowledge about sight words intervention and how teacher use sight words strategy to teach students with autism spectrum disorders reading vocabulary.
- 2- Understanding how sight words strategy impact other aspect of literacy, such as fluency and comprehension, in students with ASD.

1.7 Important Terms

Autism Spectrum Disorder (ASD)- is a situation in which a student's social communication and interaction, as well as repeated behavior, passions, and activities, are not fully developed (American Psychiatric Association, 2013).

Sight Words- The capacity to read a word without trying to examine the word's composition in order to identify and understand its sound (Akcin, 2013).

Acquisition- The technique of finding and learning anything new, whether it's knowledge or new behavior (Miltenberger, 1997).

Reading Fluency- naturally reading with appropriate expression. The ability to read literature quickly and clearly and understand what you are reading (Friedland, Gilman, Johnson, & Demeke, 2017).

Visual organizers- Visual organizers are comprised of a number of different visual learning strategies that are intended to "help students better understand important text ideas and how they are related ...[including] graphic organizers, maps, chains, charts, continuums, webs, trees, grids, matrices, or diagrams that provide a visual representation of the content of narrative or expository text" (Dowhower, 1999, p. 678).

Reading Rate- the quantity of words that read in a certain amount of time (Valencia et al., 2010).

1.8 Scope and Delimitations of the Study

The participants in this study were restricted to those who teach and work with students with ASD. Only teachers from Al Qassim, Saudi Arabia were included in this study, whether private or public schools. This research excludes teachers who work with students with other disabilities or who teach outside of Qassim.

2 Literature review

The academic and professional studies related to the study's purpose will be the focus of this part of the literature review. The main purpose of this study was to understand teachers' knowledge about using sight words with Saudi students with ASD. In addition to that, the study was intended to discover teachers' perspectives on the use of sight words to enhance reading skills of Saudi students with ASD. In the literature review, two primary sections have been outlined. To begin, several intervention strategies that help students with ASD improve their reading skills will be discussed in this section. Second, I will discuss some research that was done on the best ways to teach reading to students who have ASD, as well as how to implement various practices related to the subject. To start with Bosseler and Massaro (2003) who examined the ability of eight children with ASD to acquire new words with the use of Computer Assisted Instruction (CAI). They discovered that software help children with ASD pick up and learn new vocabulary. They also discovered that same words learned through software could be applied to non-computer activities, and the outcomes were able to be maintained over a period of 30 days.

Yaw's et al (2011) investigated the impact of a computer-based sight-word reading intervention on the reading skills of children with ASD. In this study, student's teacher selected thirty words which were from the Dolch's list of words. The student did not know these words before. The interventions also included the audio recording so that student could be recorded reading each word as it was presented. The data showed that student's ability to read and recognize the words he learned in this intervention increased dramatically.

Some teachers used traditional way to teach his/her student sight words by using words with pictures. Pictures plays important role in sight word interventions. For example, Fossett and Mirenda (2011) conducted study with teacher who asked students to match pictures with words in the baseline. In the intervention sessions, two groups of five words were chosen for each participant. Five words for the paired associate, and five words for the picture-to-text matching. During these sessions, teacher taught students to match between pictures and text. Matching worksheets was applied by teacher. Participants were shown lists of words for common objects. One was shown with text, and another without. In each scenario, the participants were able to match the correct picture when given the word verbally. However, greater success was achieved when the participants were given the picture with text as opposed to just the picture.

Not only flashcards help teaching words, but also help increase the fluency of sight words. Crawley et al. (2013) aimed to examine flashcard system with a reading racetrack to teach sight words. During the intervention sessions, cards presented to the student by teacher using flashcards. The reading racetrack procedure applied by teacher after the flashcards were taught. Two reading racetracks were holed by teacher in the start of the session. The first track included words that were introduced in the most recent collection of words. These words were presented to the students but had not yet been well learned. The words on the second track were newly set and already mastered words. The teacher indicated to each word on the track to help the students determine which word to read. Participated in this study showed improvement in their reading vocabulary from utilizing this intervention. The result also showed that this intervention helps students to increase fluency in general.

Nation, Clark, Wright and Williams (2006) aimed to find out where students with ASD had reading deficiencies in four different areas: word recognition, nonword decoding, text reading accuracy, and text comprehension. The study's participants varied in age from six to fifteen years old. According to the study's findings, 78 percent of the children with ASD who took part in the study exhibited decoding abilities that were average or above normal. They could read single words from a list. According to the findings, 66 percent of the students in the sample scored below average in reading comprehension.

Scott and Nagy (1997) explained why vocabulary instruction is becoming more and more important each day. They claimed that there is not enough control over the words that are used in normal class reading programs, which results in students being exposed to a greater number of unfamiliar words. In order to eliminate this issue completely, children are allowed time each day to participate in independent reading, and they are encouraged to make their own choices on what they want to read. As a result, children are more likely to come across unfamiliar words, which they are more likely to ignore. For example, children are exposed to online and video game material. They may also learn English but speak another language with family.

Yates, Cuthrell, and Rose (2011) outlined the four characteristics that are common of word walls. The educational goal must to be taken into consideration while choosing the words. The list should then be regularly updated with new words. Word walls should also provide students the opportunity to practice these words in context. Students should study the vocabulary and definitions; teachers may encourage critical thinking and allow them to use what they've learned in class.

Baker, Simmons, and Kame'enui, (1995) discussed how to fit teaching methods to vocabulary goals and how to help children become independent word learners. For successful vocabulary instruction, they recommend the following

strategies: (a) the teaching of vocabulary should be clear to the student. Student should not have any trouble understanding the way to teaching the vocabulary, (b) it is important that students get enough vocabulary training. It is necessary to give multiple chances for vocabulary practice to the student, (c) it is important to make use of a child's background knowledge in order to teach them new words in an effective way, and (d) a teacher should establish a vocabulary goal while remembering that different words are learnt at different levels.

National Reading Panel (2000) has concluded that:

“Vocabulary should be taught both directly and indirectly. Repetition and multiple exposures to vocabulary items are important. Learning in rich contexts, incidental learning, and use of computer technology all enhance the acquisition of vocabulary. Direct instruction should include task restructuring as necessary and should actively engage the student. Finally, dependence on a single vocabulary instruction method will not result in optimal learning” (p. 14).

3 Methodology

The main purpose of this study was to understand teachers' knowledge about sight words intervention. In addition to that, the study was intended to discover teachers' perspectives on the use of sight words to enhance reading skills of Saudi students with ASD. The descriptive approach gives an accurate explanation of the study's topic as well as a clear representation of all the dimensions to be studied in this research. Therefore, the descriptive approach was employed as a method.

3.1 Participants

The study sample was taken from male and female teachers of students with ASD in Saudi Arabia, Qassim region. Whether they are teachers in schools affiliated with the Ministry of Education or private schools.

3.2 Data Collection

To get the relevant information, a questionnaire was employed. This study identified two domains: knowledge and teacher perspectives. To evaluate the teachers' viewpoints and understanding of each domain, there are a number of items under each domain that appropriately explain the main goal of each domain. In this questionnaire, I used the Laker technique to collect and evaluate data. As it was arranged into five Responses: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree.

3.3 Research Procedures

3.3.1 Research sample

The main sample of the research consisted of (89) male and female teachers of students with ASD. In the following tables, I will present the variables of the participants according to the personal variables of the participants. Distribution of the sample according to “Gender” variant is presented in table (1):

Table 1: Distribution of the sample according to “Gender” variant.

Gender	No.	Percentage
Male	28	31.5%
Female	61	68.5%
Total	89	100.0%

It is clear from the table (1) that the research sample included (28) males with a percentage of (31.5%), and (60) females with a percentage of (68.5%). Sample distribution according to the “Academic Qualification” variant is given in table (2):

Table 2: Sample distribution according to the “Academic Qualification” variant.

Academic Qualification	No.	Percentage
Bachelor	71	79.8%
Bachelor + Diploma	12	13.5%
Master's	6	6.7%
Total	89	100.0%

Table (2) shows that the research sample included (71) participants who have a bachelor's degree, at a rate of (79.8%), number of (12) of those who have a bachelor's degree + diploma, at a rate of (13.5%), and (6) of those who have a Master's degree (6.7%). Distribution of the sample according to “Scientific Experiences” variant is presented in table (3):

Table 3: Distribution of the sample according to “Scientific Experiences” variant.

Scientific Experiences	No.	Percentage
Less than 5 years	38	42.7%
5 to 10 years	40	44.9%
10 to 15 years	9	10.1%
15 to 20 years	2	2.2%
Total	89	100.0%

Table (3) shows that the research sample included (38) participants with less than 5 years of scientific experience, at a rate of (42.7%), and (40) with a percentage 5 to 10 years, at a rate of (44.9%), a number of (9) have more than 10 years and less than 15 (10.1%), and (2) have scientific experiences of 15 years and less than 20 (2.2%). Sample distribution according to “Educational Stage of Teacher of Students with Autism Spectrum Disorder” variant is shown in table (4).

It is clear from table (4) that the research sample included (17) pre-school teachers with a percentage of (19.1%), (28) primary school teachers with a percentage of (31.5 %), and (42) intermediate schoolteachers by (47.5 %), and (2) secondary school teachers with a rate of (2.2%).

Table 4: Sample distribution according to “Educational Stage of Teacher of Students with Autism Spectrum Disorder” variant.

Educational Stage	No.	Percentage
Pre-school	17	19.1%
Primary stage	28	31.5%
Intermediate stage	42	47.2%
Secondary stage	2	2.2%
Total	89	100.0%

3.4 Validity and Reliability of the Questionnaire

3.4.1 Questionnaire Validity

According to Al-Assaf 2016, “A tool to be valid if it only measures what it was intended to measure” (p.429). The validity of the questionnaire was confirmed by the following:

1- Face Validity

The first version of the questionnaire was given to seven experts in the field of special education. Based on their feedback, the questionnaire was changed, and the researcher got the final version of the questionnaire.

2- Internal Consistency Validity

The survey was given to 20 persons who did not engage in the main sample of the study. Pearson's coefficient was used to assess the relationship between the phrases and the dimensions they represent, and then between the dimensions and the questionnaire's overall score.

Table 5: the results of the internal consistency validity of the questionnaire statements.

First Dimension: Knowledge level			Second Dimension: Efficiency level		
Statement No.	Correlation coefficient	Statistical function	Statement No.	Correlation coefficient	Statistical function
1	0.638	0.01	11	0.576	0.01
2	0.700	0.01	12	0.594	0.01
3	0.616	0.01	13	0.787	0.01
4	0.802	0.01	14	0.620	0.01
5	0.891	0.01	15	0.828	0.01
6	0.719	0.01	16	0.765	0.01
7	0.713	0.01	17	0.791	0.01
8	0.747	0.01	18	0.879	0.01
9	0.680	0.01	19	0.825	0.01
10	0.705	0.01	20	0.834	0.01

Table 6: results of the correlation coefficients of the dimensions of the questionnaire.

Questionnaire dimensions	Correlation coefficient	Statistical function
First Dimension: Knowledge level	0.833	D at 0.01
Second Dimension: Efficiency level	0.948	D at 0.01

3.4.2 Questionnaire Reliability

Reliability of tool means “to make sure that the answer will be approximately the same if it is repeatedly applied to the same people and in the same circumstances” (Al-Assaf, 2016, 430). The Split-Half Method for calculating reliability, and the results are as shown in table (7):

Table 7: The Split-Half Method for calculating reliability.

Questionnaire dimensions	Cronbach's Alpha coefficient	Correlation coefficient	Split-Half Method
First Dimension: Knowledge level	10	0.894	0.854
Second Dimension: Efficiency level	10	0.915	0.891
Total questionnaire score	20	0.928	0.863

The general reliability coefficient of the questionnaire using the "Alpha Cronbach" method was (0.928) and by the Split-Half Method amounted to (0.863), and these values confirm that the questionnaire as a whole enjoys a high degree of reliability.

4 Research Results

This part deals with a presentation of the results reached by the researcher after applying the research tool and statistical analysis of the data, with a discussion and interpretation of these results in the light of the theoretical framework and previous studies related to the subject of the research.

The current research sought to answer the following two questions:

- 1- What is the level of teachers' knowledge of using sight words in teaching reading to their students with ASD?
- 2- What is the teachers’ perspective on the effectiveness of using words to enhance reading skills of students with ASD?

Researcher to submit the results of each question as follows:

4.1 The results of the First Question:

The first question: “What is the level of teachers' knowledge of using sight words in teaching reading to their students with ASD?”.

In order to answer the first question, the frequencies, percentages, arithmetic averages, standard deviations, and relative weights were calculated for the viewpoint of the sample members of the teachers of students with ASD on the first dimension of the research tool, which is related to determining the level of teachers’ knowledge using the sight word strategy in teaching reading to their students with Autism Spectrum Disorder. The results were as shown in the following table (8):

Table 8: Results related to determining the level of teachers' knowledge of using sight words in teaching reading to their students with ASD (N = 89).

S. No.	Statements	Frequencies and ratios	Degree of response					Arithmetic Mean	Standard Deviation	Relative Weight	Knowledge Level	Ranking
			Totally Agree	Agree	Neutral	Disagree	Strongly Disagree					
1	I know that the sight word strategy can be used to teach new words to students with Autism Spectrum	F	20	65	4	0	0	4.18	0.49	83.6%	High	1
		%	22.5	73.0	4.5	0.0	0.0					

S. No.	Statements	Frequencies and ratios	Degree of response					Arithmetic Mean	Standard Deviation	Relative Weight	Knowledge Level	Ranking
			Totally Agree	Agree	Neutral	Disagree	Strongly Disagree					
	Disorder.											
2	I know that the sight word strategy helps to attract the attention of students With Autism Spectrum Disorder during the educational lesson.	F	18	60	10	1	0	4.07	0.60	81.3%	High	2
		%	20.2	67.4	11.2	1.1	0.0					
3	I received adequate training to use the sight word strategy with students with Autism Spectrum Disorder.	F	0	16	26	30	17	2.46	1.00	49.2%	Low	9
		%	0.0	18.0	29.2	33.7	19.1					
4	I can choose the appropriate sight words for the abilities and capabilities of students with Autism Spectrum Disorder.	F	11	58	12	6	2	3.79	0.83	75.7%	High	6
		%	12.4	65.2	13.5	6.7	2.2					
5	Use references and reliable sources in choosing appropriate sight words for students with Autism Spectrum Disorder.	F	0	21	24	29	15	2.57	1.03	51.5%	Low	8
		%	0.0	23.6	27.0	32.6	16.9					
6	I can grade using sight words from easy to more difficult to suit the abilities of students with Autism Spectrum Disorder.	F	14	58	9	8	0	3.88	0.78	77.5%	High	5
		%	15.7	65.2	10.1	9.0	0.0					
7	I can organize the students in the classroom in a way that facilitates the use of the sight word strategy.	F	5	40	29	14	1	3.38	0.86	67.6%	Medium	7
		%	5.6	44.9	32.6	15.7	1.1					

S. No.	Statements	Frequencies and ratios	Degree of response					Arithmetic Mean	Standard Deviation	Relative Weight	Knowledge Level	Ranking
			Totally Agree	Agree	Neutral	Disagree	Strongly Disagree					
8	Follow a well-thought-out plan in the classroom to submit the sight words in a clear and easy way for students with Autism Spectrum Disorder.	F	17	61	7	4	0	4.02	0.67	80.4%	High	3
		%	19.1	68.5	7.9	4.5	0.0					
9	I can evaluate the effectiveness of the sight words strategy with students with Autism Spectrum Disorder.	F	14	62	8	5	0	3.96	0.69	79.1%	High	4
		%	15.7	69.7	9.0	5.6	0.0					
10	I can communicate with teachers who are skilled in applying the sight word strategy to students with Autism Spectrum Disorder.	F	0	20	20	23	26	2.38	1.13	47.6%	Low	10
		%	0.0	22.5	22.5	25.8	29.2					
The General Arithmetic Mean of the first dimension							3.47	0.81	69.4%	High level		

It is clear from table (8) that the general arithmetic mean of the first dimension was (3.47) and a relative weight of (69.4%), which are values that confirm that teachers have a high level of knowledge using the sight word strategy in teaching reading to their students with Autism Spectrum Disorder, and that From the perspective of the sample members of teachers of students with Autism Spectrum Disorder.

The average responses of the sample members about determining the level of teachers' knowledge using the sight word strategy in teaching reading for students with Autism Spectrum Disorder ranged between (2.38 and 4.18), with relative weights ranging between (47.6%-83.6%); Where the Statement No. (1): " I know that the sight word strategy can be used to teach new words to students with Autism Spectrum Disorder." ranked first with an arithmetic mean (4.18), a relative weight (83.6%) and a (high) level, followed by Statement No. (2)): " I know that the sight word strategy helps to attract the attention of students With Autism Spectrum Disorder during the educational lesson." in the second place with an arithmetic mean (4.07), a relative weight (81.3%) and a (high) level, and the statement No. (8): " Follow a well-thought-out plan in the classroom to submit the sight words in a clear and easy way for students with Autism Spectrum Disorder." in the third place with an arithmetic mean (4.02), a relative weight (80.4%) and a (high) level.

Statement No. (5): "Use references and reliable sources in choosing appropriate sight words for students with Autism Spectrum Disorder." ranked eighth, with an arithmetic mean (2.57), a relative weight (51.5%) and a (low) level, while Statement No. (3): " I received adequate training to use the sight word strategy with students with Autism Spectrum Disorder." on the ninth place - and penultimate - with an arithmetic mean (2.46), a relative weight (49.2%) and a (low) level, and ran Statement No. (10): " I can communicate with teachers who are skilled in applying the sight word strategy to students with Autism Spectrum Disorder." ranked tenth - and last - with an arithmetic mean (2.38), a relative weight (47.6%) and a (low) level, from the point of view of the sample members of the teachers of students with Autism Spectrum Disorder.

4.2 The results of the Second Question:

The second question: "What is the teachers' perspective on the effectiveness of using words to enhance reading skills of students with ASD?"

In order to answer the second question, the frequencies, percentages, arithmetic averages, standard deviations, and relative weights were calculated for the viewpoint of the sample members of the teachers of students with Autism Spectrum Disorder on the second dimension of the study tool, which is related to determining the level of effectiveness of using sight words in enhancing reading skills among students with Autism Spectrum Disorder. The results were as shown in the following table (9):

Table 9: Results related to determining the level of teachers' perspective on the effectiveness of using words to enhance reading skills of students with ASD (N = 89).

S. No.	Statements	Frequencies and ratios	Degree of response					Arithmetic Mean	Standard Deviation	Relative Weight	Knowledge Level	Ranking
			Totally Agree	Agree	Neutral	Disagree	Strongly Disagree					
11	The sight word strategy helps students with Autism Spectrum Disorder to know the alphabets.	F	0	20	21	29	19	2.47	1.07	49.4%	Low	10
		%	0.0	22.5	23.6	32.6	21.3					
12	The sight word strategy helps students with Autism Spectrum Disorder increase their word count.	F	16	33	37	3	0	3.70	0.80	73.9%	High	1
		%	18.0	37.1	41.6	3.4	0.0					
13	The sight words strategy helps students with Autism Spectrum Disorder learn words quickly and in a short time.	F	13	27	22	13	14	3.13	1.29	62.7%	Medium	4
		%	14.6	30.3	24.7	14.6	15.7					
14	The Sight Words strategy helps students with Autism Spectrum Disorder to pronounce words correctly.	F	10	39	27	13	0	3.52	0.88	70.3%	High	2
		%	11.2	43.8	30.3	14.6	0.0					
15	The sight words strategy helps students with Autism Spectrum Disorder to know the tools for connecting sentences	F	10	29	19	18	13	3.06	1.26	61.1%	Medium	5
		%	11.2	32.6	21.3	20.2	14.6					
16	The sight word strategy helps students with Autism Spectrum Disorder improve reading comprehension.	F	9	29	19	18	14	3.01	1.26	60.2%	Medium	6
		%	10.1	32.6	21.3	20.2	15.7					

S. No.	Statements	Frequencies and ratios	Degree of response					Arithmetic Mean	Standard Deviation	Relative Weight	Knowledge Level	Ranking
			Totally Agree	Agree	Neutral	Disagree	Strongly Disagree					
17	The sight words strategy helps students with Autism Spectrum Disorder to read written texts fluently.	F	3	29	22	18	17	2.81	1.19	56.2%	Medium	8
		%	3.4	32.6	24.7	20.2	19.1					
18	The sight words strategy helps students with Autism Spectrum Disorder connect ideas while reading a text.	F	6	31	16	21	14	2.93	1.23	58.6%	Medium	7
		%	6.7	34.8	18.0	23.6	15.7					
19	The sight word strategy helps increase the concentration of students with Autism Spectrum Disorder while reading.	F	0	23	20	30	16	2.56	1.07	51.2%	Low	9
		%	0.0	25.8	22.5	33.7	18.0					
20	The sight word strategy helps students with autism to remember and memorize what has been read.	F	12	31	20	18	8	3.24	1.19	64.7%	Medium	3
		%	13.5	34.8	22.5	20.2	9.0					
The General Arithmetic Mean of the first dimension							3.04	1.12	60.9%	Medium Level		

Table No. (9) shows that the general arithmetic mean of the second dimension "was (3.04) and a relative weight of (60.9%), which are values that confirm that teachers see that the use of sight words is moderately effective in enhancing the reading skills of students with Autism Spectrum Disorder, and that From the point of view of the sample members of teachers of students with Autism Spectrum Disorder.

The average responses of the sample members on determining the level of effectiveness of using sight words in enhancing the reading skills of students with Autism Spectrum Disorder from the teachers' point of view ranged between (2.47 and 3.70), with relative weights ranging between (49.4%-73.9%); Where Statement No. (12): "The sight word strategy helps students with Autism Spectrum Disorder increase their word count." ranked first with an arithmetic mean (3.70), a relative weight (73.9%) and a (high) level, followed by Statement No. (14): The Sight Words strategy helps students with Autism Spectrum Disorder to pronounce words correctly." In the second place, with an arithmetic mean (3.52), a relative weight (70.3%) and a (high) level, and the Statement No. (20): "The sight word strategy helps students with autism to remember and memorize what has been read." came in third place with an arithmetic mean (3.24), a relative weight (64.7%) and a (medium) level.

Statement No. (17) is " The sight words strategy helps students with Autism Spectrum Disorder to read written texts fluently." ranked eighth with an arithmetic mean (2.81), a relative weight (56.2%) and a (medium) level, while Statement No. (19): The sight word strategy helps increase the concentration of students with Autism Spectrum Disorder while reading." on the ninth place - and the penultimate one - with an arithmetic mean (2.56), a relative weight (51.2%) and a (low) level, and Statement No. (11): " The sight word strategy helps students with Autism Spectrum Disorder to know the alphabets." ranked tenth - and last - with an arithmetic mean (2.47), a relative weight (49.4%) and a (low) level, from the point of view of the sample members of the teachers of students with Autism Spectrum Disorder.

5 Discussion

The main purpose of this study was to understand teachers' knowledge about sight words intervention. In addition to that, the study was intended to discover teachers' perspectives on the use of sight words to enhance reading skills of Saudi students with ASD. According to Brownell et al., (2010), teachers in special education are supposed to have specialized knowledge and unique teaching method on how to educate students with disabilities. The result of the first dimension showed that teachers' knowledge of sight words and their ability to evaluate the effectiveness of sight words with their students were good. The first dimension also showed that teachers have the ability to choose sight words that suit their students and their capabilities. Even though the teachers' results in the first dimension showed that teachers didn't get enough training, as well as they didn't use scientific references when using and understanding sight words. In addition, they could not communicate with teachers with experience in using sight words. The results are consistent with Ravet (2018) who found that teachers are unprepared to help and educate students with ASD due to a lack of basic training on ASD. Therefore, this study recommends that teachers should receive adequate training in how to use sight words since Wangsgard and Cardon (2018) reported that evidence-based practice and support training is essential for instructors, particularly for teachers who teach students with ASD.

The second dimension showed teachers' perspective if sight words assisted students with ASD to improve their reading skills. The final result of this dimension was low since the most of teachers thought that sight words did not help students with ASD knowing alphabet or helping them focus while reading the text. This result was consistent with Scott et al., (1997) who reported that we need to do more than simply teach students the meaning of a word to increase their ability to use words effectively in context. However, the results of this dimension did not correspond with Stahl (2005) who reported that all aspects of language are influenced by vocabulary. There is a correlation between vocabulary and all other aspects of language. In additions, Biemiller, (2003) found that reading comprehension is significantly affected by vocabulary. However, the results of items in the second dimension ranged from medium to low, with the exception of two questions where sight words assisted students in expanding their vocabulary and correctly pronouncing words, where the results of them were high.

Since the results of the first dimension showed that teachers didn't get enough training, didn't use scientific references for sight words, and had trouble communicating with teachers who had enough experience in this area and this finding consistent with Scheeler et al. (2016) who found that some educators who working with students with ASD feeling unprepared well to use evidence-based strategies, we need qualitative studies to find out how teachers use sight words. Once we know more about how teachers use sight words with their students, we'll be able to figure out if their view on sight words was because they didn't know how to use sight words, or actually sight words does not develop all aspects of reading skills for students.

6 Limitation and Future Research

In Saudi Arabia, the field of education, particularly special education, is gaining a lot of attention. There are several teachers that specialize in ASD. They apply interventions with their students; therefore, we need to know how often they use them and how they affect their students. The first significant limitation of this study is that this study was limited to one region of Saudi Arabia, we need a study in the future that will explore the impact of sight words at the level of Saudi Arabia in order to know the impact of this strategy more broadly. Another limitation of this study was that this study was limited to determining the extent to which teachers use sight words and the impact of their use on their students' reading skills. We need empirical studies in which the sample is students with ASD that measure the level of impact of using sight words on the skills of students with ASD.

7 Conclusion

Despite the fact that there are several interventions in the field of ASD, sight word intervention has proven to be effective with students with ASD. This study benefited in determining the teachers' cognitive level when applying sight words, since if the teacher does not understand how to implement, the outcomes would be unsatisfactory. This study illustrates that children with ASD are able to improve their reading and verbal skills. Therefore, I believe that intervention such as sight word offers children with ASD an important opportunity to improve their academic skills such as reading. This study also provided insight into teachers' perspectives on the impact of this intervention on the development of reading abilities. This outcome will demonstrate the extent to which this intervention has impacted students with ASD. This study provided installed in places background information about the effectiveness of sight word interventions on the reading skills of students with ASD, but many more studies are needed to discover other types of strategies that suit autistic students in the Kingdom of Saudi Arabia and their impact on these students.

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Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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