

SURVEY ON THE KNOWLEDGE ABOUT DYSLEXIA AMONG PRIMARY ARABIC SCHOOL TEACHERS

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ABSTRACT:

Background: Teacher's awareness and good knowledge about dyslexia is very important in early detection and intervention of dyslexic children.

Aim of the work: The aim of this study is to estimate knowledge of Arabic teachers in primary schools about dyslexia and their attitude towards dyslexic children, in order to emphasize their roles in early detection of dyslexia and guide setting plans for proper intervention.

Patients and methods: This study went through 4 steps: I) Questionnaire design and construction. II) A pilot study to check any difficulty in understanding the questionnaire questions. III) Questionnaire application and data collection. IV) Questionnaire Validation, reliability and statistical analysis stage.

Results: The study was conducted on 168 Arabic teachers at primary schools in Cairo and Al Qalyubia governates. The participants were in the age range 23-59 years, (mean \pm SD, was 40.76 ± 10.28 years), including 50(29.8%) males, and 118 (70.2%) females. About 51.2% of them were teaching in governates schools, 39.9% in private schools, while about 10% were teaching in international schools. there is lack of awareness among teachers, the younger teachers were more aware of dyslexia than older ones. There was significant association between international schools and correct answers score of scale domains.

Conclusions: This current cross-sectional study that was conducted on Arabic teachers at primary schools of Qaylubia and Cairo Governorate revealed that: There is lack of knowledge about dyslexia among teachers. The lack of understanding of the underlying behavioral and cognitive difficulties associated with dyslexia. the inaccuracies held, may be due to not having a well previous training program. A good understanding of dyslexia is important in successfully intervening to best help those with dyslexia.

Keywords: Dyslexia – Awareness of teachers – Questionnaire.

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INTRODUCTION:

Dyslexia is a learning disorder that involves difficulty in reading due to problems in identifying speech sounds and learning how they relate to letters and words (decoding). The International Dyslexia Association and National Institutes of Child

Health and Human Development offers a current definition of dyslexia as a specific learning disability that is neurological in origin. It argues that dyslexia is not a disorder but a specific learning disorder. Many authors come to a consensus that dyslexia are linked

to genes, that is why the condition often runs in families^(1&2).

The prevalence of dyslexia has been estimated at 5–15 % of school-aged children depending on the language and culture⁽³⁾

Symptoms of dyslexia usually become more obvious when children start school and begin to focus more on learning how to read and write. These symptoms are: difficulty in learning the names and sounds of letters, spelling that is unpredictable and inconsistent, confusion over letters that look similar and putting letters the wrong way round (such as writing "b" instead of "d"), confusing the order of letters in words, reading slowly or making errors when reading aloud, answering questions well orally, but having difficulty writing the answer down, difficulty carrying out a sequence of directions, struggling to learn sequences, such as days of the week or the alphabet, slow writing speed, poor handwriting, problems copying written language and taking longer than normal to complete written work, poor phonological awareness and word attack skills⁽⁴⁾.

Some people with dyslexia also have other problems not directly connected to reading or writing. These include difficulties with numbers (dyscalculia), poor short-term memory, problems concentrating and a short attention span, including attention deficit hyperactivity disorder (ADHD), poor organization and time management, physical co-ordination problems such as developmental co-ordination disorder (dyspraxia)⁽⁵⁾.

The teacher in classroom needs to be aware of the difficulties in reading and writing of his/her students, verifying which and how many problems the child presents. In this way, if some symptoms are recognized, it is up to the teacher and the pedagogical coordinators to evaluate the child and if necessary, recommend referring the child to specialist⁽⁶⁾.

Although it is not a teacher's job to diagnose dyslexia, it is important that they have an accurate understanding of the underlying behavioral and cognitive difficulties associated with dyslexia to identify those that could be at risk and to intervene appropriately. The broad category of phonological processing includes the cognitive skills of phonological awareness and phonological working memory retrieval. Deficits in these skills are commonly associated with dyslexia⁽⁷⁾.

Students who had teachers with more knowledge about reading interventions, such as phonological awareness and systematic phonics instruction, had higher reading and spelling scores⁽⁸⁾.

The most effective interventions for dyslexia focus on improving cognitive processing. Therefore, it is crucial that teachers are aware of this so that they can help their students most effectively⁽⁹⁾.

AIM OF THE WORK:

The aim of this study is to estimate knowledge of Arabic teachers in primary schools about dyslexia and their attitude towards dyslexic children, in order to emphasize their roles in early detection of dyslexia and guide setting plans for proper intervention.

PATIENTS AND METHODS:

The current study is a cross sectional study using a newly constructed Arabic questionnaire. The study was conducted in the period from December 2021 to March 2022 on 168 Arabic teachers at primary schools of both sex with wide age range, different education qualification, teaching stages from 1st primary to 6th primary and different years of experience, who were randomly selected from different primary schools in Cairo and Al Qalyubia governates.

A sample of Arabic teachers at primary schools was selected upon the following inclusion criteria.

Inclusion criteria:

1. Arabic teachers.
2. Teachers from primary schools.
3. Governmental, private and international schools.

This study went through 4 steps:

- I) Questionnaire design and construction.
- II) A pilot study to check any difficulty in understanding the questionnaire questions.
- III) Questionnaire application and data collection.
- IV) Questionnaire Validation, reliability and statistical analysis stage.

I) Questionnaire design and construction:

- a. An Arabic questionnaire to estimate knowledge of Arabic teachers in primary schools about dyslexia and their attitude towards dyslexic children.
- b. The questionnaire included a total of 12 questions and 6 main scale domains with underlying questions:
 - 2 questions about demographic data.
 - 4 questions to ensure fulfilling the inclusion criteria.
 - 3 questions about teachers' awareness on term dyslexia.
 - 15 questions about symptoms and signs of dyslexia under the title of (*children who dyslexic are may have one or more of the following*).
 - 6 questions about the causes of dyslexia under the scale domain (*dyslexia can be caused by*).
 - 5 questions about the associated symptoms of dyslexia under the scale domain (*dyslexia may be associated with*).
 - 4 questions about the teacher knowledge in dealing with dyslexic child under the scale domain (*how you deal with dyslexic student*).

- 4 questions about the teacher knowledge in managing dyslexic student under the scale domain (how to manage dyslexic student).
 - 4 questions about the teacher knowledge about whose job to help dyslexic student under the scale domain (*whose job to help dyslexic student*).
 - the remaining 3 questions are open-ended questions to help collect fresh individual ideas.
- c. The survey used a "YES," "NO," and "Do not know" format to differentiate between wrong knowledge and lack of knowledge.
 - d. This questionnaire was translated to English and tested by colleagues who speak English fluently then re-translated to Arabic language again.

II) Pilot study:

Before applying the Arabic questionnaire on our study sample, the questionnaire was applied on 10 Arabic primary teachers to ensure that there was no difficulty in understanding the questions and to check the pattern of presentation of the questionnaire items themselves, and their order of presentation.

According to the pilot study, some modifications were done:

1. Rearrangement of questions into certain items.
2. A reformulation of some questions to be clearer to the participants.

III) Questionnaire validity and reliability:

Validity:

Expert validity was done to assess this survey by sending the Arabic questionnaire to 4 professors of Phoniatrics in Faculty of Medicine at Ain Shams University to evaluate the questionnaire.

Reliability:

Cronbach's alpha coefficient:

Internal reliability was evaluated using Cronbach's alpha coefficient, if the result is

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greater than 0.7 this indicates high internal consistency of the questionnaire.

Then Cronbach's alpha coefficient was measured for each question and was 0.649-0.748.

Table 1. Cronbach's alpha coefficient demonstrating internal reliability of each scale in the questionnaire of knowledge about dyslexia.

Question	Cronbach's alpha
Children who are dyslexic have	0.672
Dyslexia can be caused by	0.748
Dyslexia may be associated with	0.668
How do you deal with dyslexic student	0.708
How to manage dyslexic child	0.649
Whose job is to help the dyslexic student	0.743
Total	0.758

Correlation of subscales with total scale:

Item-total correlation was also used to evaluate the correlation of each scale with total score in which item-total correlation

greater than 0.4 means satisfactory correlation. All the questions in the questionnaire had correlation greater than 0.5.

Table 2. Correlation of subscales with total scale (Pearson correlation coefficient)

Subscale	r	P-Value
Children who are dyslexic have	0.850	0.000
Dyslexia can be caused by	0.501	0.000
Dyslexia may be associated with	0.669	0.000
How do you deal with dyslexic student	0.758	0.000
How to manage dyslexic child	0.677	0.000
Whose job is to help the dyslexic student	0.793	0.000

P=0 (mean high correlation)

Test- retest reliability:

Test-retest analysis by Spearman's correlation was done. It was applied twice with one month interval between its application.

Correlation for each variable as follow:

- pre-post Children who are dyslexic have, $r = 0.987$ ($p < 0.01$, two tailed), pre-post Dyslexia can be caused by, $r = 0.981$ ($p < 0.01$, two-tailed).

- pre-post Dyslexia may be associated with, $r = 0.992$ ($p < 0.01$, two-tailed).
- pre-post How do you deal with dyslexic student, $r = 0.983$ ($p < 0.01$, two-tailed).
- pre-post How to manage dyslexic child, $r = 0.974$ ($p < 0.01$, two-tailed).
- pre-post Whose job is to help the dyslexic student, $r = 0.962$ ($p < 0.01$, two-tailed).

Strong positive correlation between test and retest in all variables were found.

Table 3. Test-retest of the questionnaire of knowledge about dyslexia

	R	P-Value
Children who are dyslexic have	0.987	0.000
Dyslexia can be caused by	0.981	0.000
Dyslexia may be associated with	0.992	0.000
How do you deal with dyslexic student	0.983	0.000
How to manage dyslexic child	0.974	0.000
Whose job is to help the dyslexic student	0.962	0.000

P=0 (mean high correlation)

IV) Questionnaire application and data collection:

On the day of data collection, all the available Arabic primary teachers at the randomly selected primary schools in Cairo and Al Qalyubia governates were included in the study.

At the beginning of each visit, I have to meet the school manager for permission to apply the questionnaire and I mentioned that I have a permission from ministry of education to perform the questionnaire.

Then introduced me to the manager as a doctor of phoniatics and the purpose of the questionnaire as part of a master thesis in Faculty of Medicine Ain Shams University.

Second step is meeting with the Arabic teachers individually in each school and explaining to them the questionnaire and if they have any inquires.

The data was collected after filling the questionnaire and saved by the Microsoft forms application for their analysis.

Finally, the results of 168 subjects were statistically analyzed.

Ethical Considerations:

- Informed consent was obtained from all participants after being informed about the process and aim of the study as well as applicable objectives.
- The study procedures were free from any harmful effects on the participants as well as the service provided.
- The principal investigators have kept individuals' data as private information safely.
- They study protocol has been approved by the Ain-Shams Institute's Ethical Committee [FMASU MS 511/2021].

Statistical analysis:

The data collected were tabulated and analyzed by using SPSS (statistical package

for social science) version 25 (IBM, Armonk, NY, USA) on IBM compatible computer.

RESULTS:

The participants were 168 teachers in the age range 23-59 years (mean \pm SD, was 40.76 ± 10.28 years), including 50(29.8%) males, and 118(70.2%) females. About 51.2% of them were teaching in governmental schools, 39.9% in private schools, while about 10% were teaching in international schools.

About the domain "Children who are dyslexic may have" 94% of participants agreed that students who have dyslexia mainly have problems with spelling and writing, 61% agreed that they have difficulty in seeing similarities and differences in letters and words, and 54.2% said that dyslexic students have problems in remembering arithmetic tables, while 51% said that dyslexic students have problems in pronunciation of unfamiliar words.

About the domain "Dyslexia may be associated with" about 54.2% of participants said that dyslexia associated with attention deficit hyperactivity disorder, 35.1% said it is associated with low self-esteem, and anxiety, about 26.8% said aggression, while about 41.6% said withdrawal from friends, parents and teachers.

About the domain "How do you deal with dyslexic student" 95.2% agreed on providing a focused learning program to dyslexic student, 55.4% agreed on referring to phoniatrician doctor, and 34.5% refused referring to psychiatric doctor.

About the domain "How to manage dyslexic child" 96.4% answered correctly that they should give him/ her extra time to complete task, 94% agreed on giving him/ her easy tasks, 48.2% agreed on training for phonological awareness, and 98.2% follow special program for learning reading (using

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alphabet writing system, teaching how sounds blend into words...).

About the domain “Whose job is to help the dyslexic student” answers show that

69.6% agreed on student parents at home, 97.6% agreed on teachers at school, 17.9% didn’t agree on speech and language therapist, and 57.1% agreed on phoniatrician doctor.

Table 4. Correlation between age of participants and scale domains scores and total scale scores:

Scale domains	Age	
	r	P
Children who are dyslexic have	-0.157	0.043*
Dyslexia can be caused by	0.093	0.229
Dyslexia may be associated with	-0.112	0.147
How do you deal with dyslexic student	-0.487	0.000**
How to manage dyslexic child	-0.156	0.044*
Whose job is to help the dyslexic student	-0.229	0.003*
Total score of the scale	-0.275	0.000**

(*) *P*-value < 0.05 is considered statistically significant.

There was negative correlation between age and correct answers score of scale domains:(the youngest the age of participant the more correct answer given)

- Children who are dyslexic have.
- How do you deal with dyslexic student.

- How to manage dyslexic child.
 - Whose job is to help the dyslexic student.
- And total score of the scale
And that gives us indication that the younger teachers were more aware of dyslexia than older ones.

Table 5. Association between educational qualifications of participants and scale domains scores and total scale scores

Scale domains	Bachelor of Education	Bachelor of Arts	Teachers Diploma	Bachelor of Arabic Language Dar Al Uloom	P-value	Post hoc test (sig. p-value)
	Mean ± S.D	Mean ± S.D	Mean ± S.D	Mean ± S.D		
Children who are dyslexic have	6.14 ± 2.91	5.49 ± 2.78	5.39 ± 2.42	5.50 ± 2.97	0.642	
Dyslexia can be caused by	1.31 ± 1.04	1.53 ± 1.07	1.61 ± 1.07	1.75 ± 1.06	0.492	
Dyslexia may be associated with	1.94 ± 1.77	1.91 ± 1.62	1.89 ± 1.59	2.06 ± 1.61	0.987	
How do you deal with dyslexic student	3.28* ± 0.70	2.81 ± 0.84	2.46 ± 0.79	2.75 ± 0.77	<0.001**	P1=0.003* P2=0.000** P3=0.029*
How to manage dyslexic child	3.50 ± 0.51	3.32 ± 0.65	3.36 ± 0.56	3.38 ± 0.72	0.526	
Whose job is to help the dyslexic student	2.67* ± 0.48	2.44* ± 0.71	2.21 ± 1.03	2.13 ± 0.81	0.036*	P2=0.017* P3=0.016*
Total score of the scale	18.83 ± 4.03	17.50 ± 4.31	16.93 ± 4.30	17.56 ± 5.01	0.314	

P1: Bachelor of Education vs Bachelor of Arts P2: Bachelor of Education vs Teachers Diploma P3: Bachelor of Education vs Bachelor of Arabic Language Dar Al Uloom
(*) *P*-value < 0.05 is considered statistically significant.

There was no statistically significance difference between participants education as regards correct answers score of scale domains and total score of the scale.

As regards the domain “How do you deal with dyslexic student” teachers who had

Bachelor of education had higher scores than other teachers, and about the domain “Whose job is to help the dyslexic student” teachers who had Bachelor of education and Bachelor of arts had higher scores.

Table 6. Correlation between how many years they have been teaching and scale domains scores and total scale scores.

Scale domains	How many years have you been teaching	
	r	P
Children who are dyslexic have	-0.145	0.061
Dyslexia can be caused by	0.109	0.158
Dyslexia may be associated with	-0.075	0.331
How do you deal with dyslexic student	-0.394	0.000**
How to manage dyslexic child	-0.168	0.030*
Whose job is to help the dyslexic student	-0.17	0.027*
Total score of the scale	-0.246	0.001*

(*) P-value < 0.05 is considered statistically significant.

There was no significant correlation between how many years they have been teaching and correct answers score of scale domains:

- Children who are dyslexic have.
- Dyslexia can be caused by.
- Dyslexia may be associated with.

But there was significant negative correlation between how many years they have been teaching and correct answers score of scale domains

- How do you deal with dyslexic student
- How to manage dyslexic child
- Whose job is to help the dyslexic student
- Total score of the scale

And that is gives us indiction that the younger teachers were more aware of dyslexia than older ones, and the experience has no role.

Table 7. Association between the school where they were teaching in and scale domains scores and total scale score

Scale domains	Governmental school	Private school	International school	P-value	Post hoc test (sig. p-value)
	Mean ± S.D	Mean ± S.D	Mean ± S.D		
Children who are dyslexic have	5.17 ± 2.66	5.81 ± 2.94	7.27 ± 1.67	0.018*	P2=0.006* P3=0.031*
Dyslexia can be caused by	1.62 ± 1.02	1.31 ± 1.09	1.87 ± 1.06	0.038*	P2=0.027* P3=0.044*
Dyslexia may be associated with	1.73 ± 1.59	1.27 ± 1.62	2.33 ± 1.62	0.020*	P1=0.024* P3=0.022*
How do you deal with dyslexic student	2.42 ± 0.73	3.22 ± 0.69	3.60 ± 0.63	<0.001**	P1=0.000** P2=0.000**
How to manage dyslexic child	3.21 ± 0.62	3.45 ± 0.58	3.93 ± 0.26	<0.001**	P1=0.013* P2=0.000** P3=0.004*
Whose job is to help the dyslexic student	2.28 ± 0.85	2.51 ± 0.64	2.87 ± 0.35	0.010*	P2=0.005** P3=0.043*
Total score of the scale	16.43 ± 4.28	18.63 ± 4.11	20.80 ± 2.83	<0.001**	P1=0.001* P2=0.000**

P1: Governmental school vs Private school **P2:** Governmental school vs International school.

P3: Private school vs International school.

(*) P-value < 0.05 is considered statistically significant.

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There was significant association between international schools and correct answers score of scale domains, and that gives us indication that teachers in

international schools were more aware of dyslexia than governmental and private schools.

Table 8. Association between from where they got information about dyslexia and scale domains scores and total scale scores.

Scale domains	Training	Education	Personal Experience	Social media	P-value	Post hoc test (sig. p-value)
	Mean ± S.D	Mean ± S.D	Mean ± S.D	Mean ± S.D		
Children who are dyslexic have	5.12 ± 2.12	6.06 ± 3.20	5.72 ± 2.63	5.53 ± 2.94	0.564	
Dyslexia can be caused by	1.45 ± 0.79	1.65 ± 1.15	1.48 ± 1.05	1.51 ± 1.17	0.878	
Dyslexia may be associated with	1.52 ± 1.56	2.12 ± 1.49	2.00 ± 1.59	2.00 ± 1.80	0.432	
How do you deal with dyslexic student	2.24 ± 0.66	2.91 ± 0.71	2.98 ± 0.77	3.06 ± 0.90	<0.001**	P1=0.001* P2=0.000** P3=0.000**
How to manage dyslexic child	3.21 ± 0.55	3.38 ± 0.60	3.52 ± 0.58	3.31 ± 0.68	0.133	
Whose job is to help the dyslexic student	2.21 ± 0.78	2.50 ± 0.75	2.50 ± 0.81	2.43 ± 0.67	0.328	
Total score of the scale	15.76 ± 3.75	18.62 ± 4.51	18.20 ± 4.49	17.84 ± 4.12	0.029*	P1=0.007* P2=0.011* P3=0.029*

P1: Training vs Education **P2:** Training vs Personal Experience **P3:** Training vs Social media
(*) P-value < 0.05 is considered statistically significant.

There was no significant correlation between the question “from where do you get information about dyslexia” and correct answers score of scale domains

- Children who are dyslexic have.
- Dyslexia can be caused by.
- Dyslexia may be associated with.
- How to manage dyslexic child.
- Whose job is to help the dyslexic student.

On the other hand there was significant correlation between the question “where do you get information about dyslexia” and correct answers score of scale domains

- How do you deal with dyslexic student as regards social media.
- Total score of the scale as regards education.

DISCUSSION:

The current study is a cross sectional study, which was conducted at the Phoniatics unit, Faculty of Medicine, Ain Shams University throughout December 2021 to March 2022. The study included 168 primary school teachers from schools in Cairo and Al Qalyubia governates who agreed to share in the study.

This study is a pioneer step, as a new Arabic questionnaire was constructed and designed at Ain Shams university, Phoniatic unit.

In our study, 94% of participants agreed that students who have dyslexia mainly have problems with spelling and writing, 61% agreed that they have difficulty in seeing similarities and differences in letters and words, 54.2% said that dyslexic students have

problems in remembering arithmetic tables and 51% said that dyslexic students have problems in pronunciation of unfamiliar words.

In agreement with our study, Washburn et al. ⁽¹⁰⁾. Who concluded that most of the teachers reported either definitely true or probably true to the item seeing letters and words backwards is a characteristic of dyslexia. However, the majority of both groups of participants answered definitely false or probably false regarding the reading ability and intellectual ability questions.

Also, Shetty et al. ⁽¹¹⁾. reported that 33.3% of participants were aware that dyslexic students had Problems in learning the concepts of time and temporal sequencing, i.e., yesterday-tomorrow, days of the week, etc.

Our study was consistent with **Sümer Dodur et al** ⁽¹²⁾. who showed that most teachers were not knowledgeable about dyslexia, and they hold misconceptions. The study reported that teachers agreed that dyslexia stem from a lack of visual perception that causes letters and words to be reversed, and that answer was incorrect. And for the diagnosis factor, 80% of the teachers agreed that reversing letters and words is the fundamental characteristic of dyslexia this answer was incorrect.

All of this crucial information regarding dyslexia should be much clearer to teachers who deal a lot with children in education.

In our study, the responses of participants regarding the domain (*Dyslexia can be caused by*), and how many correct answers. This domain consisted of six questions, around 33.3% of participants knew the correct answer for three questions, while 10-15% of them knew the right answer for the other three questions.

Our study was consistent with Serry et al ⁽¹³⁾. who reported that more than 82% of participants were correct about if Dyslexia can be caused by a literacy-poor home

environment (e.g., parents not reading to their children). However only 42% of participants were correct about if Dyslexia and emotional/social problems are highly correlated.

As for the responses of participants about the (*Dyslexia may be associated with*) domain and how many correct answers, we found that 54% of participants said that dyslexia associated with attention deficit hyperactivity disorder, and 35.1% said it is associated with Low self-esteem, and anxiety, about 27% said aggression, while 42% said withdrawal from friends, parents and teachers.

In agreement with our study Elias et al. ⁽¹⁴⁾ reported that over 68 % respondents think a person who is dyslexic is more likely to also have ADHD, dyspraxia, and/or specific language impairment than a non-dyslexic person.

Although dyslexia may be associated with other disorders, it should be highlighted that dyslexia can lead to these disorders, so proper management of dyslexia can save a lot of time and effort in treating these associated problems.

In our study regarding the responses of participants about the domain (*How to manage dyslexic child*), we noted that 96.4% answered correctly that they should give him / her extra time to complete task, 94% agreed on giving him / her easy tasks, 48.2% agreed on training for phonological awareness, and 98.2% follow special program for learning reading (using alphabet writing system, teaching how sounds blend into words). It is a good finding that almost all the participants agreed that dyslexic student should receive a focused learning program, but they need to have more information on how this program works and that dyslexic students are unique (ex. Some need phonological awareness training, others have other deficits).

Regarding the correlation between age of participants and the 4 scale domains scores and total scale score, there was negative

correlation between age and correct answers score of scale domains; Children who are dyslexic have, how do you deal with dyslexic student, how to manage dyslexic child, whose job is to help the dyslexic student and total score of the scale. That gives us indication that the younger teachers were more aware of dyslexia than older ones. This may be explained by the fact that knowing and dealing with dyslexia had gained more attention recently. Therefore, older teachers with no updates in their learning lack a lot of information about dyslexia.

Regarding the correlation between sex of participant and the 6-scale domain there was no difference between males and females as regards correct answers score of scale domains.

Regarding the correlation between educational qualifications of participants and the 4 scale domains (Children who are dyslexic have, Dyslexia can be caused by, Dyslexia may be associated with, how to manage dyslexic child) we found that there was no statistical significance difference between participants education as regards correct answers score of scale domains and total score of the scale. But regarding the domain "How do you deal with dyslexic student", the teachers who had Bachelor of Education had higher scores than other teachers, and the domain "Whose job is to help the dyslexic student" the teachers who had Bachelor of Education, and Bachelor of Arts had higher scores. So, curriculum in different colleges where teachers learn must highlights more on teaching them about dyslexia.

Our study revealed that the younger teachers were more aware of dyslexia than older ones, and the experience has no role. This goes with Tosun et al. ⁽¹⁵⁾ whose study showed that there was no significant relationship between teachers' knowledge of dyslexia and their teaching experience. In contrary to Thorwarth et al. ⁽¹⁶⁾. reported that

impact of years' experience on dyslexia beliefs was statistically significant.

Regarding the correlation between the school where the teachers teaching in and the 6 scale domains scores, we found that there was significant association between international schools and correct answers score of scale domains. That gives us indication that the teachers in international schools were more aware of dyslexia than governmental and private schools. This might be due to international schools in our country paying more attention and having a good systematic program for teachers to increase their awareness and general information about the most recent problems in education.

Our findings are in consistent with Pittman et al. ⁽¹⁷⁾. reported that there were significant school-level variations regarding basic morpheme counting skills and knowledge.

As regard training of teachers about dyslexia our study revealed that training in school is more efficient than in the educational administration. This can show the lack of teachers' awareness and knowledge about dyslexia, that needs to be properly experienced to teachers, and that training programs must be obligatory to all teachers.

That is in agreement with Kormos et al. ⁽¹⁸⁾. reported that there was a statistically significant difference regarding participation in some initial training professional development.

In our study there was significant correlation between who gets information about dyslexia as regards social media and correct answers score of scale domains "how do you deal with dyslexic student" and total score of the scale as regards education. This explains the force of social media recently in spreading the information worldwide.

In a review paper on the use of mobile technologies by Reid et al. ⁽¹⁹⁾. including smartphones, iPods, tablets and laptops to

assist students with dyslexia, it was found that, although useful, they do not replace traditional teaching and learning strategies.

Conclusions:

This current cross-sectional study that conducted on Arabic teachers at primary schools of Qalyubia and Cairo governates revealed that:

There is lack of knowledge of dyslexia among teachers. The lack of understanding of the underlying behavioral and cognitive difficulties associated with dyslexia, the inaccuracies held, may be due to not having a well previous training program. A good understanding of dyslexia is important in successfully intervening to best help those with dyslexia. The younger teachers were more aware than older ones. Teachers in international schools were more aware of dyslexia than governmental and private schools and teachers who had Bachelor of Education and Bachelor of Arts were more aware than others.

Recommendations:

Further study is recommended to evaluate the cost and benefit of training teachers about dyslexia for early detection of dyslexic students. Effective training should be mandatory given to teachers to raise their level of awareness about dyslexia.

Conflict of interest:

No conflict of interest.

REFERENCES:

1. **Miciak, J., & Fletcher, J. M. (2020).** The critical role of instructional response for identifying dyslexia and other learning disabilities. *Journal of Learning Disabilities*, 53(5), 343–353.
2. **Makgato, M. M., Leseyane-Kgari, M., Cekiso, M., Mandende, I. P., & Masha, R. (2022).** Evaluating the awareness and knowledge of dyslexia among primary school teachers in Tshwane District, South Africa. *African Journal of Disability (Online)*, 11, 1–12.
3. **Soriano-Ferrer, M., Echegaray-Bengoa, J. and Joshi, R., 2015.** Knowledge and beliefs about developmental dyslexia in pre-service and in-service Spanish-speaking teachers. *Annals of Dyslexia*, 66(1), p.91.
4. **Snowling, M. J. (2013).** Early identification and interventions for dyslexia: a contemporary view. *Journal of Research in Special Educational Needs*, 13(1), 7–14.
5. **Habib, M., & Giraud, K. (2013).** *Dyslexia. Handbook of clinical neurology*, 111, 229-235.
6. **Sengupta, K., Shah, H., Ghosh, S., Sanghvi, D., Mahadik, S., Dani, A., Deshmukh, O., Pacione, L., Dixon, P., & Salomone, E. (2021).** World Health Organisation-Caregiver Skills Training (WHO-CST) Program: Feasibility of delivery by non-specialist providers in real-world urban settings in India. *Journal of Autism and Developmental Disorders*, 1–18.
7. **Knight, C .(2018) .**What is dyslexia? An exploration of the relationship between teachers 'understandings of dyslexia and their training experiences *.Dyslexia* ,(3)24, .219-207
8. **White, J., Mather, N. and Kirkpatrick, J., 2020.** Preservice educators' and noneducators' knowledge and perceptions of responsibility about dyslexia. *Dyslexia*, 26(2), p.220.
9. **Yin, L., Joshi, R. and Yan, H., 2019.** Knowledge about dyslexia among early literacy teachers in China. *Dyslexia*, 26(3), p.247.
10. **Washburn, E. K., Binks-Cantrell, E. S., & Joshi, R. M. (2014).** What do preservice teachers from the USA and the UK know about dyslexia? *Dyslexia*, 20(1), 1-18.
11. **Shetty, A., & Rai, B. S. (2014).** *Awareness and knowledge of dyslexia among elementary school teachers in India. Journal of Medical Science and Clinical Research*, 2(5), 1135–1143.

12. Sümer Dodur, H. M., & Altındağ Kumaş, Ö. (2021). Knowledge and beliefs of classroom teachers about dyslexia: the case of teachers in Turkey. *European Journal of Special Needs Education*, 36(4), 593-609.
13. Serry, T. A., & Hammond, L. (2015). What's in a word? Australian experts' knowledge, views and experiences using the term dyslexia. *Australian Journal of Learning Difficulties*, 20(2), 143-161.
14. Elias, R. (2014). Dyslexic learners: An investigation into the attitudes and knowledge of secondary school teachers in New Zealand. *Unpublished Master Dissertation, University of Auckland*.
15. TOSUN, D., ARIKAN, S. and BABÜR, N. (2021) 'Teachers' knowledge and perception about dyslexia: Developing and validating a scale', *International Journal of Assessment Tools in Education*, 8(2), pp. 342-356. doi:10.21449/ijate.684672.
16. Thorwarth, C. (2014). Debunking the Myths of Dyslexia. *Leadership and Research in Education*, 1, 51-66.
17. Pittman, R. T., Zhang, S., Binks-Cantrell, E., Hudson, A., & Joshi, R. M. (2020). Teachers' knowledge about language constructs related to literacy skills and student achievement in low socio-economic status schools. *Dyslexia*, 26(2), 200-219.
18. Kormos, J., & Nijakowska, J. (2017). Inclusive practices in teaching students with dyslexia: Second language teachers' concerns, attitudes and self-efficacy beliefs on a massive open online learning course. *Teaching and Teacher Education*, 68, 30-41.
19. Reid, G., Strnadová, I., & Cumming, T. (2013). Expanding horizons for students with dyslexia in the 21st century: universal design and mobile technology. *Journal of Research in Special Educational Needs*, 13(3), 175-181

استبيان حول المعرفة بعسر القراءة لدي معلمي اللغة العربية بالمدارس الابتدائية

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المقدمة: نظرًا لأن عسر القراءة هو إعاقة خفية، غالبًا ما توجد في أطفال المدارس، إذا تركت دون تشخيص في المراحل المبكرة، فقد تؤدي إلى مواجهة الأطفال للتحديات الاجتماعية والعاطفية والأكاديمية. لذلك، يجب على المؤسسات التعليمية اتخاذ بعض المبادرات مثل تنظيم ورش عمل مختلفة كل عام لتوعية المعلمين بعسر القراءة وعلاماته وأعراضه واستراتيجيات التدخل لتقليل معدل عسر القراءة عند الأطفال. يجب على المعلمين تطبيق منهجيات تدريس مختلفة، مثل تكرار المحاضرات، لمساعدة الأطفال المتضررين .

الهدف من العمل: تهدف هذه الرسالة الي فحص معرفة مدرسين اللغة العربية في المدارس الابتدائية عن صعوبات القراءة وسلوكهم تجاه الاطفال الذين يعانون من صعوبات القراءة وذلك للتأكيد علي دورهم في الاكتشاف المبكر لمشكلة عسر القراءة وتوجيه الخطط من اجل التدخل السليم .

الحالات وطرق البحث: كانت هذه الدراسة عبارة عن دراسة مقطعية. تم اختيار 168 معلمًا من مدرسي اللغة العربية في المدارس الابتدائية ممن يتضمنوا هذه المعايير: مدرسين لغة عربية، المدرسين في المدارس الابتدائية، المدارس الحكومية والخاصة والعالمية.

لنتائج: أظهرت النتائج وجود نقص في معرفة المدرسين باعراض واسباب صعوبات القراءة مما يترتب عليه عدم التشخيص المبكر للاطفال الذين يعانون من صعوبات القراءة .

الخلاصة: توضح الدراسة مدي اهمية المعلمين في حياة الطالب التعليمية لانهم اكثر من يتعاملون مع الطلاب في المدارس وان معرفة المعلمين بالمشكلات التعليمية التي تواجه الطلاب في المدارس ومنها صعوبات القراءة يساعد في الاكتشاف المبكر والتدخل السريع لمثل هذه المشكلات .