

Competencies of Jordanian Teachers of Grades 1-3 With Dyslexic Students in Light of Some Variables

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Abstract

The study aimed to reveal the competencies of Jordanian teachers of the first three grades in dealing with students with dyslexia, and its relationship to the variables of teaching experience, undergoing previous training courses in dyslexia, and the grades they teach. The study sample consisted of (86) male and female teachers who were selected randomly in schools affiliated with the Directorate of Education of Wadi Al-Seer District in the capital, Amman. The study followed the descriptive approach. To achieve the study objectives, the researchers developed a scale of competencies for teachers of the first three grades related to students with dyslexia. It consisted of (41) paragraphs distributed over three dimensions: The first dimension: includes the nature and causes of dyslexia. The second dimension: includes the diagnosis and symptoms of dyslexia. The third dimension: includes therapeutic interventions for dyslexia. The researchers verified the validity and reliability of the scale. The results showed that the competencies of Jordanian teachers of the first three grades in dealing with students with dyslexia were average across the scale dimensions as a whole, with the “diagnostic competencies” dimension ranking first, followed by the “nature and causes of dyslexia” dimension in second place, and the “treatment of dyslexia” dimension in last place. The results also indicated that there were statistically significant differences in the competencies of teachers of the first three grades according to the variable of teaching experience, and the differences were in favor of those with experience ranging between (6 years and less than 11 years). As for the variable of grades (first, second, third) taught by primary school teachers, the differences were in favor of teachers of the first grade, followed by the third grade and then the second grade. As for the variable of attending training courses, the differences were in favor of teachers of the first three grades who attended previous training courses in dyslexia. In light of these results, a set of recommendations were presented.

Keywords: *Competencies, First Three Grades' Teachers, Dyslexia.*

Introduction

Learning disabilities are one of the major categories that have taken over special education services in the United States of America. The National Center for Education Statistics report between (2019-2020) indicates that (33%) of students between the ages of 3-21 (years) have learning disabilities and receive these services under the (IDEA) (Individuals With Disabilities Education Act) (National Center for Education Statistics, 2021). This category is a heterogeneous group of manifestations, characteristics, difficulties, classifications, and types, and among those types and difficulties is dyslexia. Dyslexia is defined as a developmental disorder resulting from a dysfunction in cognitive processing in the brain (Balestieri, 2024). When the cause of learning to read is not discovered in the student, it leads to academic failure, and teachers will not deal with the problem properly, which leads to many problems facing academic success. Therefore, many educators have addressed the importance of remedial programs to improve their academic progress (Beirat & Al-Khateeb, 2018). Students who are more skilled in reading have a better chance of developing linguistic, conceptual, and cognitive skills, which in turn will affect the student's ability to process and understand information (Abdul Muin, Riyanto, Budi Wibowo, 2020). Therefore, teachers of the first three grades should have high competencies and a thorough understanding of this disorder; in order to help students who, suffer from dyslexia (Al-Hiary, et al., 2014). According to the International Dyslexia Association (IDA) and the IDEA estimate, which indicated that the number of students with dyslexia is (10%) of students without dyslexia, and according to available statistics, the National Institutes of Health (NIH) estimates that approximately (15%) of the population in the United States is affected by reading difficulties. In addition, figures from the US Department of Education show that approximately (4.5%) of American students receive special educational services for dyslexia disorder. Despite these statistics and

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figures, the knowledge of first-grade teachers about dyslexia is usually limited and full of misconceptions, and they need proposed models to develop their teaching practices and raise their levels of competencies in comprehensive educational institutions in Jordan (Al-Khateeb, et al., 2023; Passadelli & Klonari, 2020; Shaywitz&Shaywitz, 2020; Gonzalez, 2021; Mullikin et al., 2021).

The low cognitive and professional competence of teachers of students in the first three grades affects the process of identifying and detecting students with dyslexia, and affects the process of providing scientific services and therapeutic interventions for these students. The responsibility of teachers of the first grades is to provide students with the basics of reading and direct therapeutic services and programs towards specific weaknesses, which contributes to their success and enhances their opportunities for progress (Almakanin, et al., 2018; Jap et al., 2017) and reduces the chances of difficulty in reading, difficulties in reading comprehension, and spelling. The understanding of teachers of the first three grades of the nature of these difficulties in dyslexia is an urgent necessity and an indispensable competence. The low competence of teachers of students in the first three grades confirms the existence of opportunities for dyslexia and the formation of misconceptions for students (Mather et al., 2020; Ness & Southall, 2010).

It is worth noting that research in educational interventions has indicated that the neural networks and connections in the brain that mediate reading are most flexible in students before the third grade (Sun Y-J et al., 2024). When remedial efforts begin late, it is often difficult to achieve smooth word recognition and improve reading fluency. These highlights and emphasizes the importance of early detection and knowledge by teachers of the first three grades of students with dyslexia as an academic and social problem as well (Almakanin, et al., 2024). Early grade teachers who are responsible for assessing and teaching their students can do much to mitigate the effects of dyslexia, but many are unaware of the intensive, specialized instruction that dyslexic students need (Gedik, & Akyol, 2024). Teachers are confused about the terminology surrounding dyslexia and feel they do not have the information and training needed to work with children at risk for dyslexia (Washburn et al., 2017).

Having the necessary competencies for dyslexia for the first three grades i plays a fundamental and crucial role in meeting the needs of their students with dyslexia (AL Khateeb, et al., 2023)), and they must ensure a clear understanding of what dyslexia is, how it affects their students, and how to apply the best methods to help these students. There are teaching methods and strategies that help students with dyslexia improve their reading skills, in addition to their role in academic achievement. Therefore, measuring the cognitive competencies of teachers of the first three grades and their awareness of the subject of dyslexia is of utmost importance (Kunwar, 2024). It is natural that dyslexia hinders early learning, so teachers of the first three grades should be able to identify the manifestations and characteristics of dyslexia in students whose indicators appear in their reading, which is considered much lower than the expected level for their age, in addition to difficulties in understanding and interpreting what they hear, difficulty finding the appropriate term or formulating appropriate responses to the question, as they face difficulty remembering the order of events, difficulty in recognizing similarities and differences in letters, and spelling problems (Blue, 2021).

In terms of studies of the competencies of dyslexia teachers in the first three grades, Valle, et al., 2024) conducted a study to discover the competence of teachers in assessing special education needs (SEN) in relation to developmental language disorders. (433) teachers working in dyslexia-friendly schools in Norway responded to the questionnaire. The results showed that assistive technology (AT), special education, and years of teaching were determinants of teachers' competence in assessing special education needs in relation to developmental language disorders. In terms of knowledge of developmental language disorders, female teachers showed higher competence than their male counterparts. The study recommended the importance of teachers developing theoretical and practical competencies in the field of dyslexia through teacher preparation programs.

(Eltyeb, et al., 2024) conducted a study in the Kingdom of Saudi Arabia exploring the knowledge and attitudes of primary school teachers regarding dyslexia. The descriptive approach was used through a questionnaire distributed electronically via the Internet to a sample of (421) male and female teachers. The results concluded that more than a third of teachers have an average level of knowledge (39.9%) about dyslexia. Teachers' knowledge of the symptoms and diagnosis of dyslexia was between low and average,

while the causes of dyslexia were low. The results also showed that there were no statistically significant differences between the individuals of the study sample attributed to the variables of age, academic qualification, and experience. The results also emphasized the need to build a training program to raise teachers' competencies regarding the treatment of dyslexia and the educational strategies provided to these students.

Gedik & Akyol, 2024, investigated prospective teachers' knowledge and beliefs about dyslexia. Using a quantitative survey design, a sample of 954 prospective teachers registered in Niğde Province during the first semester of the 2021-2022 academic year was selected. Data were collected using the Personal Information Form and the Dyslexia Knowledge and Belief Scale. The results indicated that female prospective teachers and those who had a relative with specific learning disorders showed greater knowledge and stronger beliefs about dyslexia. Moreover, prospective teachers in the fourth grade and those who attended training courses showed a higher level of understanding and more positive beliefs about dyslexia and that these courses contributed to increasing knowledge and beliefs about dyslexia. The study concluded that prospective teachers in general showed inadequate understanding and beliefs about dyslexia.

Solheim et al., (2023) described many teachers who feel inadequately prepared to teach dyslexic students and when they should seek support in recognizing and facilitating cases from specialist teachers with more knowledge. The study was applied to a sample of Norwegian upper primary school teachers (N = 269). It also examined whether specialist teachers ("learning disability teachers") had higher dyslexia knowledge than regular teachers with classroom experience. It revealed that only a small proportion of teachers held misconceptions about dyslexia. However, a significant proportion were unsure, especially regarding the role of visual impairment in dyslexia. Somewhat surprisingly, learning disability teachers had only slightly higher knowledge of dyslexia than classroom teachers. Finally, neither experience nor content of reading-related courses in formal in-service training were significant predictors of dyslexia knowledge. The study concluded that teacher training curricula and professional development opportunities should be reconsidered.

In a study (Martan, et.al, 2023) conducted on a sample of speech and language therapists and teachers of Croatian primary schools for grades 1-8, it aimed to explore the knowledge of teachers and therapists about dyslexia and to identify differences in their knowledge of students with dyslexia. The results showed that most teachers know some specific strategies (after treating dyslexia) for teaching students with dyslexia, and to a lesser and weaker degree for the dimension of the causes of dyslexia. Teachers who received professional training in teaching dyslexia had better knowledge and competence than others. The study emphasized the need to work on significant improvements in all forms of professional development for teachers.

Izzati Suffiah & Ai Cheng (2022) conducted a study to examine the common understanding and misconceptions about dyslexia among Malaysian primary school teacher trainees. The study was conducted using the Knowledge and Beliefs about Developmental Dyslexia Scale (KBDDS) developed by Soriano-Ferrer & Echeagaray-Bengoa, 2014. The results showed that a moderate percentage of the primary three teacher trainees were not aware of dyslexia in terms of general information (34%, n = 39), symptoms and diagnosis (23%, n = 23), and treatments (32%, n = 32). Based on the results, it can be concluded that there are teacher trainees who were not aware of dyslexia in terms of general information, symptoms, diagnosis, and treatments.

In a national online survey of schools in Aotearoa, New Zealand, Dymock (2022) sought to explore the issue of dyslexia from the perspectives of primary three teachers and school leaders. The data indicated that primary three teachers and leaders were generally very positive, with many students with dyslexia rating their classrooms as "dyslexia-friendly". Teachers rated themselves as confident in helping students with dyslexia and making a difference. On the other hand, the data indicated that primary three teachers and leaders were dissatisfied with the level of training and resources available to them. They relied on their own experiences. Another less positive finding was that many schools did not screen for dyslexia, or did not have a policy for identifying students with dyslexia.

Tosun et al. (2021) conducted a study to develop a scale to measure primary school teachers' knowledge and perception of dyslexia and to determine whether the knowledge and perception of dyslexia among first-grade teachers differed according to their background. The results showed that there was no statistically significant relationship between primary school teachers' teaching experience and their knowledge of dyslexia. On the other hand, there was a positive but weak relationship between teaching experience and first-grade teachers' negative perceptions of dyslexia. Primary school teachers who had taken a college dyslexia course had less negative perceptions of dyslexia than first-grade teachers who had not. First-grade teachers' perceptions did not differ regarding taking an in-service seminar, reading a book or article, or teaching a student with dyslexia.

Popovska & Kuzmanovska, 2020 conducted a test of the competencies of teachers of the first three grades of primary education in the Republic of North Macedonia for educational work with students with dyslexia. The results showed that most teachers of the first three grades (41% sometimes and 39% often) in their practice had experience in working with students with reading and writing difficulties. The results showed that most teachers of the first three grades (50%) notice reading and writing difficulties in the second grade when the reading and writing process begins according to the curriculum. (39%) notice reading and writing difficulties in the third grade, and (2%) at least in the first and fifth grades.

The Study Problem

Dyslexia leads to academic and educational failure, and psychological problems in students with dyslexia; unless therapeutic interventions are provided early that aim to improve their reading skills (Monicca Lesevane, et al., 2018), and this depends on the process of detecting these students, which constitutes a concern and challenge facing teachers of the first three grades in particular, and perhaps this is due to the lack of relative agreement on the nature of dyslexia among them, and the criteria for their detection due to the difference and multiplicity of theories, opinions and diagnostic criteria, as teachers of the first three grades possess superficial knowledge and competencies that do not meet the required purpose; while teachers understand that dyslexia affects reading and spelling, they are not aware of other aspects of dyslexia, such as: slow processing speed, difficulty with working memory, confusion and difficulty knowing directions for reading, which affects all academic skills (Knight, 2018; Passadelli & Klonari., 2020). Which makes many students with dyslexia never achieve reading skills at the grade level and age appropriate for successful performance in school. The teacher is the most important and essential element for the success of any educational program. It is important to prepare the teacher during and before service according to the specific standards for his work, which enables him to deal with students with dyslexia. Teachers must also be aware of the signs of dyslexia, and make adjustments in the classroom. Therefore, teachers need to be able to accurately identify dyslexia to ensure that their students receive appropriate interventions and support (Cainelli & Bisiacchi, 2019). From this standpoint, the current study seeks to verify the competencies of Jordanian teachers of the first three grades in light of some variables from their point of view by answering the main research question:

What is the level of competence of Jordanian first-grade teachers regarding students with dyslexia?

The following question emerges from it:

Are there statistically significant differences at the level ($\alpha=0.05$) in the level of competencies of Jordanian teachers of the first three grades with students with dyslexia attributed to the variables (teaching experience, grades taught (first, second, third), and previous training courses that the teacher underwent)?

The Importance of the Study

The importance of this study lies in its treatment of a very important topic, the importance of which increased after the circumstances of the Corona crisis that swept the entire world in 2019. The education sector was one of the sectors most affected by this pandemic, which forced the education system to close schools and move to distance learning. This reinforced the presence of a percentage of students in the first three grades who cannot read. The most affected by this pandemic may be students who have symptoms

and characteristics of dyslexia. It also highlights its importance by drawing attention to this category of marginalized students who are usually misunderstood and described as lazy, unwilling to learn and chaotic. Through this study, we aspire to help parents and teachers of the first three grades to identify the common signs of the nature of the disorder, its characteristics, some of the supposed causes, and methods of treating dyslexia. It also seeks to refute the misconceptions and misconceptions surrounding dyslexia, and emphasize the importance of early detection, identification, and intervention for students at risk of dyslexia. The current study may help, through its results, in identifying the training needs necessary to optimally deal with students with dyslexia. Through the researchers' review of the theoretical literature and previous studies, it became clear that there is an urgent need to conduct studies in the field of dyslexia. Perhaps this study clarifies and enables teachers of the first three grades to better understand these students through the study tool to reach these students and provide appropriate therapeutic interventions, which contributes to alleviating the psychological and academic effects resulting from dyslexia and its challenges.

Study Methodology

The researchers followed the descriptive survey approach because it is suitable for the nature and objectives of the study, relying on the field study method in collecting information to verify its objectives and interpret its results.

Design of the Study Scale

The study scale was developed based on referring to a number of studies, the most important of which is the study (Soriano-Ferrer & Echegaray-Bengoa, 2014), whose data dealt with the subject of knowledge and beliefs about dyslexia among teachers ((KBDDS the Knowledge and Belief about Developmental Dyslexia Scale,). The researchers added some paragraphs in each dimension of the scale based on a review of the theoretical literature and previous studies related to dyslexia that are appropriate to the Jordanian environment and represent an aspect of knowledge and beliefs about dyslexia among teachers. The study tool consisted of two sections: the first section: demographic variables related to the individuals participating in the study, and the second section: about their knowledge and beliefs about dyslexia, and it contains (41) paragraphs focused on the following dimensions: general knowledge (19) paragraphs, symptoms and diagnosis (12) paragraphs, treatment of dyslexia (10) paragraphs. The process of responding to the scale is carried out according to a three-response system, which includes (yes, no, I don't know), where high scores on the scale indicate strong competencies about dyslexia disorder, and low scores indicate weak competencies about this disorder.

Study Scale Application Procedures

After completing the final version of the scale, the researchers contacted the Jordanian Ministry of Education to facilitate the application of the tool in the relevant schools, obtain a letter of approval, and apply the study tool in the schools affiliated with the Wadi Al-Seer District Education Directorate in the capital, Amman. Then, the researchers shared a Google Form link with the study sample members to answer the tool for 3 weeks, and then the responses were collected via email after the researchers shared the Google Form link. This ensured that the participants could answer the questions only once, based on their emails. The researchers set 3 weeks to deliver the data by mail. Then, the researchers closed the response and collected the data after the specified deadline. In order to make the data easily downloadable, the data were displayed and documented in special Excel sheets; in order to analyze them according to the appropriate statistical methods.

Validity of the Study Scale

The scale was developed to measure the competencies of teachers of the first three grades regarding general information, symptoms, diagnosis and treatment of dyslexia, which could lead to acquired misconceptions among teachers of the first three grades about dyslexia. The researchers verified the validity of the instrument through apparent validity and internal consistency validity.

Apparent Validity

The researchers verified the validity of the scale by presenting it in its initial form to a group of arbitrators specialized in the field of special education and learning difficulties. Their number reached (7) arbitrators. The arbitrators provided their comments and suggestions on the scale in terms of its clarity and linguistic integrity, the extent to which it covered the subject of the study, and the addition of some paragraphs. In its final form, it reached (41) paragraphs.

Internal Consistency Validity

The internal consistency of the scale's statements means: the extent of consistency of all its items with the dimension to which they belong. Accordingly, the Pearson correlation coefficient was calculated between the score of each item and the total score of the dimension to which it belongs, and the total score of the scale.

Table 1. Correlation Coefficients of The Items of the Jordanian First Three Grades Teachers' Competencies Scale For Students With Dyslexia With The Total Score of the Dimension To Which It Belongs And With the Total Score if the Scale

Item	Correlation to dimension	Correlation to overall score	Item	Correlation to dimension	Correlation to overall score
1	.458*	.457*	22	.720*	.700*
2	.374*	.284*	23	.522*	.491*
3	.311*	.262*	24	.574*	.595*
4	.327*	.282*	25	.529*	.501*
5	.466*	.402*	26	.734*	.619*
6	.420*	.319*	27	.733*	.641*
7	.476*	.473*	28	.659*	.583*
8	.373*	.256*	29	.755*	.683*
9	.236*	.315*	30	.580*	.482*
10	.399*	.396*	31	.586*	.543*
11	.437*	.403*	32	.600*	.557*
12	.275*	.231*	33	.610*	.476*
13	.466*	.505*	34	.461*	.330**
14	.344*	.320*	35	.451*	.243*
15	.536*	.460*	36	.606*	.366*
16	.491*	.438*	37	.636*	.584*
17	.482*	.426*	38	.588*	.461*
18	.513*	.433*	39	.369*	.412*
19	.317*	.345*	40	.310*	.291*
20	.667*	.594*	41	.615**	.609**
21	.404*	.377*			

*Statistically significant at the level ($\alpha = 0.05$)

It is clear from Table (1) that all correlation coefficients of the paragraphs with the dimension to which they belong and with the total score of the scale are statistically significant at the level ($\alpha=0.05$), as the correlations of the paragraphs with the dimension to which they belong ranged between (0.236 and 0.755), and the correlations of the paragraphs with the total score ranged between (0.231 and 0.700), and all of

these values are statistically significant, and this indicates the consistency of the internal structure of the scale, and thus the scale of competencies of Jordanian teachers of the first three grades for students with dyslexia consists of (41) paragraphs in its final form.

The Reliability of the Study Scale

To ensure the reliability of the Jordanian first three grades teachers' competencies scale for students with dyslexia, reliability was calculated using Cronbach's alpha coefficient, and Table (3) shows these results.

Table 2. Reliability Coefficient of the Scale of Competencies of Jordanian Teachers of The First Three Grades Regarding Students with Dyslexia Using the "Cronbach's Alpha" Method

The scale	Number of items	Cronbach's alpha reliability
Dyslexia (Nature and Causes of Dyslexia)	19	0.76
Dyslexia diagnosis	12	0.72
Dyslexia treatment	10	0.75
Total score of the scale	41	0.79

Table (2) shows that the Cronbach's alpha coefficient was (0.79), the stability coefficient for the dyslexia dimension (nature and causes of dyslexia) was (0.76), the stability coefficient for the dyslexia diagnosis dimension was (0.72), and the stability coefficient for the dyslexia treatment dimension was (0.75). This result indicates that the scale of competencies of Jordanian first three grade teachers for students with dyslexia has a good degree of stability and its suitability for application to the basic sample according to the Nani scale, which adopted (0.70) as the minimum limit for stability.

Study Scale Correction Key

The correct answer was given (2), for the answer I don't know (1), and for the wrong answer (0). Accordingly, the grades were calculated using the following equation:

The highest value - the lowest value of the answer alternatives divided by the number of levels, i.e.:

$2-0/3= 2/3= 0.66$, this value is equal to the length of the class.

Thus, the low score is from 0.00 to 0.66.

The average score is 0.67-1.33.

The high score is from 1.34 - 2.00.

The Study Population

The study community consists of all teachers of the first three grades (first, second and third grades) in government schools affiliated with the Directorate of Education of Wadi Al-Seer District in the Jordanian capital, Amman, numbering (220) teachers, according to the statistics of the Educational Planning Department in the Directorate (Ministry of Education Jordan, 2024).

Individuals involved in the study (Sample)

The study participants were selected as a representative sample using the simple random method available from male and female teachers in government schools affiliated with the Directorate of Education of Wadi Al-Seer District, where the study sample included (86) male and female teachers.

Table 3. Distribution of Sample Members According to Study Variables

The variable	Category	N	Ratio
Teaching experience	Less than 6 years	29	33.7%
	From 6 - less than 11 years old	40	46.5%
	11 years and above	17	19.8%
	Total	86	100%
The classes he teaches	1 st grade	28	32.6%
	2 nd grade	27	31.4%
	3 rd grade	31	36.0%
	Total	86	100%
Undergo training courses	Yes	46	53.5%
	No	40	46.5%
	Total	86	100%

Statistical Methods Used in the Study

It was represented in extracting the repetitions to identify the participants in the study, and the correlation coefficients were calculated by calculating the Pearson correlation coefficient between the score of each paragraph and the total score of the dimension to which it belongs, and the total score of the scale. To verify the structural validity of the data collection tool, the stability of the study scale was verified by using the Cronbach Alpha test, and to identify the level of responses of the study sample members on the paragraphs and areas of the study, the arithmetic means and standard deviations were calculated for the responses of the teachers of the first three grades on the scale of competencies of teachers of the first three grades with students with dyslexia. To know the significance of the differences, the analysis of variance (ANOVA) test was conducted to know the significance of the differences in the arithmetic means of the responses of the teachers of the first three grades on the scale of the competencies of the teachers of the first three grades with students with dyslexia, and the Scheffe test for post-comparisons in the level of competencies of the teachers of the first three Jordanian grades regarding dyslexia.

Study Results

The results were obtained with the aim of revealing the competencies of teachers of the first three grades with students with dyslexia in schools affiliated with the Directorate of Education for Wadi Al-Seer District.

First: The results related to answering the first question: What is the level of competencies of Jordanian teachers of the first three grades regarding students with dyslexia in the dimensions of the scale as a whole and each dimension?

To answer this question, the arithmetic means and standard deviations of the responses of the teachers of the first three grades were calculated on the scale of the competencies of teachers of the first three grades with students with dyslexia, as shown in Table (4).

Table 4. Arithmetic Means and Standard Deviations of the Responses of Teachers of the First Three Grades on the Scale of Competencies of Teachers of the First Three Grades with Students with Dyslexia, Arranged in Descending Order According to the Arithmetic Means

Rank	Dimension	Mean	STD	Degree
1	Dyslexia diagnosis	1.14	0.50	Moderate
2	Dyslexia (Nature and Causes of Dyslexia)	1.03	0.36	Moderate
3	Dyslexia treatment	0.70	0.38	Moderate
Total score of the scale of competencies of teachers of the first three grades		0.98	0.39	Moderate

Table (4) shows that the overall average of the total score of the scale of competencies of teachers of the first three grades with dyslexia students was average with an arithmetic mean of (0.98), and after diagnosing dyslexia came in first place with an arithmetic mean of (1.14) with an average degree, followed in second place after dyslexia (nature and causes of dyslexia) with an arithmetic mean of (1.03) with an average degree, and after treating dyslexia came in third place with an arithmetic mean of (0.70) with an average degree. As for after diagnosing dyslexia, it came in first place in the competencies of teachers of the first three grades, Table No. (5) shows this result:

Table 5. Arithmetic Means and Standard Deviations of The Responses of The Teachers of The First Three Grades on The Dyslexia Diagnosis Competency Dimension, Arranged in Descending Order According to The Arithmetic Means

Rank	Item	Mean	STD	Degree
1	Individual reading test application is essential in the diagnosis of dyslexia.	1.50	0.81	High
2	In general, children with dyslexia have problems with phonological awareness.	1.43	0.86	High
3	The use of informal tests to measure phonological awareness, decoding, reading fluency, vocabulary comprehension, spelling, and dictation is essential in the diagnosis of dyslexia.	1.42	0.87	High
4	Children with dyslexia have difficulty decoding symbols, spelling problems, and no problems with listening comprehension.	1.41	0.89	High
5	Dyslexia is characterized by difficulties in learning to read fluently.	1.34	0.90	High
6	Children with dyslexia often lose their place while reading.	1.21	0.95	Moderate
7	Difficulty processing phonological information is one of the major deficits found in dyslexia.	1.19	0.95	Moderate
8	Reversing letters and words is the main feature of dyslexia.	1.07	0.94	Moderate
9	Intelligence tests are useful in identifying dyslexia.	0.99	0.98	Moderate
10	Children with dyslexia often read less accurately and with less fluency.	0.71	0.89	Moderate
11	Children with dyslexia have below average intelligence.	0.71	0.89	Moderate
12	Children with dyslexia generally tend to be poor spellers.	0.69	0.91	Moderate
The first dimension: The efficiency of diagnosing dyslexia among teachers of the first three grades		1.14	0.50	Moderate

Table (5) shows that the overall average of the dyslexia diagnosis dimension was average with an arithmetic mean of (1.14), while the arithmetic means of the paragraphs ranged between (0.69 and 1.50). The paragraph that states "Applying an individual reading test is necessary in diagnosing dyslexia" came in first place with an arithmetic mean of (1.50) with a high degree, and the paragraph that states "In general, children with dyslexia have problems with phonological awareness" came in second place with an arithmetic mean of (1.43) with a high degree, and the paragraph that states "Children with dyslexia generally tend to be weak in spelling" came in twelfth and last place with an arithmetic mean of (0.69) with a medium degree. As for the dyslexia dimension (the nature and causes of dyslexia) came in second place in the competencies of teachers of the first three grades, Table No. (6) shows this result:

Table 6. Arithmetic Means and Standard Deviations of The Responses of The Teachers of The First Three Grades on The Dyslexia Competency Dimension (The Nature and Causes of Dyslexia) Arranged in Descending Order According to the Arithmetic Means

Rank	Item	Mean	STD	Degree
1	Dyslexia refers to a relatively chronic condition that usually cannot be completely overcome.	1.71	0.65	High
2	It is possible for a child to be dyslexic and gifted.	1.62	0.74	High
3	Children with dyslexia are not stupid or lazy.	1.27	0.94	Moderate
4	Most children with dyslexia usually have difficulty pronouncing some of the sounds within a word out loud.	1.24	0.94	Moderate
5	Dyslexia is hereditary.	1.20	0.96	Moderate
6	All poor reading children have dyslexia.	1.16	0.94	Moderate
7	Dyslexia is caused by a deficit in visual perception that results in the reversal of letters and words.	1.13	0.96	Moderate
8	Most studies indicate that about 5% of school-age students have dyslexia.	1.12	0.96	Moderate
9	Many children with dyslexia have low self-esteem.	1.08	0.96	Moderate
10	Every problem child have with reading is dyslexia.	0.98	0.93	Moderate
11	Many children with dyslexia continue to have reading problems into adulthood.	0.98	0.98	Moderate
12	The brains of children with dyslexia are different from those of children without dyslexia.	0.97	0.96	Moderate
13	Dyslexia usually lasts for a long time.	0.90	0.93	Moderate
14	Dyslexia is a neurological disorder.	0.87	0.96	Moderate
15	Most children with dyslexia usually have emotional and/or social problems.	0.83	0.95	Moderate
16	Students with reading difficulties without an obvious cause (e.g., mental disability, frequent absence from school, inadequate instruction by teachers in the first three grades) are referred to in the definition of dyslexia.	0.81	0.95	Moderate
17	Dyslexia is more common in males than in females.	0.76	0.92	Moderate
18	Children with dyslexia usually have poor working memory.	0.58	0.87	Low
19	I believe that dyslexia is not a reality and a problem that exists.	0.44	0.78	Low
The second dimension: Dyslexia competence (nature and causes of dyslexia) among teachers of the first three grades		1.03	0.36	Moderate

Table (6) shows that the overall average of the dyslexia competency dimension (nature and causes of dyslexia) was average with an arithmetic mean of (1.03), while the arithmetic means of the paragraphs ranged between (0.44 and 1.71). The paragraph that states “Dyslexia refers to a relatively chronic condition that usually cannot be completely overcome” came in first place with an arithmetic mean of (1.71) with a high degree. The paragraph that states “It is possible for a child with dyslexia to be gifted” came in second place with an arithmetic mean of (1.62) with a high degree. The paragraph that states “I believe that dyslexia is not a reality and an existing problem” came in nineteenth and last place with an arithmetic mean of (0.44) with a low degree. As for the dyslexia treatment dimension, it came in third and last place in the competencies of teachers of the first three grades, Table No. (7) shows this result:

Table 7. Arithmetic Means and Standard Deviations of the Responses of the Teachers of the First Three Grades on the Dyslexia Treatment Dimension, Arranged in Descending Order According to the Arithmetic Means

Rank	Item	Mean	STD	Degree
1	Modeling fluency reading is often used as a technique for teaching children with dyslexia.	1.19	0.96	Moderate
2	Children with dyslexia need assistive technologies to learn to read fluently.	1.07	0.96	Moderate
3	Intervention programs that emphasize the phonological aspects of language along with visual letters are an effective support intervention for children with dyslexia.	0.86	0.96	Moderate
4	Giving children with dyslexia certain privileges, such as extra time on assignments, shorter spellings of language texts, and special seats close to the teacher, is unfair to other students.	0.76	0.93	Moderate
5	Children with dyslexia can be helped with transparencies and colored lenses.	0.66	0.92	Low
6	Most first-grade teachers receive specific training to work with children with dyslexia.	0.64	0.88	Low
7	Doctors may prescribe medications to help children with dyslexia.	0.50	0.84	Low
8	Children with dyslexia need direct, structured, and sequential instruction in basic skills and learning strategies.	0.45	0.73	Low
9	Techniques that involve repeatedly reading material (such as words, sentences, or texts) help improve reading fluency.	0.45	0.73	Low
10	Multisensory approach has been shown to be ineffective for treating dyslexia.	0.44	0.79	Low
The third dimension: the efficiency of treating dyslexia among teachers of the first three grades		0.70	0.38	Moderate

Table (7) shows that the overall average of the dyslexia treatment dimension was average with an arithmetic mean of (0.70), while the arithmetic means of the paragraphs ranged between (0.44 and 1.19). The paragraph that states “Modeling fluent reading is often used as a technique for teaching children with dyslexia” came in first place with an arithmetic mean of (1.19) with an average degree. The paragraph that states “Children with dyslexia need technological support techniques to learn to read fluently” came in second place with an arithmetic mean of (1.07) with an average degree. The paragraph that states “The multi-sensory method has been shown to be ineffective for treating dyslexia” came in tenth and last place with an arithmetic mean of (0.44) with a low degree.

Second: The results related to answering the second question: Are there statistically significant differences at the level ($\alpha=0.05$) in the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia attributed to the variables (teaching experience, grades taught, and previous training courses that the teacher underwent)?

To answer this question, the arithmetic means and standard deviations of the study sample’s responses were calculated on the scale of the competencies of teachers of the first three grades with students with dyslexia according to the study variables, as shown in Table (8).

Table 8. Arithmetic Means and Standard Deviations of The Responses of Teachers of The First Three Grades on the Scale of Competencies of Teachers of the First Three Grades with Students with Dyslexia According to The Study Variables

The variable	Category	N	Mean	STD
Teaching experience	Less than 6 years	29	0.74	0.28
	From 6 - less than 11 years old	40	1.31	0.18
	11 years and above	17	0.63	0.29
The classes he teaches	First	28	1.31	0.26
	Second	27	0.55	0.28
	Third	31	1.06	0.17
undergo training courses	Yes	46	1.28	0.19
	No	40	0.64	0.27

The results in Tables (8) indicate that there are apparent differences between the arithmetic averages in the level of competencies of teachers of the first three grades with students with dyslexia due to the variables (teaching experience, grades taught, and previous training courses that the teacher underwent). To determine the significance of the differences, an analysis of variance (ANOVA) test was conducted, and the results came out as shown in Table (9).

Table 9. Results of the Analysis of Variance (ANOVA) Test to Determine the Significance of The Differences in the Arithmetic Means of the Study Sample's Responses to the Scale of The Competencies of Teachers of The First Three Grades with Students with Dyslexia According to The Study Variables

Source of variance	sum of squares	df	Mean squares	(F) Value	Sig
Teaching experience	0.212	2	0.106	3.242	0.044*
The classes he teaches	1.379	2	0.690	21.068	0.000*
undergo training courses	0.330	1	0.330	10.072	0.002*
Error	2.619	80	0.033		
Adjusted total	12.979	85			

* Significance level ($\alpha=0.05$)

Table (9) shows that there are statistically significant differences in the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia according to the variable of teaching experience, where the value of (F) reached (242.3) at a significance level of (0.044). The results show that there are statistically significant differences in the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia according to the variable of the grades they teach, where the value of (F) reached (21.068) at a significance level of (0.000). The results also show that there are statistically significant differences in the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia according to the variable of undergoing training courses, as the value of (F) reached (10.072) at a significance level of (0.002), and the arithmetic mean of the responses of teachers of the first three grades who underwent previous training courses was higher than the arithmetic mean of teachers of the first three grades who did not undergo previous training courses; that is, the competencies of teachers of the first three grades who underwent previous training courses are higher. To find out the source of the differences in the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia according to the variable of teaching experience according to teaching experience and the grades taught, a Scheffe test was conducted for post-comparisons, and Table (10) shows these results.

Table 10. Scheffe Test for Post-Test Comparisons of The Level of Competencies of Jordanian First-Grade Teachers Regarding Students with Dyslexia According to The Variable of Teaching Experience

Teaching experience		Difference between averages (I-J)	Sig
I	J		
Less than 6 years	11 years and above	0.1061	0.165
From 6 - less than 11 years old	Less than 6 years	.5763*	0.000
From 6 - less than 11 years old	11 years and above	.6824*	0.000

Table (10) shows that there are statistically significant differences in the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia according to the experience variable between those with teaching experience (from 6 - less than 11 years) and those with teaching experience (less than 6 years) and (11 years or more). On the other hand, the level of competencies of those with teaching experience (from 6 - less than 11 years) was higher than those with teaching experience (less than 6 years) and (11 years or more), while no statistically significant differences appeared in the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia between those with teaching experience (less than 6 years) and (11 years or more). Table (10) shows that the level of competencies of Jordanian teachers of the first three grades compared to students with dyslexia was in favor of those with teaching experience (from 6 - less than 11 years).

Table 11. Scheffe Test for Post-Test Comparisons of The Level of Competencies of Jordanian Teachers of The First Three Grades Regarding Students with Dyslexia According to The Variable of The Grades They Teach

The classes he teaches		Difference between averages (I-J)	Sig
I	J		
First	Second	.7599*	0.000
First	Third	.2505*	0.000
Second	Third	-.5094-*	0.000

Table (11) shows that there are statistically significant differences in the level of competencies of Jordanian teachers of the first three grades regarding students with dyslexia, according to the grades they teach, between first grade teachers and second and third grade teachers on the other hand. The level of competencies of first grade teachers was higher than that of second and third grade teachers, and statistically significant differences appeared between second grade teachers and third grade teachers, and the level of competencies of second grade teachers was lower than that of third grade teachers

Discussion of Results

The researchers interpret the result related to the first question: that the level of competencies of teachers of the first three grades on the dimensions of the scale as a whole came to a medium degree, that teachers of the first three grades in Jordan are well qualified in the principles of the Arabic language at the university level during their preparation as teachers, and although the competence is at a medium degree, they still need to raise their competencies and skills regarding dyslexia. This result agreed with the study of Valle et al. (2024) and the study of Altyeb et al. (2024) which recommended the necessity for teachers to develop theoretical and practical competencies in the field of dyslexia through teacher preparation programs. This result also indicates that teachers of the first three grades are not at a sufficient degree of dyslexia and are below the required level of competence necessary to teach these students due to the importance of the reading skill and its specificity. Having high-level competencies is very important because teachers of the first three grades play vital roles in the academic lives of their students. Researchers attribute the occurrence of the dyslexia diagnosis dimension in the first place to reading behavior, which can be observed behaviorally and outwardly through spelling and decoding, and is present in students in the primary stage in all subjects, which makes the competencies of teachers of the first three grades better in identifying their

students' problems in the reading process in different educational situations. This facilitates the process of detecting and diagnosing the student's dyslexia problem. This result is consistent with the study of Eltyb, et al. (2024) which indicated that teachers' knowledge was between medium and low in the dimension of diagnosis and symptoms, and the nature and causes of dyslexia came in second place as a result of the attempt of teachers of the first three grades to study the causes and nature of the reading problem in the student to try to know how to deal with it. This is due to the fact that the reading skill is a complex and psychological process, and it is known that those who do not achieve the requirements of good reading will be affected in their academic, social and emotional performance, and reduce their chances of success. It differed from the results of the study of Eltyb et al. (2024) which showed that the dimension of the nature and causes of dyslexia came in last place in teachers' knowledge and competencies. This result differed from the study Martan et al. (2023) which showed that the dimension of knowledge of primary school teachers and therapists in the causes of dyslexia came in a weak degree and in last place. Unfortunately, it came in last place after treating dyslexia. What is the benefit of diagnosing the problem if it is not accompanied by therapeutic interventions to help alleviate the severity and difficulty of the reading problem? Perhaps this is due to the poor training required for teachers of the first three grades to understand the needs and requirements of students with dyslexia. Teachers of the first three grades may have negative perceptions about the problem of dyslexia, as a problem related to the student himself and his weak interest in learning, and that the improvement in the student's reading level comes from the increased interest of parents and the student himself, and that the teacher is not concerned with finding solutions for this category of students. Unfortunately, this puts students in a difficult educational situation. The earlier the therapeutic intervention, the more it contributes to improving the students' reading skills. The result can also be attributed to the academic preparation of teachers of the first three grades at the university level due to the lack of curricula that dealt with the subject of learning difficulties, dyslexia, practical strategies and practical practices for this disorder, which weakens their knowledge and competencies in how to find appropriate educational and therapeutic solutions and interventions for their students. This result differed from the results of the study Izzati Suffiah & Ai Cheng (2022), which showed that there were trainee teachers who were not aware of dyslexia in terms of general information, symptoms, diagnosis, and treatment. It differed from the results of the study Martan et al. (2023) which showed that most teachers know some specific strategies (after treating dyslexia) to teach students with dyslexia.

As for the explanation that the diagnosis as a competency among teachers of the first three grades ranked first, the researchers attribute this to linking diagnosis to academic development, as it has a direct impact on their academic progress, and this is an indicator of the importance of early diagnosis; teachers realize the importance of diagnosing dyslexia as a necessary step to intervene with students with dyslexia. This result is consistent with the study of Eltyeb et al. (2024) which addressed that teachers' knowledge of the symptoms and diagnosis of dyslexia was low, in addition to the fact that the reading problem and the mechanism of acquiring and mastering it is an individual problem for some students they teach, so they must undergo an individual reading test that measures their reading skills compared to the age group to which they belong, and their performance must be equal to or close to their colleagues in reading skills. The paragraph that states "In general, children with dyslexia have problems with phonological awareness" came in second place, which indicates that the competence of teachers of the first three grades in the principles of the Arabic language and the acquisition of reading skills is somewhat high. It is known that one of the most important factors for success in learning and acquiring reading skills is the student's ability to possess phonological awareness and realize that a word is a set of individual phonetic symbols that are combined to obtain a meaningful word. Without the student's ability to master the alphabetical principle in acquiring the reading skill, he will not be able to reach a good reader. As for the paragraph that states "Children with dyslexia generally tend to be weak in spelling", it came in twelfth and last place with an average degree. This can be explained by the competence of teachers of the first three grades being average in knowing the nature, symptoms, and impact of dyslexia on the level of their students. Those who cannot read will be affected by their reading spelling, blending sounds, and analyzing them.

Regarding the dimension of the nature and causes of dyslexia, which ranked second as a competency among teachers of the first three grades, the researchers explain this result by saying that teachers of the first three grades, when detecting reading problems among students, some of them try to find solutions by diversifying

the means, tools, methods and teaching methods, and making observations and recommendations to parents to help solve the problem. Despite the diversification of therapeutic interventions, the condition does not improve radically and quickly, as it requires more time. Often, the same teacher teaches the same student in more than one educational stage and more than one course, so the same problem is observed. Those who do not meet the reading requirements before the age of seven or eight will face reading problems in later age stages. The paragraph that states, “It is possible for a child to be dyslexic and gifted” came in second place, which indicates that teachers of the first three grades realize that dyslexia is not related to intelligence and is not a problem related to low cognitive abilities or laziness, and if therapeutic interventions are prepared for them, there is a possibility of increasing the chances of success and academic progress for these students (Flora, 2008). The paragraph that states, “I believe that dyslexia is not a reality and an existing problem” came in nineteenth and last place with a low degree, which indicates the cognitive sufficiency of primary school teachers that students with dyslexia face a real and realistic problem in the process of acquiring the reading skill and is not arising from the weakness of the student’s abilities and effort.

The researchers explain that the achievement of the dimension of treating dyslexia as a competency among teachers of the first three grades in the last place is that teachers of the first three grades need specialized training, relying in their teaching of students with dyslexia on a special education specialist. This result differs from what the current study reached in that the adequacy of diagnosis ranked first because diagnosis is easier and treatment requires many specialized teaching strategies. In addition, they possess theoretical competencies about some of the necessary therapeutic interventions with students with dyslexia, for example: modeling, technological techniques, and the multi-sensory method. However, their possession of theoretical competencies is not sufficient and they must be provided with appropriate and sufficient training in how to use these strategies, techniques, and methods to improve the level of reading skills for their students with dyslexia.

The researchers attribute the result that the teachers of the first three grades who attended previous training courses are more competent than the teachers who did not attend to the fact that the attendance of these teachers of the first three grades in previous training courses raised their cognitive and theoretical competencies regarding dyslexia, and improved the ability of the teachers of the first three grades to deal with the reading challenges of students in the primary stage. In other words, if the teachers of the first three grades are provided with such courses, it has an impact on the professional development of teachers and on their awareness, perceptions and understanding of dyslexia. This facilitates the mechanism of dealing with them and choosing the most appropriate methods and allows teachers to respond better to deal with such reading challenges for their students. The result of this question was consistent with the study Ferrer, Bengoa, and Joshi (2016) which indicated that the knowledge of teachers of the first three grades about dyslexia increased significantly with the training courses they received on dyslexia and was positively reflected in their self-confidence in teaching children with dyslexia. It also agreed with the results of the study Tosun, Arkan, Babur (2021) which indicated that primary school teachers who received a training course on dyslexia in college had fewer negative perceptions of dyslexia than teachers of the first three grades who did not receive training courses. It also agreed with the results of the study of Gedik & Akyol (2024) which showed that future teachers in the fourth grade who attend training courses have a higher level of understanding and more positive beliefs towards dyslexia and that these courses contribute to increasing knowledge and beliefs related to dyslexia. It differed with the results of the study of Solheim et al. (2024) which indicated that they do not consider the content of reading courses in formal in-service training to be significant predictors of dyslexia knowledge. The researchers explain the result of the teaching experience of the category (6-11) that it is known that the knowledge and competencies of teachers of the first three grades increase based on the teaching and practical experiences they have spent in the teaching process, but the result of this question came in favor of those who have teaching experience of 6 years and less than 11 years, meaning the teachers of the first three grades who are beginners compared to those with more teaching experience. The researchers attribute this result to the positive perceptions of the teachers of the first three grades who are beginners in forming and structuring their teaching experiences and to the good preparation in the university stage and their ability to use teaching techniques compared to their predecessors of teachers who have more teaching experience. Perhaps this is due to the development and professional preparation of the teachers of the first three grades whose experience is 6 years and less than

11 years. This result was consistent with the study of Soriano-Ferre et al., (2016) which indicated that the knowledge of teachers of the first three grades increased and was significantly associated with their years of teaching experience. It also agreed with the result of the study of Martan et al. (2023) that teachers who received professional training in teaching dyslexia had better knowledge and competence than others. This result differed from the study of Tosun, Arkan, and Babur (2021) which showed that there is a positive but weak relationship between teaching experience and the negative perceptions of teachers of the first three grades about dyslexia. It also differed from the result of the study of Solheim et al. (2024) which showed that in-service experience is not considered an essential predictor of teachers' knowledge of dyslexia. It also differed from the result of the study of Altyeb et al. (2024), which indicated that there are no statistically significant differences between teachers according to the variable of teaching experience.

In explaining the result that the efficiency of first grade teachers was in favor of those who deal with first grade, the researchers attribute this result to the fact that first grade primary school teachers notice the problem in the reading process because reading skills begin and are formally formed in the first grade, which is the formal teaching experience in the student's life. Also, the acquisition of reading skills from decoding, phonemic awareness, and the ability to analyze and synthesize words is very prominent in the first grade, meaning that the majority of educational activities for the student enrolled in the first grade depend on reading skills, and if the student faces difficulty in acquiring and knowing them, they will be clearly evident to the first grade teacher. This result differed from the study of Gorica (2020) which showed that most teachers of the first three grades (50%) notice difficulty in reading and writing in the second grade when the reading and writing process begins according to the curriculum. (39%) notice difficulties in reading and writing in the third grade, and (2%) at least in the first and fifth grades. The researchers indicate that this variable has not received sufficient attention from previous research and has not been addressed, which puts it in a scientific research position to pay attention to the need to raise awareness and understanding of teachers of the first three grades to the same extent in order to advance students with dyslexia due to the sensitivity of this important and essential stage in the student's life.

Conclusion

The study revealed the competencies of teachers of the first three grades in Jordan with students with dyslexia, and its relationship to teaching experience, attending pre-service training courses, and the grades they teach (first, second, and third grades). The sample included 86 male and female teachers from schools in Wadi Al-Seer District in Amman. The study used a scale consisting of 41 paragraphs distributed over three dimensions: (the nature of dyslexia dimension, the diagnosis dimension, and the therapeutic intervention dimension). The results showed that the level of competencies was average, as diagnostic competencies ranked first, followed by knowledge competencies of the nature and causes of dyslexia, and finally therapeutic intervention competencies. It also showed statistically significant differences in favor of teachers with experience ranging between 6 and 11 years, first grade teachers, and those who attended previous training courses in dyslexia.

Recommendations and Suggestions

Based on the results of the current study, the researchers recommend the following:

Increasing awareness and practical competencies among teachers of the first three grades regarding dyslexia and mechanisms for dealing with the challenges resulting from this disorder.

Develop practical guides for teachers on how to provide reading skills to students diagnosed with dyslexia.

Providing a supportive and friendly school environment for students with dyslexia, which will achieve opportunities for success and academic progress for these students.

Conducting surveys at the beginning of each academic year to measure the reading skills of students in the first three grades.

Conduct future qualitative studies to measure the competencies of teachers of the first three grades in teaching students with dyslexia.

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