How to Cite this Article: Rashid, A., & Manzoor, A. (2026). Gender and Regional Differences in Dyslexia Awareness among Primary School Teachers: A Punjab Survey. *The Knowledge, 5*(1), 287-299.
https://doi.org/10.55737/tk/v5i1.51154

RESEARCH ARTICLE THE KNOWLEDGE

Volume 5, Issue 1 (Winter 2026) • Pages: 287 – 299 • DOI: 10.55737/tk/v5i1.51154 • e-ISSN: 3006-869X

Gender and Regional Differences in Dyslexia Awareness among Primary School Teachers: A Punjab Survey

Asifa Rashid [1*] **Afaf Manzoor** [2]

Corresponding Author: Asifa Rashid (✉: Asifarashid007@gmail.com)

Abstract

Dyslexia is one of the most common learning disorders that negatively influences the activities of reading, writing, and spelling, thus possibly worsening the performance of students and their self-image. Teachers take a pivotal role in the early detection and management of students with dyslexia; however, a significant number of teachers in Pakistan at the primary school level lack awareness and training, and therefore have limited opportunities to effectively deal with students with dyslexia. The current research examines the awareness regarding dyslexia among primary school teachers in Punjab province, with special focus on differences that are due to gender as well as rural and urban union councils. With the quantitative survey design, a structured questionnaire was given to a stratified random sample of teachers. The statistics used were descriptive statistics and independent sample t-tests to study the general level of awareness and group variations. The outcomes are expected to shed light on the differences in awareness by gender and region, and thus, help bring empirical information to the development of specific teacher training programs, professional development, and inclusion education policy. The study will help teachers improve their teaching methods to effectively include students with dyslexia in Punjab, Pakistan, by identifying gaps in knowledge and awareness across the province.

Key Words

Dyslexia, Teacher Awareness, Primary School Teachers, Gender Differences, Regional Variations, Union Council, Rural and Urban, Inclusive Education, Punjab

Introduction

Dyslexia is a particular learning disability that is defined by problems in recognizing the right word and/or inaccurate word recognition, spelling deficits, and impaired decoding, even when the intellectual capacities and educational facilities are sufficient (International Dyslexia Association, 2018). As a specific learning disorder in DSM-5, dyslexia belongs to the group of the most widespread parasites globally among those of school-going age, with prevalence rates typically at 5-15% based on the conditions of diagnosing and the characteristics of the population (American Psychiatric Association, 2013; Shaywitz, 2020). Upon going undiagnosed or untreated, dyslexia may lead to a decline in the academic performance of victims, diminished self-confidence, and social-emotional problems (Morte-Soriano & Soriano-Ferrer, 2024).

[1] PhD Scholar, Department of Special Education, University of Education, Lahore, Punjab, Pakistan.
Email: asifarashid007@gmail.com

[2] Assistant Professor, Department of Special Education, University of Education, Lahore, Punjab, Pakistan.
Email: afaf.manzoor@ue.edu.pk

The knowledge, awareness, and use of effective teaching techniques, including multisensory ones, affect the learning outcomes of the students directly because teachers play a pivotal role in the early identification and support of students with dyslexia.

Nonetheless, existing studies have shown that most primary school educators do not have adequate knowledge about dyslexia, which is usually caused by poor pre-service and in-service education (Enemuo & Ibezimako, 2025). This is particularly wide in low- and middle-income nations, such as in Pakistan, in which teacher training programs rarely focus on particular learning disabilities. Additionally, contextual influences, e.g., gender and regional location, can impact teacher awareness and understanding of dyslexia.

Educational studies have reported gender disparities in knowledge, instructional styles, and attitudes, which implies that male and female educators could have different degrees of readiness and instructional sensitivity (Abu Hamour & Al Hmouz, 2016). Similarly, teacher consciousness can vary within geographic or administrative ranges, including union councils, which indicates the difference in access to professional development opportunities, school facilities, and local school policies (Yi et al., 2024).

Although teacher awareness as a factor that helps students with dyslexia is recognized to be important, only a few empirical studies have been carried out to focus on gender differences in teacher awareness or differences in teacher awareness across regional administrative units in Pakistan. The majority of the studies focus on general teacher knowledge or classroom practices and do not study the possible demographic or geographical differences. The gap in the evidence does not facilitate the creation of interventions and professional development programs tailored to meet the unique needs of teachers in different regions or demographics.

The current research, therefore, seeks to investigate the awareness of teachers in primary schools in Punjab, Pakistan, on dyslexia, and its differences between genders and the rural and urban areas. On revealing these differences, the research aims to inform policy, teacher training, and inclusion education programs, which, in the long run, will achieve better outcomes in learning among students with dyslexia.

Problem Statement

Dyslexia, which is a common learning disability that affects reading, writing, and spelling, poses a severe threat to the academic performance and self-esteem of primary school students. Teachers can also have an important role in the early detection and intervention of students with dyslexia, but research shows that most teachers do not have sufficient awareness and knowledge of the condition, mainly because of the lack of pre-service and in-service training. There is a paucity of empirical evidence on the way teachers' knowledge and perception about dyslexia change with various demographic factors, such as gender, administrative or geographic divisions like union councils in the rural and urban areas in Punjab, Pakistan. This is a gap that restricts the design and application of context-specific teacher training programs and inclusive learning that accommodate the needs of students with dyslexia. Hence, the need to study these disparities can guide specific interventions, raise the readiness of the teachers, and eventually raise the academic achievement of the dyslexic students in the area.

Research Objectives

1. To examine whether there is a difference in primary school teachers' knowledge regarding dyslexia on the basis of gender.
2. To investigate the difference in primary school teachers' knowledge regarding dyslexia between rural and urban areas.

Research Questions

Based on the above objectives, the study addresses the following research questions:

1. On a gender basis, what is the difference in Primary School Teachers' Knowledge regarding Dyslexia?
2. On a rural and urban area basis, what is the difference in Primary School Teachers' Knowledge regarding Dyslexia?

Significance of The Study

This research is also quite important in many ways.

First, it addresses a significant gap in the current body of knowledge regarding teachers' awareness of dyslexia in Pakistan by examining the impact of demographic factors (gender) and non-demographic factors (union councils) on teachers' knowledge. To develop specific strategies to improve teacher preparedness, it is necessary to understand these differences.

Secondly, the results may be used in a teacher training program at pre-service and in-service stages. With the help of defining certain areas of lack of awareness and instructional knowledge, educational authorities and policymakers may develop interventions that are context-specific and inclusive, i.e., teachers are more likely to help students with dyslexia.

Thirdly, the research provides insight into the inclusive education practice that may indicate differences in the teacher awareness regionally. These insights can help in the allocation of resources, professional development programs, and policies that allow equitable education support to be given to students with learning difficulties, irrespective of their geographical location or the sex of their educator.

Lastly, the current research provides an empirical foundation for future research that is to be undertaken in Pakistan and similar settings with the use of baseline measures regarding the knowledge of dyslexia among teachers. It, therefore, suggests the continued investigation of factors that define pedagogical excellence, student achievement, and the effectiveness of inclusive education efforts in general.

Delimitations of The Study

This study is subject to certain delimitations that define its scope and focus:

1. The study is focused on the teachers of primary school children in Punjab province.
2. The research question narrowly focuses on the cognizance among teachers about dyslexia, analytically with a focus on gender and union council differences.

All other possible determinants (socioeconomic status or school typology) are recognized but not predetermined. Such restriction parameters make the research focused, feasible, and relevant to the stated aims.

Definitions of Key Terms

- **Dyslexia:** It is a neurocognitive disorder that is characterized by continuing problems with word recognition, spelling, and decoding accuracy, and/or fluency in the presence of normal intellectual abilities and educational accessibility.
- **Primary School Teachers:** The teachers are those who teach students between grades one and five in either a state-owned or a privately owned institution within the state of Punjab, Pakistan.
- **Gender:** The biological description of male or female teachers in the survey instrument.
- **Union Council:** This is the smallest administrative unit in Pakistan, which refers to a local geographic area in a district. In this case, it is used to examine the differences in teacher awareness in regions.
- **Inclusive Education:** This is an educational concept that ensures that education is equally delivered to all students, including those with learning disabilities like dyslexia, in mainstream classrooms.

Literature Review

A specific learning disability that is characterized by inabilities to read, write, and spell words, dyslexia has a strong impact on the education of primary school students in cases of underdiagnosis and misdiagnosis (American Psychiatric Association, 2013). The knowledge and awareness of teachers about dyslexia is a key to early detection, creation of special instructional support, and encouragement of inclusive classroom practices (International Dyslexia Association, 2018). Empirical data show that the level of awareness of dyslexia among teachers is always moderate to low in different educational settings, which is why there is an urgent necessity to enhance the quality of teacher education and lifelong learning (Washburn et al., 2011; Soriano-Ferrer & Echegaray-Bengoa, 2014; Morte-Soriano & Soriano-Ferrer, 2024; Rashid & Manzoor, 2026).A survey of primary school teachers in the Qassim region in Saudi Arabia revealed a gap in the necessary pre-service and in-service training, as most of them did not have sufficient training, knowledge, and skills to diagnose and support students with dyslexia (Alawadh, 2016). Some studies hypothesize that gender can control how teachers are aware of dyslexia and their attitudes towards the condition.

A survey among future teachers in Turkey has shown that female teachers have more knowledge about dyslexia and that they have more positive beliefs than their male peers, which might indicate that gender-specific differences in readiness and their attitudes towards pedagogy could be present (Gedik & Akyol, 2024).

However, not all studies are consistent; specifically, in the Saudi Qassim survey, there are no statistically significant differences between genders, but other studies indicate that, in contrast to male teachers, among female teachers, there is a high probability of demonstrating higher levels of results in the specified areas when it comes to associating learning disorders with the ability to diagnose a particular learning disorder (Yousef, 2022). These opposing results suggest that gender may moderate the mechanism of learning, retaining, and applying dyslexia knowledge, maybe by differentiating between learning experience, career progression, or role anticipation.

Nevertheless, the evidence is quite unclear, which makes one think that region-specific studies are necessary. The regional context has become seen as a key predictor of teachers' perceptions and awareness of dyslexia. Comparative and cross-cultural studies reveal that there is a significant difference in teacher awareness in various geographic and cultural contexts. A recent systematic review revealed significant differences in teacher awareness across the globe, showing that the contextual and systematic factors have a strong impact on the understanding of dyslexia among educators (Folia & Malisiova, 2025). Some countries, e.g., Sri Lanka, Algeria, Iran, and Pakistan, have hinted that a significant number of teachers have little or no knowledge of developmental dyslexia, although relatively higher levels of awareness have been noted in Europe. Moreover, studies in South Asia and Africa report that a significant percentage of teachers are not familiar with the concept of dyslexia and frequently fail to use effective teaching methods, which is partly because of the lack of formal training opportunities (Makgato et al., 2022). Results also demonstrate a significant lack of teacher readiness and emphasize the need to conduct focused professional development programs and interventions at the policy level to promote the inclusive education of dyslexic students

These trends highlight how geographic disparities in education systems, unequal access to professional development, and policy priorities can affect teacher awareness. Lack of access to training and institutional support in rural and resource-constrained settings further impedes teachers from identifying and supporting dyslexic students. As a result, the significance of thorough teacher training is always highlighted in the literature as an instrument of closing the gap in awareness and facilitating inclusive educational practices. The advocacy of comparative studies is that structured learning disability curricula should be integrated into pre-service teacher education, and lifelong professional learning based on the needs of the local populations should be provided

(Martan et al., 2023). Such programs ought to include not only the theoretical basis of dyslexia, but also intervention techniques that can be carried out in the classroom to help such learners.

Secondly, gender and regional differences in awareness of dyslexia should be studied to develop specific interventions. The knowledge about the differences between male and female teachers, between rural and urban teachers, may help policymakers to create context-based professional development programs that can help close the gaps and take advantage of the available strengths in the teaching workforce.

Methodology

Research Design

The current research study utilized a quantitative survey research design to measure how much primary school teachers in Punjab, Pakistan, are aware of dyslexia. Survey methodology was chosen to collect data in an efficient way, through the collection of standardized information on a large and heterogeneous cohort (Creswell and Creswell, 2023). This design supports examining the difference in awareness based on gender and union council (rural and urban), and thus, allows both descriptive and comparative statistical tests.

Population

The population that was targeted included teachers of public primary schools in the state of Punjab. With a population of about 131,550 primary school teachers, the Punjab Education Statistics (2020) report indicates that the province had 36,415 public primary schools. Target population: Primary schools in Punjab. =36,415, Total Primary School Teachers in Punjab. = 131,550

Source: Punjab Education Statistics (2020)

Sample and Sampling Technique

The sample was made up of 2, 500 primary school teachers by means of a multi-stage disproportionate stratified random sampling plan across divisions, districts, tehsils, and union councils in Punjab. The basis of stratification was rural-urban classification, and disproportionate allocation was on the basis of school number, distribution of teachers, logistical factors, and balanced gender. The response rates were variable; nonetheless, all sub-groups were sufficiently represented and, therefore, could be compared.

Participation Criteria of the Public Primary School Teachers

The inclusion criteria included the participation of the respondents who were employed in a public primary school in Punjab and had at least two years' experience in teaching at the primary level, and gave voluntary informed consent to be included.

These were the criteria that ensured that the data collected was based on real-life teaching experiences, which are useful in developing a successful dyslexia inclusion training program.

Instrument Development and Validation

This involves developing and validating an instrument (e.g., scales, self-report measures, etc.). The questionnaire was created after a thorough literature review and was also in line with the recommendations provided by the International Dyslexia Association (IDA, 2018). An expert review was conducted to achieve content validity and entailed the following five professionals: two psychologists, two inclusive education researchers, and one speech-language therapist. The specialists also assessed the item clarity, construct representation, theoretical correspondence, and cultural suitability; their response led to slight modifications of the tool. The stratified random sampling was done on 500 primary school teachers in the Lahore Division to conduct a pilot study. The analysis of reliability showed that the Cronbach's alpha of all domains was more than 0.70, which indicates a satisfactory

to high internal consistency (George & Mallery, 2016). The construct validity was also substantiated by confirmatory factor analysis (CFA), standardized factor loadings of which were between .70 and .87. The measures of model fit showed it was a good fit (CFI = .933, TLI = .925, RMSEA =.052) (Hair et al., 2019; Hu & Bentler, 1999).

Data Collection Procedure

The data were gathered through a mixed-mode method, which incorporated online (Google Forms) and paper-based questionnaires to provide the data coverage of both geographical and technological settings (Creswell and Creswell, 2023). Professional networks were used to distribute online surveys, and paper questionnaires were used during the visits and training at schools, which enhanced the response rates and data quality (Bryman, 2016). These questionnaires were handed out to 3,000 participants, and 2,500 of those responded to them (response rate = 83.3%). Questionnaires that remained incomplete or unreturned were also not used to protect the integrity of the data.

Data Analysis

Analysis of the data was done in SPSS (Version 22). The awareness level of the teachers was summarized using descriptive statistics, such as frequencies, percentages, means, and standard deviations. The inferential tests were used to show the difference in demographics and the correlation between the questionnaire areas.

Ethical Considerations

The Department of Special Education of the University of Education, Lahore, decided they had to provide ethical approval. The participation was voluntary, and informed consent was obtained. Anonymity and confidentiality were taken into account and ensured during the research.

Analysis and Results

Demographics

Table 1

Frequency Table of Gender

Gender	Frequency	Percent
Male	1205	48.2
Female	1295	51.8
Total	2500	100.0

Table 1 illustrates the gender of respondents. Out of the 2,500 participants, 1,205 (48.2 1) are male, and 1,295 (51.8 1) are female, which demonstrates that the study sample represents an almost equal representation of the two genders with a small preponderance of respondents of the female gender.

Qualification

Table 2

Frequency Table of Qualification

Gender	Frequency	Percent
F.A	98	3.9
B.A	952	38.1
M.A	1402	56.1
MPhil/MS	48	1.9
Total	2500	100.0

Table 2 suggests that 98 (3.9) respondents had an F.A. qualification, 952 (38.1) respondents had a B.A. degree, 1402 (56.1) respondents had an M.A. degree, and 48 (1.9) respondents had an MPhil/MS degree. These results indicate that most of the study respondents were master's degree holders, implying that it was a well-qualified sample with considerable academic preparation, which was relevant to the pedagogical practice.

Professional Qualification

Table 3

Frequency Table of Professional Qualification

Professional Qualification	Frequency	Percent
P.T.C	86	3.4
C.T	77	3.1
B.Ed.	1665	66.6
M.Ed.	670	26.8
M.SEd	2	.1

Table 3 illustrates that 86 (3.4%), 77 (3.1%), 1,665 (66.6%), 670 (26.8%), 2 (0.1%), and 2 (0.1) of respondents had a P.T.C. qualification, C.T. qualification, B.Ed. qualification, M.Ed. qualification, and B.S.Ed. qualification respectively. These data show that most of the respondents had a B.Ed. qualifications, which implies that most teachers received formal training in the area of professionalism in the field of education, which makes the data more credible in terms of instructional practices and inclusion of students with dyslexia.

Division of Punjab

Table 4

Frequency Table of Division of Punjab

Division of Punjab	Frequency	Percent
Lahore	833	33.3
Multan	833	33.3
Rawalpindi	834	33.4
Total	2500	100.0

Table 4 reveals that the distribution of the respondents was nearly the same in the three divisions of Punjab: Lahore (833; 33.3), Multan (833; 33.3), and Rawalpindi (834; 33.4). This small sample size ensures that the findings are based on the views of different geographical areas and educational conditions.

District of Division

Table 5

Frequency Table of the District of Division

District of division	Frequency	Percent
Lahore	416	16.6
Kasur	417	16.7
Multan	416	16.6
Vehari	417	16.7
Rawalpindi	417	16.7
Jhelum	417	16.7
Total	2500	100.0

Table 5 shows that respondents were evenly spread within six districts, i.e., Lahore (416; 16.6⁻ 1), Kasur (417; 16.7⁻ 1), Multan (416; 16.6⁻ 1), Vehari (417; 16.7⁻ 1), Rawalpindi (417; 16.7⁻ 1), and Jhelum (417; 16. This percentage

arrangement has made the teachers in various parts of Punjab well represented since each district selected contributed to the sample proportionally

Tehsils

Table 6

Frequency Table of Tehsils of Districts

Tehsils	Frequency	Percent
Model town	208	8.3
Raiwind	208	8.3
Kasur	208	8.3
kot Radha kishen	209	8.4
Texla	209	8.4
Jhelum	208	8.3
Rawalp	208	8.3
Sohava	209	8.4
Multan	208	8.3
Shujaa	208	8.3
Malsi	209	8.4
Vahari	208	8.3
Total	2500	100.0

As Table 6 indicates, the sample was proportionately selected in twelve areas, each with around 8.3 -8.4 percent of the total sample. Such spheres are Model Town, Raiwind, Kot Radha Kishen, Taxila, Jhelum, Rawalpindi, Sohawa, Multan, Shujaabad, Mailsi, and Vehari. The fact that the data are evenly spread across these spots shows that it is regionally representative.

Union Council

Table 7

Frequency Table of Union Council

Union Council	Frequency	Percent
Rural	1438	57.5
Urban	1062	42.5
Total	2500	100.0

According to Table 7, 1,438 (57.5) respondents were in rural union councils, whereas 1,062 (42.5) respondents were in urban areas. Such a distribution has a higher proportion of rural teachers, and this ensures that the study reveals views of both rural and urban educational environments.

Have Training

Table 8

Frequency Table of Teachers Having Training

Have training	Frequency	Percent
Yes	25	1.0
No	2475	99.0
Total	2 500	100.0

In Table 8, the results reveal that 25 of the respondents (1.0 0) had some training on dyslexia, and 2,475 (99.0 0) had not. This exposes the fact that the teachers are severely under-trained in professional terms, thus giving an imminent high demand for a formal in-service training program that will provide the teachers with the demanded skills to handle students with dyslexia. There were 2,475 respondents (99.0) who said no training and 25 respondents (1.0) who underwent pre-service training,

Training Type

Table 9

Frequency *Table* of *Type* of *Training*

Training Type	Frequency	Percent
No training	2475	99.0
Pre-service	25	1.0
Total	2500	100.0

As shown in Table 9. Such an imbalance clearly shows a big discrepancy in pre-service and in-service professional development regarding dyslexia, which supports the necessity of such a teacher-training program.

RQ1: On a gender basis, what is the difference in Primary School Teachers' knowledge regarding Dyslexia?

H_{01}: There is no significant difference between male and female Primary School Teachers' knowledge regarding Dyslexia.

Table 10

Gender-based Primary School Teachers' Knowledge regarding Dyslexia

	Gender	N	Mean	Std. Deviation
Teacher Knowledge Regarding Dyslexia	Male	1205	20.0708	9.20588
	Female	1295	19.9955	9.11143

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Teacher Knowledge Regarding Dyslexia	Equal variances assumed	.200	.655	.206	2498	.837
	Equal variances not assumed.			.205	2481.163	.837

To investigate the differences in the knowledge that teachers of the primary school have about dyslexia by gender, an independent samples t-test was carried out. Basic statistics indicated that male teachers (N = 1,205) had a mean of 20.07 (SD = 9.21) and the female teachers (N = 1,295) had a mean of 19.99 (SD = 9.11). The average of 0.075 was very small, and it signified that there was no difference in the rate of awareness between genders. The test of equality of variances by Levene was non-significant (F =.20, p=.655), and thus the assumption that there is homogeneity of variances was not rejected; therefore, the t-test value under the assumption of equal variances was obtained. The results of the analysis were t(2,498) = 0.206, p =.837, which did not give any statistically significant difference in the knowledge of dyslexia among male and female teachers. This implies that gender does not have a substantial impact on the knowledge of dyslexia in teachers, and the null hypothesis (H 0: there is no difference in knowledge of dyslexia among male and female teachers) is accepted. Therefore, the gendered awareness and knowledge of dyslexia seem to be equally spread, and the gender differentiation is not necessary in the development or awareness creation concerning dyslexia.

RQ2: On a rural and urban area basis, what is the difference in Primary School Teachers' knowledge regarding Dyslexia?

H_{02}: On a rural and urban area basis, there is no significant difference in Primary School Teachers' Knowledge regarding Dyslexia.

Table 11

Rural and Urban Area-Based Differences in Primary School Teachers' Knowledge regarding Dyslexia

	Union Council	N	Mean	Std. Deviation
Teacher Knowledge Regarding Dyslexia	Rural	1438	19.0103	8.25556
	Urban	1062	21.4149	10.08896

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Teacher Knowledge Regarding Dyslexia	Equal variances assumed	68.806	.000	-6.546	2498	.000
	Equal variances not assumed.			-6.354	2007.352	.000

The independent samples t-test was conducted to establish whether the teachers had different knowledge of dyslexia based on the school location, i.e., rural or urban. Descriptive statistics showed that the mean score of teachers in rural settings (N=1,438) was lower (M=19.01, SD=8.26) compared to that of teachers in urban schools (N=1,062) (M=21.41, SD=10.09). Before the t-test result, the Levene test revealed a significant difference in variances (F = 68.806, p =. 001), which confirmed that the variances between the rural and urban groups were unequal. Based on this, the t-test value that was reported in the unequal (Welch) condition was deemed to be suitable. The analysis was able to generate t(2,007.35) = -6.354, p =.001, which indicates a statistically significant difference in the level of knowledge, whereby the mean of the rural teachers was much lower than that of their urban counterparts. As a result, the null hypothesis (H_{02}: no difference in knowledge between the rural and the urban teachers) was rejected. The findings prove that school location is an important factor that can determine the awareness and knowledge about dyslexia in teachers, and the knowledge levels of urban teachers were higher. These results indicate contextual differences in training access, professional development opportunities, and exposure to learning challenges, including dyslexia, which highlights the necessity of specialized awareness campaigns and capacity-building interventions, especially in rural settings, to facilitate fair identification and the provision of support to dyslexic students.

Summary of Key Findings

- Dyslexia knowledge is not much influenced by gender
- Rural-urban differences are also high, and urban teachers show greater cognizance.
- The results suggest disparities in training and access to resources, especially for rural teachers.

Discussion

The present paper has examined the awareness of teachers on dyslexia among primary school educators in Punjab, Pakistan, considering the gender disparities and rural-urban differences. The results show that gender has no major impact on the knowledge of dyslexia among teachers, but the geographical location is decisive, as urban teachers are more aware of dyslexia compared to rural teachers. The lack of significant gender disparity indicates that both male and female teachers in Punjab are equally exposed, have equal training opportunities, and have professional

experiences in the domain of learning disabilities. This is similar to past studies that have found that there are no significant gender differences in the knowledge of learning disabilities among teachers (Moll et al., 2014). This trend is attributable to the fact that teacher preparation in public schools is standardized, with male and female teachers receiving equal training with little focus on dyslexia, which leads to a similar awareness among the genders.

Conversely, the acute rural-urban inequality indicates the structural inequalities in access to professional growth, instructional services, and non-discriminatory educational programs. The increased awareness of urban teachers can be explained by the fact that they have more access to training opportunities, institutional support, and exposure to inclusive education programs. This correlates with the evidence on an international level, indicating that educators in rural settings tend to have lower access to professional development and education of a specific nature (Akyeampong et al., 2013; OECD, 2019). Since most of the respondents in this research were rural union councils, this gap is quite a challenge to inclusive education in Punjab.

These results are also supported by the outcome that 99% of teachers stated that they did not receive formal training on dyslexia. The general lack of awareness among both rural and urban populations implies that even the urban teachers do not have enough knowledge to detect and help students with dyslexia in the classroom. This brings out a systemic gap in pre-service and in-service teacher training with regard to specific learning disabilities.

On the whole, the results indicate that the knowledge about dyslexia among teachers in Punjab is more geographically based than gender-based. Reducing disparities related to rural-urban areas by providing equal opportunities in professional development of those concerned, decentralized professional training, and incorporation of systematic screening and intervention tools is the key to enhancing inclusive education practices and elevating the learning outcomes of students with dyslexia.

Implications

- There should be a focus on rural teachers through professional development to take care of the disparities within the regions.
- Early screening and referral systems should be institutionalized in the education departments.
- There should be cooperation between teachers, specialists, and parents in schools.
- Policymakers ought to require regular in-service training in line with inclusive education requirements.

Future Research

- Discuss the determinants of rural-urban inequality, including opportunities to develop professionally and educational facilities. Other variables that may have an effect on awareness need to be explored, such as the teaching experience, qualifications, and exposure to dyslexic students.
- Carry out qualitative research (interviews, observations) to understand the perception and strategy of teachers.
- Measure the performance of specially designed training programs, particularly in rural regions.
- Research on the effect of teacher knowledge on student performance.
- Compare the practice across provinces/countries to find best practices.

Conclusion

In Punjab, dyslexia knowledge among primary school teachers does not vary significantly by gender, and urban teachers are more aware of dyslexia than rural teachers. The obtained results indicate that special teacher training and professional development, especially in rural communities, should be carried out in accordance with the standards of IDA (2018). The policies and practices should be concerned with equitable and inclusive education so that every student with dyslexia can get the necessary support.

References

Abu-Hamour, B., & Al-Hmouz, H. (2016). Prevalence and pattern of learning difficulties in primary school students in Jordan. *Australian Journal of Learning Difficulties*, *21*(2), 99–113. https://doi.org/10.1080/19404158.2017.1287104

Akyeampong, K., Lussier, K., Pryor, J., & Westbrook, J. (2013). Improving teaching and learning of basic maths and reading in Africa: Does teacher preparation count? *International Journal of Educational Development*, *33*(3), 272–282. https://doi.org/10.1016/j.ijedudev.2012.09.006

Alawadh, A. (2016). *Teachers' perceptions of the challenges related to the provision of services for learners with specific learning difficulties (dyslexia) in Kuwaiti government primary schools* (Doctoral dissertation, University of York).

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.

Bryman, A. (2016). *Social research methods*. Oxford University Press.

Chuan, C. L., & Penyelidikan, J. (2006). Sample size estimation using Krejcie and Morgan and Cohen statistical power analysis: A comparison. *Jurnal Penyelidikan IPBL, 7*(1), 78-86.

Creswell, J. W., & Plano Clark, V. L. (2023). Revisiting mixed methods research designs twenty years later. *Handbook of mixed methods research designs, 1*(1), 21-36. https://doi.org/10.4135/9781529682663.n6

Enemuo, J. O., & Ibezimako, E. A. (2025). Strategies Adopted by Teachers in Teaching Primary School Pupils With Dyslexia in Oji-River Local Government Education Authority. *UNIZIK Journal of Educational Research and Policy Studies, 19*(1). https://unijerps.org/index.php/unijerps/article/view/875

Folia, V., & Malisiova, A. (2025). Teachers' perceptions and preparedness for teaching English as a foreign language to students with developmental dyslexia: A systematic review. *European Journal of Investigation in Health Psychology and Education*, *15*(4), 64. https://doi.org/10.3390/ejihpe15040064

Gedik, O., & Akyol, H. (2022). Reading Difficulty and Development of Fluent Reading Skills: An Action Research. *International Journal of Progressive Education*, *18*(1), 22-41. https://doi.org/10.29329/ijpe.2022.426.2

George, D., & Mallery, P. (2016). *Frequencies. In IBM SPSS Statistics 23 step by step* (pp. 115-125). Routledge.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/ebr-11-2018-0203

Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118

International Dyslexia Association. (2018). *Knowledge and practice standards for teachers of reading*. International Dyslexia Association.

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*, *11*, 807. https://journals.co.za/doi/abs/10.4102/ajod.v11i0.807

Martan, V., Skočić Mihic, S., & Čepica, R. (2023). Teachers' competencies for inclusive education of students with learning disabilities: The role of initial and in-service education. *European Journal of Special Needs Education, 11*(2), 446-458. https://doi.org/10.13187/ejced.2022.2.446

Moll, K., Kunze, S., Neuhoff, N., Bruder, J., & Schulte-Körne, G. (2014). Specific learning disorder: prevalence and gender differences. *PloS One*, *9*(7), e103537. https://doi.org/10.1371/journal.pone.0103537

Morte-Soriano, M. R., & Soriano-Ferrer, M. (2024). Beyond reading: Psychological and mental health needs in adolescents with dyslexia. *Pediatric Reports, 16*(4), 880–891. https://doi.org/10.3390/pediatric16040075

OECD. (2019). *TALIS 2018 results (Volume I): Teachers and school leaders as lifelong learners*. OECD Publishing.

Rashid, A., & Manzoor, A. (2026). Examining the level of awareness of primary school teachers regarding dyslexia: A quantitative survey study in Punjab, Pakistan. *International Journal of Social Sciences Bulletin, 4*(1), 898–914. https://doi.org/10.5281/zenodo.18322130

Shaywitz, B. A., & Shaywitz, S. E. (2020). The American experience: Towards a 21st century definition of dyslexia. *Oxford Review of Education, 46*(4), 454-471. https://doi.org/10.1080/03054985.2020.1793545

Soriano-Ferrer, M., & Echegaray-Bengoa, J. (2014). A scale of teachers' knowledge of dyslexia. *Annals of Dyslexia, 64*(3), 193–212. https://doi.org/10.1016/j.sbspro.2014.04.299

Washburn, E. K., Joshi, R. M., & Binks-Cantrell, E. S. (2011). Teacher's knowledge of basic language concepts and dyslexia. *Dyslexia, 17*(2), 165–183. https://doi.org/10.1002/dys.426

Yi, Z., Asyik, N. F., & Al-Hosaini, F. F. (2024). Teacher professional development in rural China: Opportunities and barriers. *Global Social Science and Humanities Journal, 2*(1), 1-18. https://doi.org/10.59088/gi.v1i3.13

Yousef, A. H. (2022). Primary School teachers' awareness and knowledge of dyslexia in the Qassim region, Saudi Arabia. *Pakistan Journal of Medical and Health Sciences*, *16*(5), 844–850. https://doi.org/10.53350/pjmhs22165844