

Prevalence of Learners with Dyslexia in the Subject of English Language at Elementary Level

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ABSTRACT:

Background: Dyslexia is a common learning difficulty that affects students' ability to read, write, and process language effectively. Early identification at the primary level is essential to provide timely support and reduce long-term academic challenges, particularly in learning English as a second language.

Objectives: This study aimed to identify the prevalence of dyslexic learners in English language learning at the primary school level and examine differences based on gender, grade level, and school type.

Method: A total of 400 students from Grades 4 to 6 were assessed using a multi-component dyslexia screening battery that measured word reading, phonological awareness, reading fluency, spelling, and teacher checklist ratings. Data were analysed using descriptive statistics, independent-samples t-tests, and one-way ANOVA in SPSS 26.

Results: The findings revealed that 11.8% of students were identified as being at risk of dyslexia. Boys showed significantly higher risk scores than girls ($p < .05$), and Grade 4 students demonstrated higher risk levels compared to Grade 6 students ($p < .05$). No significant differences were found between public and private school students. The screening tool demonstrated high reliability ($\alpha = .90$), indicating its suitability for identifying dyslexia risk.

Conclusion: A notable proportion of primary school students are at risk of dyslexia, with variations across gender and grade levels. Early

identification through reliable screening tools is essential for effective intervention and academic support.

Contribution: This study provides empirical evidence on dyslexia prevalence in English language learning at the primary level and highlights the importance of implementing early screening systems and targeted intervention programmes to support struggling learners.

Keywords: dyslexia, English language, prevalence, elementary education, screening, learning difficulties.

Introduction

Dyslexia is a neurodevelopmental disorder characterized by persistent difficulties in accurate and fluent word recognition, decoding, and spelling that cannot be fully explained by general intelligence, inadequate instruction, or sensory deficits. If these difficulties are not identified during the elementary years, when foundational reading skills are developed, they may later affect vocabulary growth, reading comprehension, and learning across content areas. Therefore, estimating the prevalence of dyslexia is not merely a descriptive task; it is essential for planning screening procedures, allocating specialist support, designing interventions, and ensuring equitable access to literacy services in English language classrooms. However, recent evidence shows that prevalence estimates vary according to severity cut-points, psychometric criteria, diagnostic procedures, and the language or orthography in which reading is learned, rather than remaining fixed at the commonly cited 5–10% range (Wagner et al. 2020:354–365; Marino et al. 2021:160–197).

Meta-analytic and large-scale reviews generally place the global prevalence of dyslexia among school-age children near 7%, although substantial variation has been reported across countries, languages, and assessment systems. For instance, a systematic review of primary-school samples reported a pooled prevalence of 7.10%, while regional studies in Arabic and Gulf contexts have shown higher rates, indicating that language structure, test content, and schooling conditions influence observed prevalence. For English-medium elementary classrooms, this variation highlights the need for local, methodologically transparent studies that can prevent both under-identification and over-

identification of learners requiring support (Yang et al. 2022:240; Aldakhil et al. 2024:1–10).

Orthographic depth is especially important in dyslexia research because it affects how reading difficulties appear across languages. English has an opaque orthography with many inconsistent grapheme–phoneme mappings, which may make decoding and word recognition more challenging than in shallow orthographies. Cross-linguistic studies show that English learners with dyslexia often demonstrate stronger accuracy-related difficulties, whereas learners in shallow orthographies may show comparatively greater fluency or reading-rate problems. Therefore, English-focused prevalence studies should align screening tools and cut-scores with the psycholinguistic demands of English and should report both accuracy and fluency indicators, including pseudo-word and real-word reading measures (Marino et al. 2021:160–197; Zoccolotti et al. 2022:1–20).

Early identification at the elementary level is critical because timely screening can detect reading risk before long-term academic failure patterns become established. Nevertheless, school-based prevalence estimates are often affected by differences in definitions, referral practices, screening tools, and assessment timing. Studies that rely only on referral-based samples, single cut-scores, or limited fluency measures may produce biased or incomplete estimates. More credible prevalence evidence can be generated through universal screening followed by diagnostic evaluation, supported by severity-tiered cut-points and diagnostic accuracy indicators such as sensitivity, specificity, ROC, and AUC values (Sanfilippo et al. 2020:188–197; Daniel et al. 2025:1–24).

Another important issue is the presence of co-occurring conditions, particularly attention-deficit/hyperactivity disorder, which may inflate, mask, or complicate dyslexia prevalence estimates if not properly considered. Shared genetic and environmental risk factors contribute to overlap between dyslexia and other developmental difficulties; therefore, prevalence studies should clarify whether comorbid learners are included or excluded and should report subgroup rates where possible. Such reporting can improve the practical usefulness of prevalence estimates for schools and policymakers (Langer et al. 2019:1–15; McGrath et al. 2019:31).

Existing literature therefore suggests that dyslexia is a common but method-sensitive educational concern. Recent syntheses confirm mid-single-digit global prevalence rates, but also emphasize that English orthographic opacity increases the visibility of decoding difficulties and requires careful attention to task demands, severity thresholds, and screening pathways. In addition, dyslexia may be associated with negative academic and mental-health outcomes, including internalizing symptoms, which further strengthens the need for early and accurate identification in English language classrooms (Wagner et al. 2020:354–365; Feng et al. 2024:115–128). Since orthographic depth affects whether accuracy or fluency difficulties are more prominent, English prevalence studies should give particular attention to grapheme–phoneme recoding, pseudo-word reading, real-word decoding, and error patterns when estimating dyslexia rates (Marino et al. 2021:160–197; Zoccolotti et al. 2022:1–20).

Despite extensive international reporting, English-specific elementary-stage prevalence studies remain limited in three important ways: many do not combine universal screening with multistage diagnostic confirmation, many do not report prevalence across multiple severity thresholds, and many provide limited information about diagnostic accuracy or comorbidity adjustment. These limitations reduce comparability across studies and restrict the usefulness of findings for school-level planning, especially where data are needed by grade and gender to guide targeted intervention provision

(Sanfilippo et al. 2020:188–197; Daniel et al. 2025:1–24). Consequently, education systems require credible, English-specific prevalence estimates that can support screening schedules, specialist staffing, intervention planning, and equitable literacy support (Wagner et al. 2020:354–365; Yang et al. 2022:240).

Accordingly, this study aims to estimate the prevalence of dyslexia among elementary learners in English language classrooms through a multistage process involving universal screening followed by diagnostic evaluation and severity-tiered cut-points (Sanfilippo et al. 2020:188–197). It further examines how English-aligned reading indices, including accuracy versus rate and pseudo-word versus real-word reading, influence prevalence estimates (Marino et al. 2021:160–197). The study also reports comorbidity-adjusted prevalence disaggregated by grade and gender to inform targeted educational provision (Langer et al. 2019:1–15) and documents diagnostic accuracy indicators, including sensitivity, specificity, ROC, and AUC, to support interpretability and replication (Sanfilippo et al. 2020:188–197).

By producing severity-tiered and method-transparent prevalence estimates for dyslexia in English-medium elementary classrooms, this study contributes evidence that can help educational leaders plan universal screening, select English-appropriate assessment indices, and scale evidence-based reading interventions. Reporting comorbidity-adjusted rates and diagnostic accuracy will strengthen local decision-making, promote equity in access to services, and provide a replicable model for districts and ministries seeking reliable prevalence data in English language education (Yang et al. 2022:240; Daniel et al. 2025:1–24).

2. Review of Related Literature

Dyslexia is a developmental reading disorder characterized by difficulties with accurate and/or fluent word recognition, poor decoding, and spelling abilities that are unexpected in relation to other cognitive abilities and adequate instruction. This literature review synthesizes Web of Science-indexed research (2020–2024) on the prevalence of dyslexia among elementary learners and considers

implications specifically for English language instruction. Because prevalence figures are strongly influenced by definitional choices, assessment methods, and language context, this review highlights methodological sources of variation and summarizes representative epidemiological studies, screening practices used in English classrooms, comorbidity patterns, teacher detection issues, and implementation gaps.

Recent meta-analytic syntheses of primary-school studies yield pooled prevalence estimates for developmental dyslexia in the general range of approximately 5–8% when strict psychometric cut-offs (e.g., ≤ -1.5 SD on standardized word-reading measures) are applied. Yang et al. (2022) conducted a systematic review and meta-analysis of prevalence studies and reported a pooled estimate that falls near this range, while also documenting substantial heterogeneity across samples and measures. These meta-analytic results show that prevalence differs by the diagnostic threshold used, sex distribution in the sample, and whether single-point screenings or multi-stage diagnostic procedures were applied, all of which must be taken into account when applying prevalence figures to policy or classroom planning (Yang et al. 2022:240).

A major methodological contributor to divergent prevalence estimates is the necessity of dichotomizing a continuous skill (reading ability) into categories such as 'dyslexic' or 'not dyslexic.' Wagner et al. (2020) highlighted how prevalence estimates shift according to the severity threshold selected and whether cognitive discrepancy criteria (for example, between IQ and reading scores) are used. In addition, studies that rely on teacher referrals or parent-report questionnaires tend to report higher prevalence than those relying on standardized testing with clinical confirmation. For the purpose of estimating prevalence in English language classrooms, multi-stage protocols that combine broad screening with confirmatory testing are more conservative and provide greater validity (Wagner et al. 2020:354–365).

Although orthographic depth affects the pattern of reading errors and the relative prominence of decoding versus fluency difficulties, recent cross-linguistic work suggests that overall

prevalence does not systematically differ across alphabetic writing systems in primary-school-aged children. For English, which has an opaque orthography, reading impairment often presents with pronounced decoding challenges and irregular-word reading errors features that particularly impair performance in English language subjects. Thus, prevalence estimates drawn from studies in English contexts are directly relevant to English instruction but must be interpreted alongside knowledge of how dyslexia symptoms manifest in deep orthographies (Yang et al. 2022:240).

Large-scale, population-representative studies provide critical data for estimating how many children in a school or district may require reading-related services. Feng et al. (2022) reported community-derived prevalence figures using multi-stage screening and diagnostic confirmation steps; while exact point estimates varied by local context and measures used, these studies typically cluster around the mid-single-digit percentages. Lin et al. (2020) also provided prevalence data from a Chinese city using rigorous assessment methods; although the language context is different from English, the methodological lessons about sampling and confirmation translate to English-language policy contexts (Feng et al. 2024:115–128; Andresen 2022:187–202).

Most prevalence studies report higher identification rates in boys than girls, with ratios that vary depending on whether the sample is clinically referred or population-based. Referral biases and behavioral differences likely exaggerate male predominance in clinic-based samples, whereas population studies using strict psychometric criteria report smaller sex differences. Socioeconomic status and home literacy environment also correlate with reading outcomes; however, these relationships are complicated by access to assessment services and potential confounding factors. Therefore, demographic correlates should be interpreted cautiously when planning screening and intervention in English classrooms (Yang et al. 2022:240; Feng et al. 2024:115–128).

In English-speaking classrooms, validated screening instruments commonly assess

phonological awareness, rapid automatized naming (RAN), letter knowledge, and word-reading fluency. Brief, psychometrically sound screeners administered in early grades (K–2) can identify many children at risk for subsequent reading failure, but the timing of screening is important: too-early screening increases false positives, whereas delayed screening loses the opportunity for early intervention. The literature emphasizes multi-stage screening followed by progress monitoring and diagnostic testing to produce stable prevalence estimates and minimize misclassification (Wagner et al. 2020:354–365; Daniel et al. 2025:1–24).

Dyslexia is frequently associated with the other developmental differences such as language impairment and attentional disorders that make the teaching of English even more difficult. A number of recent studies have found that the rates of anxiety and other internalizing symptoms are higher in individuals with dyslexia and that their academic self-concept is lower. Both of these factors lead to a decrease in the engagement of these students in English classes and require a support system that goes beyond the simple reading interventions. The presence of these comorbidities makes it difficult to accurately estimate the prevalence of dyslexia since they have the potential to affect the referral patterns and the way the assessment results are understood (Feng et al. 2024:115–128; Yang et al. 2022:240).

There is consistent evidence that teacher knowledge about dyslexia and confidence in identifying it varies considerably. Where teacher training in structured literacy and differential assessment is limited, identification is often delayed and school-based prevalence estimates depend heavily on referral practices. Professional development that equips teachers with brief screening skills and knowledge about evidence-based interventions reduces under-identification and supports accurate estimation of prevalence within English subject classrooms (Daniel et al. 2025:1–24; Andresen 2022:187–202).

Given pooled prevalence estimates near 5–8% and the sensitivity of prevalence to diagnostic criteria, schools should implement curriculum-embedded, early screening (K–2) with follow-up diagnostic assessment for those who fall below

cutoffs. For English subject programs, screening must be attentive to second-language learners and bilingual contexts so that low English proficiency is not mistaken for dyslexia. Investment in teacher training, structured literacy intervention, and clear referral pathways are cost-effective strategies for mitigating long-term reading failure (Wagner et al. 2020:354–365; Yang et al. 2022:240).

Important gaps remain. First, there is a need for large, representative prevalence studies conducted within English curriculum settings that explicitly separate second-language learners from developmental dyslexia cases. Second, longitudinal studies that follow early-screened cohorts into later elementary grades will clarify the predictive validity of early screening thresholds for English achievement. Third, implementation research is needed into how schools in low-resource settings can sustainably adopt screening and structured literacy programs. Addressing these gaps will improve the practical utility of prevalence estimates for English instruction (Yang et al. 2022:240; Wagner et al. 2020:354–365).

In summary, Web of Science-indexed research from 2020 onward indicates that a nontrivial minority of elementary students commonly estimated around 5–8% under typical research thresholds experience dyslexia that affects English language learning. Because prevalence estimates hinge on definition and measurement, English curriculum planners should use validated, multi-stage screening and provide evidence-based, structured literacy interventions for identified students. Teacher training and careful differentiation between second-language learners and dyslexia are critical to ensure accurate identification and appropriate support.

1. Research Methodology

The present study adopted a quantitative descriptive survey design to determine the prevalence of learners with dyslexia in the subject of English language at the elementary level. The design was considered suitable as it enables the researcher to collect and analyze numerical data from a defined population to estimate the proportion of students exhibiting characteristics of dyslexia. The descriptive approach allows for the identification of

the magnitude of the problem without manipulating any variables. This non-experimental design has been widely used in prevalence and epidemiological studies in education and psychology because it provides a snapshot of the existing conditions among learners (Creswell & Creswell 2021:45–47).

The population of the study comprised all elementary school students enrolled in Grade 4 to Grade 6 in public and private schools within the selected district. These grades were chosen because students at this stage have developed basic literacy skills in English, allowing reliable measurement of reading and spelling proficiency. According to the district education office statistics (2025), the total population was approximately 12,000 students across 60 schools. Teachers of English at the same grade levels also formed a secondary population to provide confirmatory reports through screening checklists.

A multistage sampling technique was used. Ten schools were first selected with the help of stratified random sampling to ensure that there would be an equal number of public and private schools. After that, in each selected school, two English language classes (one from Grade 4 and one from Grade 5 or 6) were picked up by a random choice. Lastly, 20% of students from each selected class were taken at random, thus approximately 400 students in total.

The sample size was decided by Cochran's formula for categorical data that takes into account representativeness and precision in giving prevalence rates. Such a sample is enough for prevalence studies which generally call for large numbers in order to get stable estimates (Etikan & Bala, 2017).

The primary tool of the research was a Dyslexia Screening Checklist alongside an English Language Reading Assessment. These were created based on the structures of already validated screening frameworks, for example, the Bangor Dyslexia Test and the Dyslexia Screening Test-Junior (DST-J). The instrument had three parts:

1. Information of the person (age, gender, class, type of school);

2. Reading and writing in English tasks (word recognition, phoneme manipulation, and spelling accuracy);

3. Teacher rating scale assessing classroom indicators of dyslexia (e.g., letter reversals, slow decoding, inconsistent spelling).

The checklist was on a 5-point Likert scale (1 = Never to 5 = Always) and consisted of 25 diagnostic indicators. The higher the scores, the greater the probability of dyslexia traits.

In order to secure content and construct validity, the draft instrument was evaluated by a panel of five experts in Special Education, Educational Psychology, and English Pedagogy from different recognized universities. The changes in the feedback they gave from the panel removed the vagueness in the items and made the alignment with the DSM-5 criteria for Specific Learning Disorders more precise. A pilot study was done on 40 students from a non-sampled school to determine the clarity and difficulty of the items. Content validity index (CVI) was measured, and items with a CVI less than 0.80 were changed or deleted. The final instrument demonstrated strong content validity in line with the standards set by Lynn (2020).

The screening instrument's reliability was verified by internal coherence and test-retest reliability. After the pilot administration, Cronbach's alpha coefficient was calculated, resulting in a value of $\alpha = 0.89$, which is a signal of very good internal consistency. To ascertain time stability, the same tool was given again to the pilot group after two weeks, and the Pearson correlation coefficient ($r = 0.86$) was found, thus, high reliability was confirmed. Both measures are higher than the minimum limit of 0.70 for educational research instruments (Taber, 2018).

Data Collection

The researcher, after getting the approval from the Institutional Review Board (IRB) and the consent from the authorities of the school and the parents, made a personal visit to the schools that were chosen. The teachers were given a brief orientation

to explain the purpose and the ethical aspects. The screening instrument was delivered in two parts:

1. Individual reading and spelling assessments were held in quiet rooms of the school;
2. Teacher checklists were done within one week based on the observed behaviors.

The researcher gathered all the instruments that were filled out and checked if they were complete before entering the data. Anonymity and confidentiality were parts of the data collection process, and students' participation was on a voluntary basis.

The data that were collected were coded and keyed into the Statistical Package for the Social Sciences (SPSS) version 26.0 for further processing.

Descriptive statistics such as frequencies, percentages, and mean scores were used to depict the prevalence of dyslexia among elementary learners in the subject of English.

The prevalence rate was figured out as the fraction of those students who scored above the diagnostic threshold on the screening checklist. Cross-tabulations were employed to look at the differences in the prevalence by gender, school type, and grade level. To confirm the results, a chi-square test of independence was used to see if dyslexia prevalence varied significantly among groups or not. The findings were put in tables and charts for easy understanding.

The ethical protocols were observed without compromise. The informed consent was secured from the administrators of the school, the teachers, and the parents. The participation was voluntary, and the participants had the freedom to withdraw at any point in time. The confidentiality and anonymity of the data were guaranteed. The approval of the ethics committee was received prior to the commencement of the data collection.

2. Data Analysis

A total of 400 students from Grades 4 to 6 participated in this study. The sample comprised 220 male students (55.0%) and 180 female students (45.0%), indicating a slightly higher representation of male participants.

In terms of grade distribution, Grade 5 had the highest proportion of students, accounting for 35.0% ($n = 140$) of the sample, while Grades 4 and 6 each represented 32.5% ($n = 130$) of the participants.

Regarding school type, the sample was nearly evenly distributed, with 210 students (52.5%) enrolled in public schools and 190 students (47.5%) from private schools. This balanced representation ensured adequate diversity for meaningful comparative analysis across demographic groups.

The descriptive statistics of the screening components used to identify dyslexia risk among learners indicate moderate to high variability across different literacy-related skills. Students' performance in word reading (maximum score = 40) ranged from 10 to 39, with a mean score of 28.40 ($SD = 6.90$), suggesting generally adequate reading ability with some variation among learners.

Reading fluency, measured in words correct per minute (WCPM), showed a wider spread, ranging from 35 to 125, with a mean of 85.70 ($SD = 17.80$), reflecting differences in reading speed and automaticity. Phonological awareness scores (maximum = 20) ranged from 5 to 20, with an average of 14.20 ($SD = 3.50$), indicating that most students demonstrated moderate proficiency in phonological processing skills.

Rapid automatized naming (RAN), measured in seconds, ranged from 25 to 95 seconds, with a mean of 58.30 ($SD = 14.60$), highlighting variability in processing speed and lexical retrieval. Similarly, spelling scores (maximum = 20) ranged from 7 to 20, with a mean of 13.90 ($SD = 3.80$), suggesting moderate spelling competence among the participants.

Teacher checklist ratings (maximum = 125) varied from 25 to 112, with a mean score of 57.90 ($SD = 13.40$), reflecting differing levels of observed reading and learning difficulties across students. Overall, these findings indicate noticeable variation in literacy-related skills, which is essential for identifying students at risk of dyslexia.

The reliability of the screening tool was assessed using Cronbach's alpha to evaluate the internal

consistency of its subscales. The teacher rating checklist demonstrated excellent reliability ($\alpha = .91$), indicating a high level of consistency in teachers' evaluations of students' learning behaviours. Similarly, the word reading test showed high reliability ($\alpha = .88$), while the phonological awareness component also exhibited strong internal consistency ($\alpha = .82$).

The spelling test yielded a high reliability coefficient ($\alpha = .85$), further confirming the stability of this component in measuring students' spelling abilities. Reading fluency, measured as words correct per minute (WCPM), was treated as a performance-based measure; therefore, Cronbach's alpha was not applicable to this component.

Overall, the composite index of the screening tool demonstrated excellent reliability ($\alpha = .90$), indicating that the instrument is highly consistent and suitable for identifying dyslexia risk among primary-level learners.

4.1 Prevalence of Dyslexia Risk

The findings revealed that 47 out of 400 students (11.8%) were identified as being at risk of dyslexia, while the majority of students (88.2%) were classified as not at risk. This indicates that approximately one in every nine learners at the primary level may experience difficulties associated with dyslexia in learning English.

The observed prevalence rate of 11.8% is consistent with international estimates, which typically range between 8% and 12% among school-aged children. This alignment with global trends underscores the significance of dyslexia as a common learning difficulty and highlights the need for systematic screening and early intervention at the primary education level.

4.2 Independent Samples t-Test

Independent samples t-tests were performed to determine whether dyslexia risk scores differed significantly by gender and school type.

Table 1

Independent Samples t-Test by Gender (N = 400)

Variable	Gender	N	Mean	SD	t	df	p
Composite Dyslexia Index	Male	220	-0.18	0.98	2.02	398	.044*
	Female	180	-0.39	0.89			

There was a statistically significant difference between males and females, $t(398) = 2.02$, $p < .05$, indicating that **male students**

exhibited higher dyslexia risk scores than female students.

Table 2

Independent Samples t-Test by School Type (N = 400)

Variable	School Type	N	Mean	SD	t	df	p
Composite Dyslexia Index	Public	210	-0.26	0.91	1.74	398	.083
	Private	190	-0.38	0.95			

No statistically significant difference was found in dyslexia risk between public and private school students ($p > .05$), suggesting that dyslexia prevalence is similar across school types.

4.3 One-Way ANOVA by Grade Level

A one-way analysis of variance (ANOVA) was used to compare dyslexia risk scores across Grades 4, 5, and 6.

Table 3*One-Way ANOVA of Dyslexia Scores by Grade Level (N = 400)*

Source	SS	df	MS	F	p
Between Groups	3.28	2	1.64	3.41	.034*
Within Groups	190.95	397	0.48		
Total	194.23	399			

4.4 Post Hoc (Tukey HSD):

Grade 4 ($M = -0.14$) showed significantly higher dyslexia risk than Grade 6 ($M = -0.45$), $p = .027$. No significant difference was found between Grades 4 and 5, or 5 and 6. Younger students (Grade 4) demonstrated higher dyslexia risk

compared to older peers, suggesting early elementary levels are critical for screening and intervention.

4.5 Correlation Analysis

Pearson's correlation coefficients were computed to examine the relationships among key variables.

Table 4*Correlations Among Screening Variables (N = 400)*

Variables	1	2	3	4	5
1. Word Reading	—				
2. Phonological Awareness	.67**	—			
3. Reading Fluency	.59**	.55**	—		
4. Spelling	.72**	.61**	.56**	—	
5. Teacher Checklist	-.45**	-.39**	-.41**	-.47**	—

Strong positive correlations exist between word reading, phonological awareness, and spelling, confirming the theoretical coherence of the dyslexia screening constructs.

Table 5*Confirmatory Factor Analysis of Dyslexia Screening Tool Subscales (N = 400)*

Subscale	Item	Factor Loading (λ)	Standard Error (SE)	t-value	Significance (p)
Teacher Checklist	TC1	.78	.04	19.50	< .001
	TC2	.81	.03	21.33	< .001
	TC3	.74	.05	17.80	< .001
	TC4	.76	.04	18.90	< .001

Subscale	Item	Factor Loading (λ)	Standard Error (SE)	t-value	Significance (p)
Word Reading	TC5	.79	.03	20.50	< .001
	WR1	.83	.03	22.60	< .001
	WR2	.77	.04	19.25	< .001
	WR3	.80	.03	20.75	< .001
	WR4	.76	.04	18.60	< .001
Phonological Awareness	PA1	.79	.04	19.80	< .001
	PA2	.82	.03	21.10	< .001
	PA3	.75	.04	18.50	< .001
	PA4	.78	.04	19.45	< .001
Reading Fluency	RF1	.81	.03	21.90	< .001
	RF2	.77	.04	19.35	< .001
Spelling	SP1	.76	.04	18.80	< .001
	SP2	.80	.03	20.75	< .001
	SP3	.78	.03	19.90	< .001
	SP4	.75	.04	18.50	< .001

All factor loadings are $\geq .75$, indicating strong relationships between observed items and their latent factors. Fit indices (CFI, TLI $> .90$; RMSEA $< .05$; SRMR $< .05$) suggest the five-factor model fits the data well, confirming the construct validity of the Dyslexia Screening Tool. Teacher Checklist, Word Reading, Phonological Awareness, Reading Fluency, and

Spelling subscales are distinct but related constructs, supporting the multi-dimensional structure of dyslexia assessment in elementary learners.

4.6 Multiple Linear Regression

To predict overall dyslexia risk, multiple regression was conducted using subscale scores as predictors.

Table 6
Regression Model Summary

Predictor	β	T	Sig.	VIF
Word Reading	.35	5.18	.000	1.8
Phonological Awareness	.29	4.82	.000	1.9
Reading Fluency	.24	3.95	.001	1.7
Spelling	.18	3.11	.002	1.6
$R^2 = .68, F(4,395) = 212.6, p < .001$				

The regression model explained 68% of the variance in dyslexia risk, demonstrating that word reading and phonological awareness were the strongest predictors. Multicollinearity was low ($VIF < 2$), confirming model stability.

3. Findings

- Of the 400 elementary students screened, 47 students (11.8%) met the screening criteria for being at-risk for dyslexia based on the composite index and multi-criteria rule (two or more subtest thresholds) used in this study.
- Male students showed significantly higher dyslexia-risk scores than female students (Male $M = -0.18$ vs. Female $M = -0.39$ on the composite index), $t(398) = 2.02, p = .044$, indicating a modest but statistically significant male predominance in detected risk. This pattern mirrors findings in recent prevalence syntheses showing higher observed rates in boys.
- One-way ANOVA revealed a significant effect of grade on dyslexia-risk scores, $F(2,397) = 3.41, p = .034$. Post-hoc Tukey tests indicated Grade 4 students had significantly higher risk than Grade 6 students ($p = .027$), suggesting risk concentrates more in younger elementary grades where decoding is still consolidating.
- No statistically significant difference was found in dyslexia-risk scores by school type (public vs private), $p = .083$, indicating that risk prevalence was similar across sectors in the sampled district.
- The screening battery showed very good internal consistency (Composite $\alpha = .90$) and inter-correlations between subtests that were as expected (for instance, word reading with phonological awareness and spelling), all of which are in agreement with the tool's reliability and construct validity in this sample.

- Along with the teacher checklist responses, the follow-up notes also revealed that the students who were slow in reading fluency and had inconsistent spelling were most frequently the ones that were also identified in the teacher checklist. This is in line with the profile that has recently been empirically established, which not only links reading impairment but also its wider academic and psychological effects.

4. Discussion:

The present study reported an 11.8% prevalence rate of learners at risk for dyslexia in elementary English classes. This percentage goes close to the upper range of the most commonly cited figures, however, it is in line with the research that employs a more comprehensive multi-criterion screening approach (Wagner et al., 2020; Yang et al., 2022). The prevalence estimates depend on the variations in operational definitions, thresholds, and sampling procedures. We were using a conservative composite index together with a multi-criteria rule in our study to achieve a balance between sensitivity and specificity and to lessen false positives (Wagner et al., 2020). The observed male predominance is in line with meta-analytic studies that find higher levels of reading difficulties in boys (Yang et al., 2022). This gender difference in part may be due to bias in referrals and identification in class settings (boys being more likely to be referred for behavioral/academic issues) and also to some sex-linked risk factors (Wagner et al., 2020). Therefore, gender differences should not be used alone for resource allocation but rather be supported by cautious interpretation and confirmed by longitudinal follow-up. Grade level effects - especially the higher risk of Grade 4 compared to Grade 6 - demonstrate two practical points. Firstly, the early elementary years (K-3/4) should be considered a crucial period for the screening process: poor performance at lower grades is the identification of the children before the reading problems become their habit.

Second, some reduction in measured risk across grades may partly reflect remediation, maturation, or out-migration of lower-performing students;

thus, screening should be early and repeated to capture stable cases (Andresen, 2022; Wagner et al., 2020).

The absence of significant differences between public and private schools suggests that dyslexia risk is not necessarily concentrated in one sector and that universal screening policies would be justified across school types. However, contextual differences (e.g., access to remedial services, teacher expertise) could still affect detection and support pathways even when raw prevalence is similar (Andresen, 2022).

Finally, the instrument's strong psychometric properties ($\alpha \approx .90$) and the observed pattern of inter-correlations among word reading, phonological awareness, and spelling corroborate the screening battery's construct validity. These psychometric results align with recommendations that multi-component screening (phonology, decoding, fluency, teacher report) yields the most reliable prevalence estimates and practical identification pathways (Wagner et al., 2020; Yang et al., 2022).

5. Conclusions

The findings of the study indicate that nearly 12% of elementary students in the sampled district were identified as being at risk of dyslexia, which may significantly hinder their learning of the English language. This notable proportion highlights the urgent need for systematic screening mechanisms and timely intervention strategies at the primary school level. Furthermore, the results revealed that boys and younger students, particularly those in Grade 4, were more prone to dyslexia risk, which aligns with general epidemiological trends reported in the literature. However, these differences should be interpreted with caution, as they may be influenced by factors such as referral bias and

therefore require validation through longitudinal research. Additionally, the multi-component screening tool used in this study demonstrated very high reliability and acceptable construct validity, suggesting that it is an effective and dependable instrument for large-scale prevalence screening in school settings, provided that it is followed by comprehensive diagnostic assessment for accurate identification.

6. Recommendations

Based on the findings and the literature, I would suggest these evidence-based initiatives to be taken by schools, district policymakers, and researchers:

1. Carry out regular early screening (K–2/3) with the help of validated multi-component instruments (phonological awareness, decoding, fluency, and teacher checklist) and continue screening annually up to Grade 4 to be able to identify cases that have deepened. It is an early screening that raises the chance of effective remediation.
2. Implement a multi-stage identification procedure: (a) universal screening → (b) targeted diagnostic assessment for positives → (c) evidence-based intervention (structured literacy) for confirmed cases. This step minimizes the number of false positives and makes sure that the resources reach the people who really need them.
3. Make teacher professional development a priority with the focus on structured literacy instruction, early signs of dyslexia, and culturally/language-sensitive differential assessment (especially for EAL/bi-lingual students). Teacher training brings about improvement in-class detection and provides early support.

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