

Awareness and Attitude on Dyslexia among Primary School Teachers, Lalitpur

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ABSTRACT

Introduction: Dyslexia is the most common learning disorder in school-age children, affecting areas such as basic reading skills, and written expression, listening, and speaking significantly impacts children's education, career, communication, and health. Teachers' awareness and attitudes toward learning disabilities are crucial for timely diagnosis, preventing further mental and social damage through educational rehabilitation and treatment measures. The study aims to assess the awareness and attitudes regarding dyslexia among primary school teachers in selected schools of Lalitpur Municipality.

Methods: This study employed a descriptive cross-sectional research design using a multistage cluster sampling method to select 180 participants from 30 public schools of Lalitpur Municipality. Ethical approval was obtained from Institutional Review Committee of Tribhuvan University, Institute of Medicine. Data collection was conducted using a self-administered questionnaire from September 1 to 28, 2019. Data analysis involved both descriptive and inferential statistics.

Results: Most of the respondents (88.3%) had an adequate level of awareness about dyslexia, and more than half (53.9%) had a positive attitude toward the disorder. A significant association was found between the level of awareness and religion (p-value 0.049), but no significant association with age, ethnic group, educational status, experience, class teaching, or subject teaching. Additionally, there was a significant association between attitude levels and age group (p-value 0.002) and educational level (p-value 0.001).

Conclusion: Awareness of dyslexia among primary school teachers in Lalitpur is encouraging, comparably only more than half of the teachers have positive attitude. So there is need to improve awareness and attitude among school teachers.

Keywords: Awareness, attitude, dyslexia, public school, teacher

INTRODUCTION

Dyslexia, the most prevalent learning disorder in children, often receives insufficient attention in developing countries, where resources are predominantly allocated to other issues like infections and nutritional disorders.¹ As economies grow and literacy rates rise, the need to address educational and social disabilities becomes more evident. Dyslexia is a specific and persistent learning disability that primarily

affects reading and spelling. It results in significant challenges in academic achievement and daily activities.^{2,3} It is characterized by reading performance that is considerably below the expected level for a person's age and intelligence and also difficulties that cannot be attributed to other sensory, neurological, or educational causes.² According to the British Dyslexia Association, dyslexia is a learning difficulty that affects accurate and fluent word reading and spelling.⁴

It impacts children's education, career, communication, and health, making research in dyslexia crucial for educational, medical, and social researchers.⁵ Studies have revealed varying prevalence rates of dyslexia among children. For instance, a study in Thailand found that 66.6% of children were at high risk of dyslexia, and 14.6% fell into the mild-risk category.⁶ In India, a study of students from Class III to V in Bikaner city reported that 10.2% were identified as dyslexic.⁷ Moreover, dyslexia and other learning disorders such as dyscalculia and dysgraphia accounted for 72.7% of poor school performance in a learning disability clinic in Mumbai.⁸ The overall prevalence of dyslexia among school-aged children in India is estimated to be between 5% and 17%.⁹

The lack of specialty clinics and trained personnel makes diagnosing and raising awareness about dyslexia more challenging, especially in developing countries.¹⁰ In Iran, the prevalence of specific learning disabilities was reported to be 15.17%, with dyslexia accounting for 11.2% of cases.¹¹ Timely diagnosis of such conditions is crucial, as it allows for appropriate educational interventions that can prevent further mental and social harm. Teachers play a vital role in this process, as their awareness and attitudes toward learning disabilities directly influence early identification and support.^{11,12}

Research showed that primary school teachers often have limited knowledge and understanding of specific learning disabilities, including dyslexia. In the context of Nepal, especially in areas like Lalitpur Municipality, there is a scarcity of research on teachers' awareness and attitudes toward dyslexia. This gap underscores the need for studies focused on this topic. Therefore, the general objective of this study is to assess awareness and attitudes regarding dyslexia among primary school teachers in selected schools of Lalitpur Municipality. The findings may support curriculum planners in developing educational materials and serve as a reference for future research in this area.

METHODS

Descriptive cross-sectional study was used. A quantitative research method was employed. The study was conducted in 30 public primary schools in Lalitpur Municipality. The target population included all full-time teachers teaching primary-level students. A multistage cluster sampling method was used to select the participants. First, a random selection of 30 schools was made from the 40 available public schools. Proportional sampling was then used to select 180 teachers, ensuring representation from all selected clusters. Ethical approval was obtained from Institutional Review Committee of Tribhuvan University, Institute of Medicine with ref.no 122/(6-11) E²/076/077. Prior to data collection written official letter was obtained from the administrative authority of district education office Lalitpur ref no344 and selected public schools of Lalitpur. Data collection was conducted using a self-administered questionnaire in the presence of researchers by maintaining anonymity from September 1 to 28, 2019. Self-developed questionnaire for awareness and modified tool for attitude was used. Adequate awareness and inadequate aware on the basis of median score that is more than 50 % is aware and less than 50 % is unaware.² The higher score > 45 indicates positive attitude < 45 indicate negative attitude as mean was taken due to symmetrical data.¹³

The instrument was validated through expert reviews and pretested in a similar setting with 18 sample size. The data were analyzed using descriptive statistics to assess the socio-demographic characteristics, awareness, and attitude levels. Associations between demographic factors and awareness/attitude levels were tested using chi-square tests.

RESULTS

Among the 180 respondents, 47.2% were aged between 40-49 years, and 96% were female. Most respondents (86.1%) followed Hinduism, and 52.2% belonged to the Brahmin/Chhetri ethnic group (Table 1). Nearly half (44.4%) had between 21-30 years of teaching experience, and nearly all (90%) taught multiple grades and subjects (Table 2).

Most of the respondents (88.3%) had adequate awareness regarding dyslexia. However, gaps were noted in specific areas; for instance, 50% of respondents were unaware that hearing and visual impairments do not cause dyslexia (Table 3).

More than half (53.9%) of the teachers exhibited a positive attitude towards dyslexia. However, misconceptions remained: 46.7% disagreed with the notion that dyslexia could be caused by poor home environments, while 30% strongly disagreed with the myth that dyslexia is a curse (Table 4).

Table 1: Socio-demographic Characteristics of the Respondents (n=180)

Characteristics	Number	Percentage
Age group (completed years)		
20-29	11	6.1
30-39	53	29.4
40-49	85	47.2
50-59	31	17.2
Mean ± SD: 45.1 ± 7.5		
Sex		
Female	173	96.0
Male	7	4.0
Education Level		
SLC/SEE	21	11.7
Intermediate	62	34.4
Bachelor	69	38.3
Master	28	15.6
Ethnic group		
Brahmin/Chhetri	94	52.2
Janjati	74	41.1
Dalit	7	3.9
Others	5	2.8
Religion		
Hinduism	155	86.1
Buddhism	25	13.9
Marital Status		
Married	171	95.0
Unmarried	9	5.0

Below half (47.2%) were from the age group 40-49 years, among them, almost all (96%) were female and married (95%). More than half (52.2%) identified as Brahmin or Chhetri and most of (86.1%) them adhered to Hinduism. Regarding

education, 38.3% had elementary level education (Table 1).

Table 2: Respondents' Work-related Characteristics (n: 180)

Characteristics	Number	Percentage
Experience (in years)		
1-10	21	11.7
11-20	37	20.4
21-30	80	44.4
>30	42	23.3
Mean ± SD: 2.7 ± 0.9		
Mostly involved teaching area		
> 1 class (1-5)	162	90
One class	1	0.6
Two class	3	1.8
Three class	8	6.4
Four class	5	2.8
Five class	1	0.6
Teaching subject		
More than one subject	108	60
Nepali	5	2.8
English	19	10.6
Maths	16	8.9
Others	32	17.8
Related training		
	1	0.6

Out of 180 respondents, nearly half of the respondents (44.4%) had 21-30 years teaching experience. Among them almost all (90%) were teaching in all grades, similarly more than half (60%) were teaching all the subjects. Regarding training only one (0.6) had obtained training (Table 2).

Table 3: Respondents' Awareness Regarding Dyslexia (n= 180)

Statements	Correct	Incorrect	Don't know
	No. (%)	No. (%)	No. (%)
Dyslexia is a learning disability that affect language processing	93(51.7)	18(10)	69(38.3)
Dyslexia is a reading disorder due to vision or hearing problem.	90(50)	63(35)	27(15.0)
Dyslexia has problems in reading the letters of the word.	134(74.4)	24(13.3)	22(12.2)
Dyslexia has difficulty in Maths solutions.	138(76.7)	24(13.3)	22(12.2)
Dyslexia is difficulty in learning and remembering printed words.	148(82.2)	20(11.1)	12(6.7)
Dyslexia has difficulty in reading and writing on reversal of letters or sequences of letters, or mirror writing, reads or writes b as d, or p as q, bad as dad etc.	152(84.4)	13(7.2)	15(8.3)
Dyslexia has difficulty in understanding what he reads comprehensively.	146(81.1)	26(14.4)	8(4.4)
Dyslexia has repeated spelling errors.	155(86.1)	17(9.4)	8(4.4)
Dyslexia is difficulty in speaking the right word when speaking.	115(63.9)	58(32.6)	6(2.8)
In Dyslexia may be late in learning right and left and other directionality components such as up-down, front behind, east west, etc.	134(73.9)	25(13.9)	21(11.7)
Problems in learning the concepts of time and temporal sequencing, i.e. yesterday-tomorrow, days of the week, etc.	120(66.7)	41(22.8)	19(10.6)
Students with dyslexia feel different from their peers.	115(63.4)	49(26.7)	16(8.9)
Approximately one in eight children in a classroom have dyslexia	98(54.4)	52(28.9)	30(16.7)
Students with dyslexia worry about what people think of them.	90(50)	59(32.8)	31(17.2)
Early intervention has great impact on students with dyslexia	143(80)	15(8)	22(12.0)
The most effective intervention strategies for student with dyslexia, is focused on their self-concept and self-esteem	162(90)	14(7.8)	4(2.2)

Table 3 shows that majority of the respondents were aware about dyslexia. Among them, more than half (51.7%, 50%) incorrectly answered about language process and hearing and visual impairment. Most of them (74.4%) knew about difficulty reading words is dyslexia d. Similarly, most of the respondents (84.4,81.1,86.1%) were aware that dyslexia is difficult in reverse words to read, understand and repeat spelling error. Half

of them (50%) were aware about the incidence of dyslexia. Most of them (90%) were aware of intervention strategies used in dyslexia (Table 3).

Table 4: Respondents' Attitude Regarding Dyslexia (n =180)

Statements	SA	A	U	D	DS
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
I think dyslexia is a curse	7(3.9)	23(12.8)	12(6.7)	84(46.7)	54(30.0)
Dyslexic students often do not succeed as adults	8(4.4)	45(25.0)	17(9.4)	88(48.9)	22(12.2)
Dyslexic students have low ability	15(8.3)	66(36.1)	17(9.4)	65(36.1)	17(9.4)
Dyslexic students have below average intelligence	13(7.2)	81(45.0)	13(7.2)	67(37.3)	6(3.3)
Dyslexic students are likely to be unmotivated because of delayed intervention.	25(13.9)	108(60.0)	15(8.3)	28(15.6)	4(2.2)
Dyslexia is a hereditary	6(3.3)	39(21.7)	46(25.6)	67(37.2)	22(12.2)
Physician can prescribe medication to help for dyslexic student	4(2.2)	34(18.9)	26(14.4)	95(52.8)	21(11.7)
Teacher cannot improve the dyslexic student	4(2.2)	33(18.3)	11(5.1)	104(57.8)	28(15.6)
Multisensory instruction can be useful for student with dyslexia to learn	44(24.4)	130(72.2)	2(1.1)	2(1.1)	2(1.1)
Dyslexia is caused by a poor home environment/poor reading instruction.	22(12.2)	80(44.4)	10(5.6)	56(31.1)	12(6.7)
Pupils with dyslexia suffer social isolation.	22(12.2)	118(65.6)	13(7.2)	26(14.4)	1(0.6)
I feel more training should be given to teachers about dyslexia	44(24.2)	40(22.0)	-	64(35.2)	32(17.6)
The high number of students in the class reduces the opportunity for early intervention.	29(16.1)	117(65.0)	4(2.2)	26(14.4)	4(2.2)
Appropriate classroom rewards should be provided to enhance self-concept and self-esteem.	15(8.2)	10(5.5)	5(2.5)	132(72.6)	18(9.9)
There is a lack of cooperation from parent(s) in delivering early intervention	35(19.4)	77(42.8)	12(6.7)	52(28.9)	4(2.2)
All classes should be dyslexic friendly	33(18.1)	47(25.8)	1(0.6)	58(17.6)	41(22.5)

SA-Strongly Agree A-Agree U-Undecided D-Disagree DS-Disagree Strongly

Below half (46.7%) disagreed with the misconception that dyslexia is a curse. Nearly half (48.9%) also disagreed that dyslexic students often do not succeed as adults. Responses were mixed on whether dyslexic students have low ability or below average intelligence. Over half (57.8%) disagreed with the belief that teachers cannot help dyslexic students. A large majority

(72.2%) agreed that multisensory instruction is effective for teaching students with dyslexia. Less than half believed dyslexia is hereditary or caused by poor home environments. Only a small percentage (24.2%) strongly agreed that more training should be given to teachers about dyslexia (Table 4).

Table 5: Association between Level of Awareness Regarding Dyslexia and Selected Socio-demographic Characteristics (n=180)

Variables	Levels of Awareness		χ^2	p-value
	Adequate No.(%)	Inadequate No.(%)		
Age group (in years)				
< 40	29(16.1)	3(1.6)		0.105*
≥ 40	130(72.2)	18(10.0)		
Ethnic group				
Brahmins /Chhetri	85(47.2)	9(5.0)	0.836	0.361
Others	74(41.1)	12(6.6)		
Religion				
Hinduism	140(77.7)	15(8.3)	0.085	0.049
Buddhism	19(10.5)	9(5.0)		
Educational status				
Up to proficiency	77(42.7)	6(3.3)	2.943	0.086
Above proficiency	82(45.5)	15(8.3)		
Marital status				
Married	152(84.4)	19(10.5)		0.283*
Unmarried	7(3.8)	2(1.1)		
Experience (in years)				
< 21	58(32.2)	7(3.8)	0.080	0.778
≥ 21	101(56.1)	14(7.7)		
Class teaching				
All the classes	118(65.5)	44(24.4)		4.047*
Specific class	17(9.4)	1(0.5)		
Subject teaching				
All the subject	80(44.4)	28(15.5)	0.123	0.725
Specific subject	55(30.5)	17(9.4)		

Significance level at 0.05. *Fisher's exact test

Table 5 presents the association between teachers' level of awareness regarding dyslexia and their socio-demographic characteristics. Among the variables analyzed, religion showed a statistically significant association with awareness levels ($p:0.049$), indicating that respondents' religious background may influence their level of awareness. Specifically, a higher proportion of Hindu respondents had adequate awareness compared to Buddhist respondents.

Other variables such as age, ethnic group, educational status, marital status, years of

experience, class taught, and subject taught did not show statistically significant associations ($p > 0.05$), suggesting these factors had no meaningful impact on awareness levels in this sample.

Table 6 shows that there was statistically significant association between level of attitude with age and level of education. Other variables like ethnic group, class teaching, subject teaching and marital status had no significant association with level of attitude on the basis of higher score more than 45 indicate positive attitude less than 45 indicate negative attitude.

Table 6: Association between Level of Attitude Regarding Dyslexia and Selected Socio-demographic Characteristics (n=180)

Variables	Levels of Attitude		χ^2	p-value
	Positive No. (%)	Negative No. (%)		
Age group (in years)				
> 40	25(13.8)	7(3.8)	9.200	0.002*
≥ 40	72(40.0)	76(42.2)		
Ethnic group				
Brahmin/Chhetri	34(18.8)	29(16.1)	0.000	0.987
Others	63(35.0)	54(30.0)		
Religion				
Hinduism	71(39.4)	84(46.6)	0.042	0.838
Buddhism	12(6.6)	13(7.2)		
Educational status				
Below Bachelor	34(18.8)	49(27.2)	10.355	0.001*
Up to Bachelor	63(35.0)	34(18.8)		
Experience (in years)				
< 20	37(20.5)	28(15.8)	0.377	0.539
≤ 20	60(33.3)	55(30.5)		
Involved classes				
All the classes	64(35.5)	44(24.4)	0.022	0.881
Specific class	33(18.3)	39(21.6)		
Subject teaching				
All the subject	87(48.3)	75(41.6)	3.134	0.077
Specific subject	10(5.5)	8(4.4)		

*Significance level at 0.05

DISCUSSION

The current study highlights a notable awareness of dyslexia among primary school teachers in Lalitpur. However, significant gaps persist in their understanding of its causes and characteristics. This finding aligns with previous research conducted in other low- and middle-income contexts, which often report similar inconsistencies between general awareness and specific knowledge of dyslexia.^{14,15}

For instance, a study by Aladwani and Al Shaye¹⁶ in Kuwait found that while teachers generally recognized dyslexia as a learning difficulty, many held misconceptions, such as believing it stemmed from sensory impairments. Similarly, the current study revealed that approximately 50% of teachers mistakenly believed dyslexia is

related to hearing or visual problems, reinforcing the global trend of confusion between dyslexia and general learning or sensory disorders.

Furthermore, the negative attitudes observed in more than half of the respondents mirror findings from studies in other South Asian contexts. For example, in a study conducted in India, Ramaa reported that teachers often viewed students with dyslexia as lazy or inattentive, attributing the condition to parental negligence or socioeconomic background.¹⁷ This corresponds with our finding that a significant minority of teachers perceived dyslexia as a consequence of a poor home environment or even as a curse highlighting the influence of cultural beliefs and a lack of targeted professional training.

The persistence of such misconceptions, despite an overall awareness of dyslexia, underscores the

need for enhanced teacher training programs. Studies in Nigeria and Ghana have shown that professional development focused specifically on learning disabilities significantly improves teachers' attitudes and knowledge.¹⁸ Therefore, similar interventions could be beneficial in Lalitpur to bridge the knowledge gap and promote inclusive education practices.

CONCLUSION

Although awareness of dyslexia among primary school teachers in Lalitpur is encouraging, persistent knowledge gaps must be addressed. Incorporating structured professional development programs focusing on learning disabilities like dyslexia is essential. Such efforts can enhance teachers' capacities to provide inclusive education, reduce stigma, and ultimately improve educational outcomes for children with dyslexia.

ACKNOWLEDGEMENT

I extend my heartfelt gratitude to Tribhuvan University Institute of Medicine Maharajgunj Nursing Campus for providing the opportunity to conduct this study. I am also grateful to the District Education Office, Lalitpur, and the teachers who participated in this study.

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