

Sociodemographic Factors and Primary School Teachers' Awareness of Dysgraphia in Some Schools in Lagos State

Elizabeth Similoluwa Aremu

earemu@unilag.edu.ng

Department of Educational Foundations

University of Lagos

Abiodun Taofikat Adewunmi, Ph.D.

Department of Special Education

University of Ibadan

passionsabbey37@yahoo.com

Kehinde Clement Ademakinwa

Nigerian Army College of Nursing

Lagos, Nigeria

adekennyc@gmail.com

and

Olaide Hannah Kosnoedo

Lagos State University Staff School

Lagos, Nigeria

tolulopeolaide8@gmail.com

Abstract

This study investigated the relationship between sociodemographic factors and the awareness of dysgraphia among primary school teachers. Dysgraphia is a learning disability characterised by significant difficulties in handwriting skills and unfortunately, pupils with this disability are frequently misdiagnosed and mismanaged due to a number of reasons which revolve around the lack of awareness of dysgraphia among school teachers and this consequently results in negative outcomes on the pupils' academic and psychological wellbeing hence the need for this study. A descriptive survey design was employed, sample consisted of 191 teachers from randomly selected public and private primary schools in Lagos State. Data was gathered using a validated questionnaire comprising sociodemographic information and dysgraphia awareness assessment. The findings indicated a relatively low level of dysgraphia awareness among primary school teachers in Lagos State. Although 89% claimed awareness of dysgraphia as a learning disability, the average

responses revealed higher unawareness (64.75%) compared to awareness (35.26%). The study tested five hypotheses related to sociodemographic factors' impact on dysgraphia awareness. It found no significant relationship between gender, academic qualification, grade level of instruction, and dysgraphia awareness. However, significant associations were observed between dysgraphia awareness and school type (public or private) and years of teaching experience. Private school teachers and those with more teaching experience demonstrated higher dysgraphia awareness. This study recommends the implementation of in-service and pre-service training programs for teachers, the organisation of awareness programs on dysgraphia, and the consideration of teaching experience in interventions and professional development related to dysgraphia.

Keywords: *Academic qualification, Dysgraphia, Grade level of instruction, Primary school teachers, Sociodemographic factors*

Introduction

Dysgraphia is one of the three most common learning disabilities, alongside dyslexia and dyscalculia that is characterised by difficulties in handwriting, including speed, precision, and fine motor skills (Chung, Patel and Nizami, 2020; Eyo and Nkanga, 2020). It is a neurological deficit that affects the brain's ability to process written information and execute writing tasks. It often emerges during early childhood and can have significant impacts on a pupil's academic performance and psychological well-being.

It is important to note that dysgraphia, like other learning disabilities, is not caused by mental or intellectual retardation (Eseyin, 2021). Instead, according to the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5), it is a persistent impairment that affects the mechanics and execution of writing skills regardless of the quality of information or instruction the pupil is exposed to. Dysgraphia can manifest in various ways, including difficulties with handwriting legibility, letter formation, spelling, writing precision, and speed. Children with dysgraphia may exhibit symptoms such as adopting odd body positions while writing, mixing up letter cases, illegible handwriting, difficulty expressing thoughts in writing, and frequent spelling errors (Chung, Patel and Hizami, 2020). These difficulties can have negative consequences, including poor writing ability, academic underachievement, susceptibility to bullying, poor psychological adjustment, and emotional distress (Feder and Majnemer, 2007). It is crucial to provide specialised assistance and support to pupils with dysgraphia through early identification, assessment, appropriate accommodations, and instructional modifications, to improve their academic performance, psychological well-being, and overall outcomes (Berninger and May, 2011; Chung, et al., 2020). Failure to effectively manage dysgraphia can result in persistent symptoms and undesirable outcomes extending into adulthood.

Role of Teachers

While early identification and effective accommodations are crucial for managing dysgraphia, the awareness and understanding of this condition among primary school teachers play a vital role in providing appropriate support to affected students.

Teachers play a crucial role in identifying and supporting students with dysgraphia. They are often the first to observe learning difficulties and can provide early intervention. However, studies have shown that teachers often misunderstand dysgraphia, leading to mismanagement and negative outcomes for affected students (Crouch and Jakubecy, 2007). Students struggling with writing tasks are sometimes labelled as lazy or slow writers, and the necessary accommodations and resources for their support are not provided (Chung, et al, 2020). This lack of awareness and understanding of dysgraphia among teachers can contribute to suboptimal writing and academic performance as awareness of dysgraphia among primary school teachers is crucial for early identification and effective support for students who may be struggling with writing tasks.

Studies have explored various aspects of dysgraphia, including teachers' knowledge of the concept of dysgraphia and accommodations for teaching pupils with dysgraphia. Orim, Ewa, Oayi, Ndifon, Ogar, Igba and Unimuke (2018) noted that all pupils in schools including those with dysgraphia should be provided access to quality instruction and awareness of dysgraphia and learning accommodations by teachers is essential. Chang, Sung and Chen (2012) suggested the use of concept mapping to enhance the writing abilities of pupils and Obatta, Adama, and Onu (2020) further stressed on the appropriate use of scaffolding strategy to enhance the writing abilities of adolescents with dysgraphia. Agamugoro, John-Ekaba, and Apene (2023) revealed that the perception of teachers regarding learners with dysgraphia has significant effects on the academic performance of the learners and it further recommended that learners with dysgraphia should be provided counselling and therapeutic attention to enhance their performance. A study by Fakolade, Adeniyi and Tella (2009) revealed that teachers' socio-demographic variables such as gender, marital status, and professional qualification influences their attitudes towards learners with special needs especially with female teachers manifesting a more positive attitude toward learners with special needs in the regular classroom.

However, there are gaps in the existing research. Many studies have focused on specific regions, neglecting comprehensive coverage of areas such as Lagos State, many studies have been carried out on the knowledge, awareness, and management of learning disabilities and dyslexia with very few studies on the concept of dysgraphia. In the same vein, previous studies have often emphasised therapies and instructional strategies, overlooking the importance of sociodemographic factors in relation to dysgraphia awareness.

This study aims to address the research gap by investigating the relationship between sociodemographic factors and primary school teachers' awareness of dysgraphia. By examining factors such as gender, type of school, years of teaching experience, academic qualification, and grade level of instruction, the study seeks to identify any significant associations with teachers' awareness of dysgraphia. The findings of this study will inform the development of targeted awareness programs, professional development initiatives, and

policy interventions aimed at improving the identification, support, and management of dysgraphia in primary schools in Lagos State and Nigeria as a whole.

Research Question

The primary research question addressed in this study sought to understand the extent of awareness regarding dysgraphia among regular teachers in Lagos State.

Hypotheses

Five hypotheses were also formulated for analysis, each tested at a significance level of .05:

Hypothesis 1: There is no statistically significant relationship between gender and the level of dysgraphia awareness among regular school teachers.

Hypothesis 2: There is no statistically significant relationship between school type and the level of dysgraphia awareness among regular school teachers.

Hypothesis 3: There is no statistically significant relationship between years of teaching experience and the level of dysgraphia awareness among regular school teachers.

Hypothesis 4: There is no statistically significant relationship between the level of academic qualification and the level of dysgraphia awareness among regular school teachers.

Hypothesis 5: There is no statistically significant relationship between the grade level of instruction and the level of dysgraphia awareness among regular school teachers.

Methodology

The study adopted a descriptive survey research method. The study randomly sampled 191 teachers from 6 randomly selected regular public schools and 6 randomly selected regular private primary schools in Lagos State. Data was collected using the Awareness of Dysgraphia Questionnaire (ADQ) which was validated by experts in the field of special education and its reliability was established with a Cronbach alpha score of 0.83. the questionnaire consisted of two parts, the first part gathered the socio-demographic information of the sample, and the second part tested the level of awareness of dysgraphia of the study sample. The instrument was retrieved, and an examination of sociodemographic data was conducted employing the descriptive approach, specifically utilising percentages as the analytical method. Furthermore, the hypothesis was subjected to empirical scrutiny by applying the Pearson product-moment correlation analysis at a significance level of 0.05. The sociodemographic data of the study sample is presented in Table 1.

Table 1: Sociodemographic data of teachers that responded to the questionnaire (N= 191)

| Variable | N | % |
|--|-----|------|
| School type | | |
| Public schools | 127 | 66.5 |
| Private schools | 64 | 33.5 |
| Gender | | |
| Male | 53 | 27.7 |
| Female | 138 | 72.3 |
| Grade level of instruction | | |
| Nursery one | 23 | 12.0 |
| Nursery two | 19 | 9.9 |
| Basic one | 29 | 15.2 |
| Basic two | 32 | 16.8 |
| Basic three | 36 | 18.8 |
| Basic four | 15 | 7.9 |
| Basic five | 17 | 8.9 |
| Basic six | 20 | 10.5 |
| Years of experience | | |
| 0 – 5 years | 13 | 6.8 |
| 6 – 10 years | 29 | 15.2 |
| 11 – 15 years | 63 | 33.0 |
| 16 – 20 years | 41 | 21.5 |
| 21 years and above | 45 | 23.6 |
| Level of academic qualification | | |
| SSCE | 1 | 0.5 |
| NCE | 40 | 20.9 |
| OND | 5 | 2.6 |
| B.Sc./B.Ed. | 59 | 30.9 |
| M.Sc./M.Ed. | 86 | 45.0 |

The analysis of the sociodemographic data indicates that most participants in the study were female teachers (138), accounting for 73.3% of the sample, while male teachers (53) comprised 27.7% of the participants. Regarding school type, regular public primary school teachers (127) constituted a larger proportion of the study sample at 66.5%, whereas regular

private school teachers (64) accounted for 33.5% of the participants. Examining the grade levels of instruction, regular teachers of the basic three classes had the highest representation among the participants (36), with 18.8% of the sample belonging to this category. In terms of teaching experience, the distribution of teachers across different experience categories was balanced. Analysing the level of academic qualification, the study revealed that the highest proportion of teachers held an M.Sc./M.Ed. degree (86), constituting 45.0% of the participants. This was followed by teachers with a B.Sc./B.Ed. degree (59), comprising 30.9% of the sample, and those with NCE (Nigeria Certificate in Education) qualification (40), making up 20.9% of the participants. These findings contribute to the understanding of the composition of the study sample which provides the basis for further analysis and interpretation of the research findings.

Results

Table 2: Level of awareness about dysgraphia among regular teachers in Lagos State

| S/N | Questions | Aware | Unaware |
|------------------|--|---------------|---------------|
| 1 | I am aware of dysgraphia as a learning disability | 89% | 11% |
| 2 | Poor handwriting is a symptom of dysgraphia | 18.8% | 81.2% |
| 3 | Adopting odd body positions while writing is a sign of dysgraphia | 35.6% | 64.4% |
| 4. | Mixing up of upper and lower cases of letters when writing is a sign of dysgraphia | 38.2% | 61.8% |
| 5. | Experiencing anxiety during writing activities is a sign of dysgraphia | 62.3% | 37.7% |
| 6. | Poor attention span is an indication of dysgraphia | 26.7% | 73.3% |
| 7. | Struggling to complete writing tasks is an indication of dysgraphia | 48.2% | 51.8% |
| 8. | Omission of letters and words while writing is a sign of dysgraphia | 33.5% | 66.5% |
| 9. | Dysgraphia is not an intellectual impairment | 23.0% | 77% |
| 10. | Pupils with dysgraphia can have average to high intelligence levels | 61.8% | 38.2% |
| 11. | Pupils with dysgraphia can perform optimally in regular schools | 29.3% | 70.7% |
| 12. | Pupils with dysgraphia often excel in science, music arts, and other educational fields | 30.4% | 69.6% |
| 13. | Dysgraphia can lead to social and emotional problems | 48.7% | 51.3% |
| 14. | Dysgraphia can be diagnosed using a standardized assessment test | 53.4% | 46.6% |
| 15. | Early diagnosis is important for pupils with dysgraphia | 25.1% | 74.9% |
| 16. | Dysgraphia can result in poor academic performance | 27.7% | 72.3% |
| 17. | Pupils with dysgraphia require special educational provisions to improve their performance | 29.8% | 70.2% |
| 18. | Dysgraphia can only be managed and not cured | 29.3% | 70.7 |
| 19. | Dysgraphia in pupils can persist into adulthood if not managed properly | 33.0% | 67.0% |
| 20. | Dysgraphia is not a cause or result of physical handicap | 22.5% | 77.5% |
| Average = | | 35.26% | 64.75% |

The findings reveal a significant lack of awareness of dysgraphia among primary school teachers in Lagos State. While a substantial majority (89%) of the participating teachers

asserted their awareness of dysgraphia as a learning disability, a more detailed examination of their knowledge revealed a considerably higher prevalence of unawareness (64.75%) in contrast to awareness (35.26%). This outcome implies that only approximately one-third of the sampled teachers demonstrated a sufficient level of familiarity with dysgraphia, indicating a significant gap in their knowledge. This finding is in tandem with the findings of Orim, et. al (2021) that states that teachers in Nigeria lack adequate knowledge of the strategies for accommodation and assessments of learners with dysgraphia which affects their competency in teaching pupils with dysgraphia.

Table 3: Relationship between gender and the level of dysgraphia awareness among regular schoolteachers

| | | Awareness | Teacher's Gender |
|-------------------------|---------------------|-----------|------------------|
| Awareness | Pearson Correlation | 1 | -.110 |
| | Sig. (2-tailed) | | .130 |
| | N | 191 | 191 |
| Teacher's Gender | Pearson Correlation | -.110 | 1 |
| | Sig. (2-tailed) | .130 | |
| | N | 191 | 191 |

The findings reveal that the correlation coefficient between the level of dysgraphia awareness and the teacher's gender is -0.110. The p-value associated with this correlation is 0.130, which is not statistically significant at a significance level of 0.05. Thus, we accept the null hypothesis that states that 'there is no statistically significant relationship between gender and the level of dysgraphia awareness among regular schoolteachers.' However, it is important to note that Fakolade (2009) and Alquraini (2012) reported a significant relationship between gender and teachers' knowledge and attitudes towards disabilities, including dysgraphia. Specifically, female teachers have been found to possess greater awareness and more positive attitudes towards disabilities as compared to male teachers. Therefore, the non-significant finding in this study calls for further research to explore the relationship between gender and dysgraphia awareness among teachers.

Table 4: Relationship between school type and the level of dysgraphia awareness among regular schoolteachers

| | | Awareness | Type of school |
|-----------------------|---------------------|-----------|----------------|
| Awareness | Pearson Correlation | 1 | -.193** |
| | Sig. (2-tailed) | | .008 |
| | N | 191 | 191 |
| Type of School | Pearson Correlation | -.193** | 1 |
| | Sig. (2-tailed) | .008 | |
| | N | 191 | 191 |

**. Correlation is significant at the 0.05 level (2-tailed).

The findings reveal that the correlation coefficient between the level of dysgraphia awareness and the type of school is -0.193. The p-value associated with the correlation coefficient is 0.008, which is lower than the significance level of 0.05. Thus, the null hypothesis which states that there is no statistically significant relationship between school type and the level of dysgraphia awareness among regular schoolteachers is rejected as the study reveals that there is a statistically significant relationship between school type and the level of dysgraphia awareness among regular schoolteachers.

This finding supports the work of Obatta, et al. (2020) who found that differences in teaching characteristics, methods, and strategies, exist between different types and locations of schools due to variations in available resources and training opportunities. Teachers in private schools may have greater exposure to resources and training on disabilities, leading to higher awareness of dysgraphia as compared to teachers in public schools.

Table 5: Relationship between years of teaching experience and the level of dysgraphia awareness among regular schoolteachers

| | | Awareness | Years of Teaching Experience |
|------------------------------|---------------------|-----------|------------------------------|
| Awareness | Pearson Correlation | 1 | -.160* |
| | Sig. (2-tailed) | | .027 |
| | N | 191 | 191 |
| Years of Teaching Experience | Pearson Correlation | -.160* | 1 |
| | Sig. (2-tailed) | .027 | |
| | N | 191 | 191 |

*. Correlation is significant at the 0.05 level (2-tailed).

The findings reveal that the correlation coefficient between the level of dysgraphia awareness and years of teaching experience is -0.160. The p-value associated with this correlation is 0.027, which is statistically significant at a significance level of 0.05. Thus, the null hypothesis which states that there is no statistically significant relationship between years of teaching experience and the level of dysgraphia awareness among regular schoolteachers is rejected as the study reveals that there is a statistically significant relationship between years of teaching experience and the level of dysgraphia awareness among regular schoolteachers. This finding aligns with the assertion of Gerber (2005) that teachers' perceptions are influenced by their responsiveness to learning and their teaching experience. Teaching pupils with dysgraphia over time can serve as a valuable learning resource for teachers, enhancing their awareness of the disability. However, this finding contradicts the findings of Woolfson and Brady (2009), who found no significant relationship between teacher experience and knowledge of learning disabilities.

Table 6: Relationship between the level of academic qualification and the level of dysgraphia awareness among regular schoolteachers

| | | Teacher's Level of Academic Qualification | |
|---|---------------------|---|------|
| | | Awareness | |
| Awareness | Pearson Correlation | 1 | .057 |
| | Sig. (2-tailed) | | .437 |
| | N | 191 | 191 |
| Teacher's Level of Academic Qualification | Pearson Correlation | .057 | 1 |
| | Sig. (2-tailed) | .437 | |
| | N | 191 | 191 |

The findings reveal that the correlation coefficient between the level of dysgraphia awareness and the teacher's level of academic qualification is 0.057. The p-value associated with this correlation is 0.437, which is not statistically significant at a significance level of 0.05. Thus, the null hypothesis which states that there is no statistically significant relationship between the level of academic qualification and the level of dysgraphia awareness among regular schoolteachers is accepted. This finding is consistent with the findings of Woolfson and Brady (2009), who found that teacher professional development training does not have a significant relationship with teachers' knowledge and attitudes towards learning disabilities.

Table 7: Relationship between the grade level of instruction and the level of dysgraphia awareness among regular school teachers

Correlations

| | | Grade Level of Instruction | |
|----------------------------|---------------------|----------------------------|------|
| | | Awareness | |
| Awareness | Pearson Correlation | 1 | .008 |
| | Sig. (2-tailed) | | .908 |
| | N | 191 | 191 |
| Grade Level of Instruction | Pearson Correlation | .008 | 1 |
| | Sig. (2-tailed) | .908 | |
| | N | 191 | 191 |

The findings reveal that the correlation coefficient between the level of dysgraphia awareness and the grade level of instruction is 0.008. The p-value associated with this correlation is 0.908, which is not statistically significant at a significance level of 0.05. Thus, the null hypothesis which states that There is no statistically significant relationship between the grade level of instruction and the level of dysgraphia awareness among regular schoolteachers is accepted. This finding aligns with the findings of Alquraini (2012), who also found no significant relationship between the grade level taught and teachers' perceptions of disability, including dysgraphia. Therefore, the grade level of instruction

does not appear to influence the level of dysgraphia awareness among regular schoolteachers, suggesting that their awareness of dysgraphia is not dependent on the specific grade level they teach.

The summary of the findings of the study simply indicates that the study found a significant relationship between school types (i.e., private, or public schools), years of teaching experience, and regular teachers' awareness of dysgraphia. However, the study revealed that there is no significant relationship between the regular teachers' gender, level of academic qualification, grade level of instruction, and level of dysgraphia awareness.

Conclusion

Enhancing primary school teachers' awareness of dysgraphia is crucial for early identification and appropriate support for students with this learning disability. The study emphasised the need for adequate provision of in-service and preservice training programs to teachers about learning disabilities and dysgraphia. It also emphasises the need for the government and relevant stakeholders to organise awareness programs on dysgraphia in schools and through other audio-visual technologies. This finding also highlights the importance of considering teaching experience when designing interventions and professional development programs related to dysgraphia.

Recommendations

To address the crucial issue of dysgraphia awareness among regular schoolteachers, This study recommends a multifaceted approach. Firstly, it is imperative for the government to engage in collaborative efforts with school administrators and special education experts. Together, they can formulate and implement effective strategies and policies aimed at enhancing dysgraphia awareness among teachers across various school settings. Public schools should allocate sufficient resources and prioritise initiatives such as in-service training and professional development programs designed to bolster the knowledge of regular school teachers concerning dysgraphia. Moreover, fostering mentoring programs and encouraging collaborations between seasoned educators and novices can prove invaluable in disseminating knowledge and elevating dysgraphia awareness among teaching professionals. Additionally, educational stakeholders and non-governmental organisations should unite in organising specialised training sessions tailored to the needs of regular schoolteachers, regardless of their current academic or professional qualifications. These training programs should focus on delivering comprehensive insights into dysgraphia, encompassing its characteristics and the diverse ways it manifests in students' writing capabilities. By elevating teachers' awareness of these symptoms, they will be better equipped to identify and provide timely support to students grappling with dysgraphia.

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