SOCIOMETRY | RESEARCH ARTICLE

An exploration of primary caregivers’ knowledge of dyslexia, awareness of the problems, and supports for elementary school children in Nigeria

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Abstract: Dyslexia is a lifelong disability that affects learning and social interaction in people of all ages, genders, and races all over the world. Yet, little is known about this condition in low- and middle-income countries. This study aims to investigate primary caregivers’ knowledge of dyslexia, their awareness of problems, and their support for elementary school children in Owerri Municipal, Nigeria. A qualitative descriptive design was utilized in this investigation, and 18 participants were invited to a single in-depth semi-structured interview. Thematic analysis was utilized in analyzing the data. Three themes and nine sub-themes emerged from the study. The result shows that participants lacked adequate knowledge of dyslexia, were aware of the effects of the condition and had adopted a variety of management and coping strategies. Participants’ support for children with dyslexia was found to be inadequate. The findings of this study have the potential to influence special education policy and programs in Nigeria, especially in the aspects of promoting

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PUBLIC INTEREST STATEMENT

Dyslexia is a lifelong disability that affects learning and social interaction in people of all ages, genders, and races all over the world. Yet little is known about it in the African context compared to other disabilities like vision loss, physical impairment, etc. Worse still, the experiences of parents as primary caregivers are hardly captured in African literature. Utilizing a qualitative descriptive inquiry, in-depth interviews were conducted with 18 primary caregivers comprising parents and teachers of elementary schools in a Nigerian town to explore views about their knowledge of dyslexia, their awareness of problems, and their support for elementary school children. Findings show that participants lacked adequate knowledge of dyslexia, were aware of the effects of the condition and had adopted a variety of management and coping strategies. Participants’ support for children with dyslexia was found to be inadequate. The study could potentially influence special education policies in Nigeria for more support and inclusivity among children living with dyslexia. See Table Appendix 2 to build up knowledge/ awareness of dyslexia.
social inclusion and the protection of the rights of students with special needs. The study recommends relooking at the National policy for special needs education in Nigeria to establish a more equitable and inclusive educational system.

Subjects: Education - Social Sciences; Educational Research; Inclusion and Special Educational Needs

Keywords: children; dyslexia; education; primary caregivers; special needs; Nigeria

1. Introduction

Dyslexia is a term often used by professionals to mean significant and persistent difficulties in reading, writing, and spelling (Schabmann et al., 2020; Snowling et al., 2020). The prevalence of dyslexia is between 5%-17% globally (Ozernov-Palchik & Gaab, 2016; Wagner et al., 2021). According to the International Classification of Disease (ICD-10), the prevalence of dyslexia ranges between 2%-4% among primary school children (Klicpera et al., 2017; World Health Organization, 2016). Some scholars estimated the prevalence of dyslexia among school-age children to be between 5%-10%; and they contend that dyslexia is more common in boys than in girls (Knight, 2018a; Arnett et al., 2017). As a lifelong disability, dyslexia occurs among people of ages, genders, and races, and its symptoms vary from person to person (Snowling, 2013). However, with appropriate support and interventions by parents and teachers as primary caregivers and identifiers (Noddings, 2012), dyslexia symptoms and their consequences can be managed (Skiada et al., 2014). Primary caregivers (henceforth referred to as caregivers) refer to parents and teachers of children with dyslexia (Wanders et al., 2020). This is because; they are the first to identify symptoms of dyslexia and other learning disabilities in a child, given their role as the primary agents of socialization (Wanders et al., 2020). Caregivers’ awareness of dyslexia has been identified as an important step in the treatment of dyslexia (Abd Rauf et al., 2018). Yet, the level of awareness among caregivers in low- and middle-income countries is still very low (Onyenochi, 2012).

It is expected that all pupils will master how to read, spell, and write when specific cognitive skills are acquired in early childhood education. This is, however, not always the case, as some children struggle to acquire skills in literacy and numeracy, even with adequate intelligence quotient (IQ), environment, and education (Chourmouziadou, 2016). Dyslexia has received increased global attention as a result of its impact on school-age children’s cognitive, mental health, and personality development. For example, most children with dyslexia have low self-esteem, poor academic performance, emotional instability, and other problems as a result of their classroom struggles with reading, writing, spelling, and worse still, the inability of parents, teachers, and peers to understand their challenges (Huang et al., 2020). Depression, anxiety, suicidal ideation, and increased antisocial behaviors are more common in school-aged children with dyslexia than in their peers without dyslexia (Fuller-Thomson et al., 2018; Karande & Venkataraman, 2012; Ludi et al., 2012), and it has negative implications on the quality of life (QOL) of such children. Karande and Venkataraman (2012) clarified this by asserting that the QOL of school-age children with a learning disability such as dyslexia is poor, and the greater severity of such specific (dyslexia) or generic (learning disability) is correlated with a poorer quality of life. Other effects of dyslexia on children include, but are not limited to, addiction and mental health problems (Macdonald & Stephen, 2015), behavioral issues (Huang et al., 2020), and poor self-concept (Huang et al., 2021). Because reading and writing are viewed as proxies for measuring intelligence, Yin et al. (2019, p. 2) summarized that “failure in learning to read and write has serious consequences for the individual, society, and the nation”.

Caregivers (parents & teachers) of children with dyslexia must have a clear plan and knowledge of these children’s needs, including those who may be at risk, as well as evaluate their (parents & teachers) methods to support and include challenged pupils (Snowling, 2013). This implies that
teachers should be well equipped with knowledge and skills to be able to identify and support children with dyslexia. However, (Su, 2018) reported that teachers do not receive adequate training to support children with dyslexia in many cases. Even though parents and teachers are not specialists with professional skills to diagnose cases of dyslexia, they must have apt knowledge of the condition so that they can easily identify and manage the symptoms before seeking professional help (Knight, 2018a). Research has shown the positive impact of early identification and intervention for children with dyslexia (Snowling, 2013). However, in most low- and middle-income countries such as Nigeria, mainstream teachers are inadequately prepared for such tasks because their training didn’t prepare them for such special situations (Onyenachi, 2012).

In Nigeria, for example, a study found that primary caregivers, especially parents of children with learning disabilities including dyslexia, experienced a variety of negative emotions, including fear, stigma, guilt, shame, and frustration (Chukwu et al., 2019). As a result, the caregivers resort to labeling, battering, and verbally abusing their children with dyslexia, with the belief that the children are lacking motivation or not trying hard enough in their academics. Chukwu et al. (2019) further aver that families are unable to support their children with dyslexia among other learning disabilities, and seeking professional interventions is both financially difficult and time-consuming for primary caregivers.

Shifrer (2013) presumed that parents’ and teachers’ negative feelings and attitudes toward children with dyslexia stem from a lack of understanding of the situation, as they perceive them in many ways including being “unintelligent”. To clarify this, Barkley (2015) averred that children with dyslexia often have average or above-average level intelligence despite persistent difficulty with classroom-related activities such as reading, writing, spelling, and math.

Studies on the awareness of learning disabilities are often generic. Only a handful of studies have specifically examined the awareness and knowledge about dyslexia (Makgato et al., 2022; Shetty & Rai, 2014; Washburn et al., 2013). While Elias (2014) reported that teachers in Australia had adequate knowledge of dyslexia, other studies reported that the teachers in India, United Kingdom, and United States of America had inadequate knowledge of the condition (Shetty & Rai, 2014; Knight, 2018b; Sacherer, 2014). In Korea, Han et al. (2015) found poor awareness of the condition, influenced by factors such as jobs, residence, gender, and personal experience with a person with dyslexia. Furthermore, Thompson (2013) reported that teachers in South Africa had adequate knowledge of dyslexia, although these teachers lacked adequate training to identify the condition among children. In Nigeria, Musa and Balami (2016) reported that with appropriate support, placement, and intervention, there would be some improvement in the reading level of children with dyslexia.

While dyslexia and its effects have been extensively researched in developed countries, the current and limited research in Africa has focused more on investigating the knowledge and awareness of teachers (Makgato et al., 2022; Onyenachi, 2012). These studies are therefore flawed as the experiences of parents- a primary agent of socialization are hardly captured in African literature. Further, no study has explored the awareness of the problems among primary caregivers (parents and teachers) and the support available for elementary school children with dyslexia in Africa. This study, therefore, adds to the ongoing conversation to explore (a) the primary caregivers’ knowledge of dyslexia among elementary school children and (b) their awareness of the problems, and support for elementary school children with dyslexia. If the findings of this study are adopted, they have the potential to identify gaps in primary caregivers’ knowledge and awareness of dyslexia to promote a better understanding of the condition, support, and inclusion.

2. Method
The researchers deployed a qualitative description design (Bradshaw et al., 2017; Sandelowski, 2000) to guide the data collection and analysis. In line with the researchers’ aim, methodological
scholars averred that a qualitative descriptive study aims to present an in-depth account of the experience or a phenomenon about which little is known (Bradshaw et al., 2017; Kim et al., 2017). The qualitative descriptive design enabled the researchers to describe participants’ perspectives on the knowledge and awareness and support for elementary school children with dyslexia. Data collection involved semi-structured interviews with primary caregivers in Owerri Municipal, Nigeria. The Research Ethics Review Board (Institutional Ethics Review Board, University of Nigeria, Nsukka) granted approval to conduct this study. Participants provided informed verbal/written consent before taking part in the study. The Consolidated Criteria for Reporting Qualitative Research (COREQ; Tong et al., 2007) was followed in reporting this study.

2.1. Study setting/recruitment
This research was carried out in three primary schools located in Owerri Municipal, Imo State, Nigeria. At the time of this study, entry-level primary education training in Nigeria was a 6-year program leading to the award of First School Leaving Certificate (FSLC), with students ranging in age from 6–13 years. Each school provided data of registered “parents of pupils” and “teachers” in their program, which sums up to a total of 901 primary caregivers. The researchers approached the school authorities to present the study at a Parent-Teachers Association (PTA) Meeting. Participants were recruited through non-probability sampling methods such as purposive, availability, and snowball technique. For instance, teachers were recruited using purpose and availability sampling based on the criteria of having a pupil with symptom/ at-risk of dyslexia. Through snowballing, teachers who participated in the study informed and provided contact information of eligible parents for the study.

2.2. Sampling
Study participants were selected through a criterion-based purposive sampling technique. Primary caregivers were included if they were (a) aged 18+, (b) identified as having a child/pupil with or at risk of dyslexia through the Advanced Assessment Dyslexia Screening Test, and (c) able to consent and communicate in English or Nigerian Pidgin English. The Advanced Assessment Dyslexia Screening Test (AADST) was administered to the participants to ascertain those with pupils at risk of dyslexia (International Dyslexia Association, 2014). A sample of 18 primary caregivers (9 parents, 9 teachers) was recruited (see, Appendix 1), which is within the recommended sample size for qualitative description study design (Sandelowski, 2000). The researchers stopped recruiting participants as they reached data saturation (information redundancy).

2.3. Data collection
Each participant was invited to a single, in-depth semi-structured interview. Before conducting the interviews, participants were informed of the study’s purpose and the risks and benefits of participating in the study. Respondents were also informed about confidentiality, anonymity, and their right to withdraw from the study at any time before or during the interviews. All participants provided either written or oral consent before the interview commenced. A pilot interview with two primary caregivers was conducted to reflect on the wording of the questions, reflect on how sensitive questions will be asked, and determine the appropriate timing for the interviews (data from this pilot were not included in the analysis). The interviews, which lasted for 40–45 minutes, were conducted in English, or Nigerian Pidgin English, and were audio-recorded. The primary researcher conducted the interviews using a semi-structured interview guide developed based on the study objectives (see, Appendix 1). Reflective and field observation notes were kept throughout the study to enhance the rigor of the study. For instance, “Subjective I’s”- the assumptions and the beliefs that the researchers brought into the research- were identified (Kalu, 2019), and how these assumptions may influence data collection and analysis were explained.

2.4. Data analysis
Data collection and analysis were done simultaneously. The interviews conducted in English were transcribed verbatim by two authors while the primary researcher who is fluent in both
English and Nigerian pidgin, transcribed and translated the 4 interviews conducted in Nigerian pidgin to English. To ensure that the data transcription to English was accurate, one author, who is also fluent in both English and Nigerian pidgin, did a final cross-check of the transcribed data, and then the researchers met two of the participants for validation of the transcribed data for trustworthiness. Codes from data were identified through thematic analysis. Two researchers independently read and re-read the transcript of one of the participants, identifying early themes and grouping the sub-themes (see, Table 1 for themes and sub-themes). While coding, the two researchers made notes of their observations, thoughts, and reflections as they read the transcript texts. A team meeting was arranged, during which both researchers discussed their findings and resolved the areas of disagreement. The themes and sub-themes extracted from the first analyzed transcripts were used to analyze subsequent transcripts; the researchers took note of emerging themes. Excerpts were chosen from the interviews to illustrate themes, and number codes were used as pseudonyms to replace identifying information of the participants. To improve the credibility of the study, two coders were employed at each stage of the analysis, as well as peer-member checking was done by all authors as they examined and provided feedback on the themes (Sandelowski, 2000; Tong et al., 2007). The NVivo® Software was utilized to manage data throughout the study.

2.5. Socio-demographics of the respondents
A total of 18 respondents were recruited from three schools in Owerri municipal in Imo State. Nine parents and nine teachers participated in the study. Twelve of the respondents were female while the other six were males. The age distribution of the respondents showed that respondents were within the age bracket of 18–46 years. Twelve of the respondents had University education; two had no formal education, while the other four had secondary education (Table 2). 16 of the respondents were married, while the remaining two were single. Both public and private schools participated in the study. Three major themes and nine associated sub-themes emerged from data that described primary caregivers’ knowledge of dyslexia, awareness of problems, and support for elementary school children (see, Table 1).

3. Results

3.1. Theme 1: caregivers’ perception of dyslexia
The primary caregivers in the study area appeared to have limited knowledge of dyslexia and they held negative perceptions of children with dyslexia. While the majority of the participants claimed to be hearing the term “dyslexia” for the first time and showed a willingness to know more about it, they do have some preconceived notions about children who struggle to cope with classroom

| Themes                                      | Sub-theme                                      |
|---------------------------------------------|-----------------------------------------------|
| Caregivers’ perception of dyslexia          | • Poor knowledge of dyslexia                  |
|                                             | • Misconceptions of dyslexia                  |
| Common symptoms of dyslexia                 | • Classroom difficulties experienced by children with dyslexia |
|                                             | • Behavioral issues                           |
|                                             | • Psychological trauma                        |
| Management and coping strategies            | • Incapacitation and poor support             |
|                                             | • Increased attention to children             |
|                                             | • Special education placement                 |
|                                             | • Religious coping                            |
activities such as reading, writing, and spelling. These perceptions frequently point to the child as the cause of their problem, with reinforcements used to change the child.

### 3.1.1. Poor knowledge of dyslexia

Findings show that participants had inadequate knowledge of the condition, with majority hearing the term “dyslexia” for the first time. While they acknowledge that intelligence differs, they were unable to explain why some children have difficulty putting ideas on paper, learning to read, and making many spelling mistakes among other phonological and comprehension difficulties compared to their mates. The following quotes capture the gross lack of knowledge about dyslexia expressed by some primary caregivers in the study area.

“*I have never come across the word dyslexia before, please what does that mean, it sounds like a medical language and I would love to know more about it*” (P1, Female, Parents 23).

“We only know about smart and dull students in the classroom. Smart students are those who think faster, read better and spell with fewer mistakes whereas the reverse is the case for others in the same class and age. Some are more willing to learn than others while some are just lucky enough to possess these academic skills better than others. I can’t give an explanation why this happens, but most people say it’s God that giveth knowledge” (P11, Male, Parent 23).

| Code number | Age (years) | Gender | Highest level of education | Caregiving role | Marital status | Setting   |
|-------------|-------------|--------|----------------------------|-----------------|----------------|-----------|
| P1          | 23          | Female | No formal education        | Parent Parent   | Married        | Private   |
| P2          | 31          | Male   | University education      | Parent          | Married        | school    |
| P3          | 25          | Male Female | University education | Parent Teacher | Married        | school Public |
| P4          | 29          | Female | University education      | Parent Teacher  | Married        | school Public |
| P5          | 42          | Female | Secondary education       | Parent Teacher  | Married        | school Public |
| P6          | 30          | Male   | University education      | Teacher         | Single         | school Public |
| P7          | 35          | Male   | University education      | Teacher         | Married        | school Public |
| P8          | 41          | Female | University education      | Teacher         | Married        | school Public |
| P9          | 32          | Female | University education      | Teacher         | Married        | school Public |
| P10         | 30          | Male Female | University education | Teacher Parent | Married        | school Public |
| P11         | 23          | Male Female | University education | Teacher Parent | Married        | school Public |
| P12         | 23          | Female | University education      | Parent Teacher  | Married        | school Public |
| P13         | 29          | Female | University education      | Teacher Parent  | Married        | school Public |
| P14         | 26          | Male   | University education      | Teacher         | Married        | school Public |
| P15         | 34          | Male   | University education      | Teacher         | Married        | school Public |
| P16         | 34          | Male   | University education      | Parent Parent   | Married        | school Public |
| P17         | 37          | Female | University education      | Parent Parent   | Married        | school Public |
| P18         | 46          | Female | University education      | Parent Parent   | Married        | school Public |
Additionally, one of the Teachers’ stated that parents have no knowledge of dyslexia in children, which is a cause of concern as parents are the first point of contact for children at home. While most teachers may be unaware of dyslexia in children, the knowledge gap among parents is even greater. One of the respondents noted thus:

“Of a truth, most parents lack apt knowledge of dyslexia thus misconception of the challenge becomes the order of the day. Before my possessing knowledge of dyslexia, I used to blame my last child for not meeting up with school expectations just like my other children and all he would do was weep his eyes out. This lack of knowledge and misgivings on dyslexia has very serious implications on the child psychologically, emotionally, educationally, socially and otherwise” (P17, female, Teacher, 37).

Both parents and teachers as primary caregivers of the children with dyslexia had poor knowledge of the condition. However, the analysis showed that teachers had more knowledge about the condition compared to parents. This indicates a need for more education for parents on dyslexia.

3.1.2. Misconceptions of dyslexia
Findings show that participants had some misconceptions about dyslexia, and often blamed the children for their difficulties in reading, writing, and spelling in the classroom. Such students are frequently labeled as “unserious” and “lazy”. Many respondents believed that the problem was the children’s refusal to follow instructions or their inability to spend quality time reading their books. They also believed that children should not be excused for their failures. Clearly stating a misconception of dyslexia two respondents said thus:

“I don’t believe in dyslexia or whatever you call it. If a child puts in a good effort, his reading ability and general school performance would increase. I beg to differ, but we should not encourage lazy and unserious children in the name of dyslexia and there should be no excuse whatsoever for failure” (P7, female, Teacher, 35).

“I think my son is his problem. He won’t read when others are reading, and he is stubborn to obey instructions. If only he is serious with his education, I have confidence that he will do better…. nothing is wrong with my child. He has no underlining condition, and he is well schooled, so he is his problem. Dyslexia? … is that a term to excuse my son from his unseriousness?” (P2, Male, Parent, 31).

Respondents continued to establish facts that portrayed their lack of knowledge of dyslexia by asking clarifying questions about initial thoughts and misconceptions about children with dyslexia.

3.2. Theme 2: common symptoms of dyslexia
Furthermore, participants may not have known about dyslexia or heard the term before, but they are aware of the symptoms or problems associated with dyslexia. According to them, it is common sense that some children struggle to perform well in school compared to their peers. Participants understood reading, writing, and spelling difficulties as the basic struggle faced by school-aged children. This has impacted the behavior of such children as they often display truant behaviors such as bullying, poor attention during class lessons, etc. Such children also experience psychological issues as a result of public perceptions of them as “failures and unintelligent”. Further, the children are disturbed by their perception of themselves, as they frequently do not understand the source of their classroom difficulties despite their efforts to improve.

3.2.1. Classroom difficulties experienced by children with dyslexia
It was noted that children with dyslexia experience classroom difficulties in particular areas such as “reading” writing’ and “spelling”. Participants are divided on the cause of these specific classroom difficulties, with some arguing for genetics and others arguing against it. The views of the respondents on classroom difficulties experienced by children with dyslexia are expressed with the following quotes: “Everyone knows that knowledge and intelligence differ across children. Some are
more intelligent than others and some are more gifted to interpret instructions than others “(P16, Female, Teacher, 37). ” Yes … some children cannot write, read, or spells like their mates who have received the same level of instruction and support. I cannot categorically say the reason for this difference, but some have claimed it could be tied to genetics”(P4, Female, Teacher, 29). Response from a parent debunked the genetics claim as a cause of the problems. He said “My child just cannot cope with his mates in school. He often struggles with basic classroom skills such as reading, writing, and spelling … I get disturbed even more knowing that my other sons are doing so well in school and I and my wife are both very intelligent with Ph.D. degrees. There is no trace of classroom difficulty in my generation hence my confusion” (P18, Male Parent, 46). Two other respondents made the following quotes:

“I have been in the classroom for quite some years, and I can tell you that children with learning challenge “dyslexia most especially” are in every classroom. But the problem is that most caregivers, parents, teachers, school administrators, and even the Nigerian government are not aware that such a challenge does exist, instead, the child is seen as the problem; … their problem starts from classroom failures down to low self-concept, and loneliness and social isolation”(P10, Female, Teacher, 30).

“Failure is another name for children who struggle to cope with classroom tasks. No matter the help I give these children, their performance continues to frustrate my efforts. They perform poorly in reading, writing, solving math as well as some extracurricular activities that require motor skill coordination” (P9, Female, Teacher, 32).

3.2.2. Behavioral and psychological issues
Respondents also expressed concerns about the behavioral and psychological issues that the children with dyslexia experience. To them, children with dyslexia may become bullies, and stubborn or they will have low self-esteem. These views are captured in the following quotes:

“Because these children are perceived as failures in school, they are always quick to transfer aggression on others. They are usually bullies and are fond of disobeying school rules or form school cult or gang” (P17, Female, Teacher, 37). “One of my pupils continues to struggle with classroom activities such as reading writing and spelling among other phonological and comprehension difficulties associated with dyslexia. This child is often found talking to herself and crying in lonely paths. … she is never among her peers and always looks depressed and in need of psychological help” (P4, Female, Teacher, 29).

Views of other respondents buttressed this point more in the following quotes:

“My son hardly communicates or moves around to play with others. I feel he is having low self-esteem because of his classroom failures and worse still, his friends sometimes insult him and that further pushes him away” (P15, Female, Parent, 34).

“Ade is always having issues with his classmates and teacher. He is always described as stubborn towards his teachers. . He is often dismissed from school because he bullies his mates and makes the classroom uncomfortable for them. I wish I could help my son, with his classroom problems which could have been the reason for his bad behaviors in school” (P5, Male, Parent, 42).

Further, the respondents showed awareness of the impact of the problems associated with dyslexia on children by mentioning that it is likely to affect them as they grow older in search of jobs as having good educational credentials is a proxy for measuring intelligence and ability. To further illustrate the psychological issues that may accompany poor classroom performance, one of the respondents mentioned the issue of suicidal ideation amongst children who struggle with reading.
3.3. Theme 3: management and coping strategies
Caregivers are usually disturbed when their child/pupil fails to complete classroom tasks such as reading, writing, and spelling. They are, therefore, quick to look for solutions and support for their child or ward. However, their supports are non-professional and inadequate to aid such children as they lack adequate knowledge, skills, or expertise to cater to the needs of such children. Caregivers, particularly parents, therefore, adopt coping strategies such as enrolling such a child in a special school with specialized teachers and facilities, and many others turn to religion for answers.

3.3.1. Incapacitation and poor support
Findings show that some children with dyslexia in the study area received little to no support because of caregivers’ lack of training to assist special learners. The children also suffer because of a lack of patience and skills in dealing with dyslexic children. The views of two of the respondents on incapacitation and poor support for children with dyslexia are captured thus:

“Some of us (Teachers) with fair knowledge of dyslexia are still lacking the patience, skill and technical know-how to handle such children with dyslexia, therefore I feel, teachers should be made to undergo training on such issues before being employed to manage such children with dyslexia and also while on the job, they should also be made to undergo compulsory periodic training and reassessment on how to manage children with learning challenge” (P17, Female, 37, Teacher)

“… the problems associated with dyslexia have persisted because we have done almost nothing to support children living with dyslexia. Most teachers like me feel pity for these children who struggle in the classroom, but we don’t have the training or capacity to help them. Our teachers’ training did not prepare us for such special cases” (P14, Female, 26, Teacher).

3.3.2. Increased support
Other support and management strategies as expressed by a respondent include: “I often try to make such children have the front seat where I can properly monitor their attention and for them to hear what I am saying clearly” (P4, Female, Teacher, 29). “I sometimes try to use disciplinary measures to help them focus but I do not think this has helped. I do not know which other way to support them. I feel frustrated myself pushing too hard and not getting the desired result from such children” (P7, Female, 35, Teacher).

“I support my child’s learning by engaging him in extramural classes after school. I don’t give him space to play around. Although this helps, results are slow and frustrating” (P2, Male, 31, Parent). “I try to pay more attention to my pupils who are struggling in school. I do this by repeating myself over and over until I am sure they are following …” (P14, Female, 26, Teacher).

3.3.3. Religious coping
Other respondents shared their perspectives on coping that are influenced by religion and beliefs. This is unsurprising given the importance of religion and spirituality in Nigerians’ lives. When confronted with situations for which they have no answers, many Nigerians turn to religion. This may be because Nigeria is a religious country. Three of the respondents’ views were captured in quotes:

“What else can I do as a mother than to keep praying to God to change his classroom performance and his general behavior. Sometimes I take him to church and other prayer houses to know if he is under a spell or not. Knowing he is not under a spell has helped me relax more, still, I know by praying for him always, God will intervene and change his story” (P1, Female, Parent, 23).
“On our assembly ground every morning we do pray and ask for divine intervention to be able to impact our pupils with our instructions. We specifically pray for those who are struggling or are not doing well in class …” (P9, Female, Teacher, 32). Another respondent said, “we reach but it is God who gives knowledge and understanding” (P4, Female, Teacher, 29).

3.3.4. Special placement
It is also mentioned that special education may be a better substitute for children with dyslexia. Two respondents believed that if mainstream teachers are lacking the expertise to cater to such children with dyslexia, a special education setting might be a better alternative. Participants are, however, constrained by the high tuition cost in special educational settings. The quotes below are words of the two parents:

“I have resorted to taking my child to a special school, I am however worried about the cost and if I can sustain it. A friend of mine told me they have teachers who are specifically trained to manage such special children. I am convinced that this alternative will help improve my Child’s learning just as it did with my friend’s child” (P6, Female, 30, Parent).

“If the mainstream school has not helped, it’s better to try another alternative. Yes, it’s better to try out special education” (P5, Female, 42, Parent).

“It frustrates me teaching students who cannot learn like others. I was not trained for such a difficult job so I sometimes encourage parents to take such children to special schools because they cannot learn the normal way” (P8, Male, 41, Teacher).

Even though the study reported that some children received increasing support, albeit unprofessional and inadequate, many others with dyslexia did not receive any form of support from caregivers. While most caregivers empathize with these children, they reported religious coping as a source of hope while recommending special education as a panacea for managing children with dyslexia.

4. Discussion
Research on students with disabilities is important because there are many students with disabilities and understanding the needs of these students would be beneficial to caregivers and authorities (Spassiani et al., 2017). This study explored primary caregivers’ knowledge of dyslexia, awareness of problems, and support for elementary school children in Nigeria. Findings revealed that primary caregivers in Nigeria lack adequate knowledge of dyslexia. This is consistent with the findings of Onyenachi (2012) on the poor level of knowledge and awareness of dyslexia in Owerri West, Imo State, Nigeria. Several scholars have corroborated the above findings, revealing that there is poor knowledge of dyslexia among primary caregivers, particularly in low- and middle-income countries (Foreman-Sinclair, 2012; Han et al., 2015; Shetty & Rai, 2014). This, however, contradicts the findings of Elias (2014) and Thompson (2013) whom both found adequate knowledge of dyslexia in their studies, although among teachers alone. This could be because both studies (Elias, 2014; Thompson, 2013) were carried out in more developed and transitional countries such as New Zealand and South Africa, where dyslexia awareness and intervention are widespread, and human welfare is prioritized. Result also shows that respondents have misconceptions about dyslexia due to their lack of knowledge of the condition (Abraham, 2014; Washburn et al., 2013).

The findings also showed that participants were aware of the difficulties that elementary school children with dyslexia face. It was reported that students were having difficulty coping with classroom work such as reading, writing, math, and spelling. A more recent study has documented that, while caregivers may not be familiar with dyslexia, they are aware of the symptoms children with dyslexia exhibit (Fuller-Thomson et al., 2018). The most noticeable symptom observed in children with dyslexia was reported to be classroom difficulties/failures. Many studies have backed up this finding, reporting that children with dyslexia are easily identified by teachers and parents.
because of their obvious failure in the classroom (Abd Rauf et al., 2018; Chukwu et al., 2019; Onyenachi, 2012). Furthermore, findings showed that respondents were aware that behavioral and psychological issues are associated with children who do not perform well in school. Previous researchers, such as Fuller-Thompson et al (2018), corroborated this study’s findings by reporting that children who are unable to cope with schoolwork are often traumatized, isolated, and often have suicidal thoughts among other behavioral problems.

To understand the support services available for children with dyslexia, the study investigated how primary caregivers have been managing the situation given its presence in homes and classrooms. Findings showed that respondents have increased their support for these children by paying more attention to them; however, the support services from caregivers are both informal and inadequate. Previous research findings support the conclusion about insufficient support services for children with dyslexia (Abdulrahman, 2015; Ogunsola, 2018). Participants believed that special education is the best option for children who are unable to cope in the mainstream classroom, but the majority of them cannot afford the high tuition cost of special schools. Participants, therefore, resort to religion and faith-based beliefs as a coping strategy. Although not among children with dyslexia, this finding is supported by a more generic study covering both dyslexia and other specific learning disabilities. For instance, in Chukwu and colleagues’ study on coping strategies of families with persons with a learning disability in Imo State Nigeria, found that, among other coping strategies, families used spiritual/religious coping to manage learning disabilities (Chukwu et al., 2019).

4.1. Implications for policy and practice
Findings of this research have shown that primary caregivers have inadequate knowledge of dyslexia, which contributes to their misconception about dyslexia and their inability to provide adequate support care services for these children who suffer socially, psychologically, and emotionally. Arguments were raised showing the relevance of policies and programs aimed at addressing the well-being of people and individuals with special needs. For example, the Salamanca Framework for action 1994, the Child Right Act of 2003 as well as the Nigerian National Policy on Education (2012). However, the implementation of these programs has remained abysmal. Suffice it to say that the Nigerian government pledged in her education policy act to equalize educational opportunities for all children and enshrined the requirement that all children be educated in regular classrooms (National Policy on Education, 2012). It is critical to ensure that programs for special-needs children are sincerely developed and implemented, to meet the needs of children with dyslexia in mainstream settings to achieve true inclusion. It is recommended that policies be developed to promote formal care and attention for such children.

The researchers advocate for a comprehensive review of the teacher education curriculum to address and prepare teachers for special needs students. A review of Nigeria’s national education policy is also required, with a special emphasis on dyslexia. They hope that such a policy review will emphasize legal provisions that will foster better attention and support for children with dyslexia, as received by their visual and auditory counterparts in the classroom. Given the misconceptions that caregivers hold about children with dyslexia, there is a need for community education and awareness on dyslexia, so that primary caregivers are educated on the facts about dyslexia and how to manage it. Schools should create special needs department with a dyslexia counselor or psychotherapist to help at-risk students cope better in the mainstream classroom. Furthermore, because special education is recommended for children with dyslexia in this study, and advocate for the establishment of more special schools to meet the needs of children with severe dyslexia.

4.2. Limitations of the study
Given the use of a single locality (Owerri municipality, L.G.A in IMO state, Nigeria), a small sample size of 18 caregivers of pupils with difficulty reading, writing, and spelling, the study may be insufficient to raise generalization across the population of dyslexia in Nigeria. Further research should be conducted to improve generalization in Nigeria.
5. Conclusion

The purpose of this study was to investigate caregivers’ knowledge and awareness of dyslexia in school-aged children, its associated problems, and the support systems available for the condition’s management. This research found that in many low- and middle-income countries, teachers, and parents have little knowledge about dyslexia. However, many of them were aware of the difficulties associated with dyslexia in the classroom. Findings also show that support for children with dyslexia is inadequate, necessitating the development of policies and programs to provide specialized assistance to children with dyslexia. It is recommended that Nigeria’s education policy be reviewed, with a focus on children with dyslexia, to ensure that no one is left behind.

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All available data are in the manuscript.

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Appendix 1. Interview Guide for Primary Caregivers to Describe Their Views on Dyslexia Among Elementary School Children, Awareness of the Problems, and Support

Preliminary questions

(a) What do you understand by dyslexia?
   • Probe for knowledge depth?

(b) What are your perceptions of children who cannot read and write like their mates?
   • Probe for accuracy
   • Probe for depth and source

(c) Are there problems faced by children who cannot read and write like their mates?
   • What are the problems
   • Probe for behavioral effects
   • Probe for psychological effect
   • Probe for social effects

(d) Are you able to support children with dyslexia?
   • Why is it?
   • Why not?
   • Probe for the type of support
   • Probe for lack of support
   • Probe for other reasons

(e) How do you cope with children who do not do well in school?
   • Probe answers
### Table 2. Table of resources to help teachers and parents build their knowledge/awareness of dyslexia

#### Some Common Signs and Symptoms of Dyslexia

Note: Almost every child shares one or two of these characteristics but it does not imply they have dyslexia. A child with dyslexia typically has multiple of these features that persist over time and obstruct learning.

| Oral language                                                                 | Common Myths, Misconceptions, and facts of Dyslexia                                      |
|---|---|
| • Late learning to talk<br>• Difficulty pronouncing words<br>• Difficulty acquiring vocabulary or using age-appropriate grammar<br>• Difficulty following directions<br>• Confusion with before/after, right/left, and so on<br>• Difficulty learning the alphabet, nursery rhymes, or songs<br>• Difficulty understanding concepts and relationships<br>• Difficulty with word retrieval or naming problems |
| ✓ Misconception: Children with dyslexia have poor intelligence<br>✓ Reality: They are of average or above average intelligence |

#### Reading

| • Difficulty learning to read<br>• Difficulty identifying or generating rhyming words, or counting<br>• Syllables in words (phonological awareness)<br>• Difficulty with hearing and manipulating sounds in words (phonemic awareness)<br>• Difficulty distinguishing different sounds in words (phonological processing)<br>• Difficulty in learning the sounds of letters (phonics)<br>• Difficulty remembering names and shapes of letters, or naming<br>• Letters rapidly<br>• Transposing the order of letters when reading or spelling<br>• Misreading or omitting common short words<br>“Stumbles” through longer words<br>• Poor reading comprehension during oral or silent reading, often because words are not accurately read<br>• Slow, laborious oral reading |
| ✓ Misconception: Children with classroom difficulties are those who are unwilling to follow instructions<br>✓ Reality: They are living with dyslexia and have difficulty processing information in chronological age |

(Continued)

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Some Common Signs and Symptoms of Dyslexia

| Written Language | Common Myths, Misconceptions, and facts of Dyslexia |
|------------------|-----------------------------------------------------|
| • Difficulty putting ideas on paper  | × Misconception: Children with classroom difficulties are unserious, lazy, badly behaved, and are responsible for their problems  |
| • Many spelling mistakes  | ✓ Reality: The children are not responsible for their problems and often wish their condition could get better.  |
| • May do well on weekly spelling tests but may have spelling mistakes in daily work  |  |
| • Difficulty proofreading  |  |

Other Common Symptoms that Occur with Dyslexia

| ✓ Myth: Letter reversal (Reading and writing letters backward) is the main sign of dyslexia.  |  |
| ✓ Fact: Letter reversal can occur in all children including those with dyslexia. Therefore, reading and writing letters backward is not necessarily a sign of dyslexia  |  |

- Difficulty naming colors, objects, and letters rapidly, in a sequence (RAN: Rapid Automated Naming)
- Weak memory for lists, directions, or facts
- Needs to see or hear concepts many times to learn them
- Distracted by visual or auditory stimuli
- Downward trend in achievement test scores or school performance
- Inconsistent schoolwork
- Teacher says, “If only she would try harder,” or “He’s lazy.”
- Relatives may have similar problems

International Dyslexia Association (2014).
