

VISUAL DYSLEXIA SYMPTOMS VS. THE LEVEL OF LEARNING OF DYSLEXIC CHILDREN

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ABSTRACT

This study focuses on visual dyslexia symptoms shown by students whom have been formally diagnosed clinically with dyslexia. The researcher carried out this study by conducting observations in classrooms, interviews with parents and teachers from the place of study and handing out questionnaires. To further strengthen the validation of study, the researcher has chosen the headquarters of the Malaysia Dyslexia Association as the place of study because the students enrolled have already been diagnosed with dyslexia. The study was conducted through two phases, namely identifying visual dyslexic symptoms commonly experienced by dyslexic students and analyzing visual dyslexia symptoms according to the level of learning. This study involved 80 students as the sample of this study and 4 teachers as the respondents. The results showed that dyslexic students showed different visual dyslexia symptoms according to their level of learning, namely beginner, intermediate and advanced.

Keywords:

dyslexia, symptoms, visual dyslexia, dyslexic students, identification of dyslexia, level of learning

INTRODUCTION

In general, dyslexia is referred to a language learning disability (Ott, 1997). Dyslexia involves the difficulty of reading or interpreting letters and sounds but that does not affect the general intelligence of the child. According to International Dyslexia Association (1949), dyslexia is a specialized learning disability influenced by neurobiological factors. Visual dyslexia refer to a different worldview when a dyslexic looks at letters, numbers or words. This is because it is difficult to remember the sequence of letters, the sound of the letters and to match the sounds with the words read. Visual dyslexics generally have problems distinguishing one letter with other letters that may have the similar shape or sound.

Dyslexic children may experience conventional classroom experiences but fail to master language skills such as reading, writing and spelling in line with their intellectual abilities like normal children (Arkell, 1977). According to Sariah Amirin, President of Malaysia Dyslexia Association, limited dyslexia interventions in Malaysia and the lack of thorough exposure for school teachers results in poor identification and teaching the dyslexic children. Reading, writing and spelling skills in the learning process is essential to master. Without mastering these basic skills, children may not be able to go through a normal learning process throughout their many school years. The formal dyslexia diagnostic process in this country is expected to take between 6 months to 1 year. This process involves many tests, assessments, and diagnostics and so on to get the certainty of the existence of the problem.

This study is conducted through the awareness of the need to identify the visual dyslexic symptoms experienced by the child so that teachers can speed up the identification process in dyslexic children. A research in the form of a 4-course programme was carried out by the researcher (2018) in collaboration of Department of Malay Language, University Community Transfer Centre UPM and the Ministry of Education. A total of 174 school teachers teaching the Malay language subject participated throughout this programme. The teachers comprise both pre-school, year one and special

education teachers from national schools (SK), Tamil vernacular schools (SJKT) and Chinese vernacular schools (SJKC). Apart from school teachers, the programme also had active involvement of 7 academic officers from Sepang, Petaling Perdana & Petaling Utama District Education Office. From the pilot study carried out in a year, the researcher found that teachers do not have sufficient knowledge on dyslexia identification. In the long term run, this results in ineffective teaching in the learning process.

STUDY OBJECTIVES

1. Identify visual dyslexia symptoms experienced by dyslexic students
2. Discuss visual dyslexia symptoms by the level of learning of dyslexic students

IMPORTANCE OF THE STUDY

This study provides a platform for educators, especially teachers who teach dyslexic students in schools to prioritize identification so that these children are not marginalized and given the same opportunity as normal children to learn properly. As a result of these identification, school teachers can combine teaching and learning strategies to create a learning system that can be implemented by schools across the country. Good educational opportunities must be given to those who have learning disabilities as well normal children in Malaysia. This study is able to raise awareness through seminars, workshops and mass media on dyslexia as it is one of the main growing problem in Malaysia. Community awareness of dyslexia is important because parents' efforts are needed in helping these dyslexic children.

STUDY HIGHLIGHTS

A study on dyslexia was conducted by Rohaty Mohd Majzub and Shafie Mohd. Nor in 2005 titled "Preschool Symptoms of Dyslexia" focusing on identifying the percentage of samples at risk of dyslexic symptoms and analysing percentages based on children's gender. Researchers use the "The Dyslexia Early Screening Test (DEST)" instrument in the process of identification of dyslexic symptoms. This DEST instrument is applied using the Brislin Translation method and the formation of a set of tests. Accordingly, a test set is designed to test the memory skill, knowledge and sensory perceptions. To complete this study, researchers selected 40 children as the sample of the study from two pre-school classes in two different schools. Samples from Negeri Sembilan were randomly selected. Data collected were then analyzed using percentage and the results showed that 27.5% (11 children) of the sample of the study showed symptoms of dyslexia at risk, but only 15% (6 children) showed very high risk of dyslexia. Not only that, when analyzed by gender of children, the findings showed that more boys have dyslexia than girls.

In addition to that, a study conducted by Lee Lay Wah (2010) entitled Davis Model of Dyslexia Intervention: Lessons from One Child aims to test a dyslexic child using a dyslexic model pioneered by Ronald Davis. This model describes the specific strategies used to test children's language and psychomotor skills. This strategy consists of three main aspects, namely Orientation Counseling Procedures, Symbol Procedures and Davis Reading Training. In this study, researchers selected a 9-year-old child who had been diagnosed with language learning problems. The subject of the study has problems in terms of visual perception, which are academically known to have problems in the process of reading and writing. The Davis model is used to identify dyslexia. The results shows that Davis's Orientation Counseling method has helped to correct the problem of visual perception and

improve reading and writing skills. In addition, the Symbol Procedure has helped to solve the subject's problem of letter reversal. The overall findings showed that Davis dyslexia model is able to solve the language learning problems experienced by dyslexic children.

Tg. Iffah Binti Tuan Yazid and See Soo Yin (2015) conducted a study to find out the level of parental understanding of dyslexia. They studied the respondents' demographic information such as parents' education level and household income level, the general understanding of dyslexia and the characteristics of dyslexic children, understanding the causes of dyslexia and its effects on speech, and treatment for dyslexia. The approach of this study was quantitative. The questionnaire was used to obtain information from respondents. Questionnaire was built based on the Cognitive Theory. This theory uses a psychological approach in which it describes human behaviour through thought processes or understanding. In terms of sample size, 24 people were selected as respondents. The majority of respondents are those who live in rural areas. The findings show that parents in rural areas understand the needs of dyslexic children. However, understanding of the causes and treatment is still lacking. Dyslexia is not a pathological problem but it is only a disorder in mastering reading, writing and spelling skills.

A study by Siti Huzaimah binti Sahari titled "Identification of the Existence of Dyslexics among Pupils in a School In Sarawak" in 2013 aims to find out the existence of dyslexia among primary school children. A total of 20 students from SK St Anne, Sarikei, Sarawak was the sample of this study. These pupils were chosen to be the sample of the study because they showed low achievements in their exams and show evident problems reading in the classroom. The questionnaire was filled by individual students and teachers through their observations. The questionnaire is based on the list of Ronald Davis Dyslexia symptoms (1992). This symptom is categorized into six categories, namely general dyslexia, reading and spelling, vision and speech, writing and motor skills, mathematical and time management, and personality. The study found that all 20 students had more than 10 dyslexic symptoms. The most significant finding shows that 40% of students display 11 to 17 dyslexic symptoms. As a result, this finding shows that these students are experiencing learning problems, especially in the reading aspect.

In addressing the problem of learning among students, effective learning strategies are needed. Wan Muna Ruzanna Bt Wan Mohammad in her study entitled "Pemeriksaan Bahasa dalam Kalangan Kanak-Kanak Disleksia" in 2013 focuses on the identification of spelling mistakes, the analysis of letters disorder, the organization of the mastering strategy, and the development of diagnostic dyslexia. The study involved eight dyslexic children following the Dyslexia Pilot Program at the state of Terengganu. This study is based on Levinson's Theory (1994) and Cognitive Development Theory (Piaget, 1960) relating to psycholinguistics. Levinson's theory (1994) covers seven elements in reading. A qualitative and quantitative approach is taken to analyze the spelling mistakes and letters by respondents. Using both theories to study the focus of the study, researchers also did observations and interviews to collect data. Subsequently, the data collected were analyzed using percentage, frequency, Cronbach's Alpha, Min, and Standard Deviation. Significant findings showed letter reversal (38.8 percent), replacement (21.7 percent), and addition (13.2 percent). The other elements of reading problems do not show a high proportion of rates and can be said to be normal among children. Then, the researchers analyzed the findings by reinforcing the results with the formation of test sets, namely Diagnostic Dyslexia-1 and Diagnostic Dyslexia-2. The significance of each question in the test set proved to be very satisfactory with the results of the analysis using the Cronbach's Alpha reliability test. The multidisciplinary strategy focuses on the strengthening of letters and words using VAKT method, which is visual, auditory, kinesthetic and tactile. According to Wan Muna Ruzanna, the diversity of interactive learning materials is needed by dyslexic children because of the dyslexic nature and brain development of dyslexic children. For example, appropriate exposure should be given to dyslexic children in mastering a subject.

METHODOLOGY

The study applies both qualitative and quantitative methods to obtain data by conducting observations on dyslexic students and interviews with teachers and psychologists. In terms of reliability, the samples of the study has already been diagnosed with dyslexia and as well as the location of the study was selected according to the question of the study. From the general description obtained descriptively, the results were then analyzed descriptively. The researcher and teachers from the Persatuan Dyslexia Malaysia also carried out observations in identifying the dyslexic symptoms. The researcher visited the place of study three times to obtain data and conduct a survey on dyslexia students. The researcher also conducted face-to-face interviews with the President of the Malaysia Dyslexia Association and teachers to obtain data.

The study was conducted at the Persatuan Dyslexia Malaysia, Jalan Ampang, Kuala Lumpur. The students at the centre have been screened and diagnosed with dyslexia after numerous diagnostic tests. This branch is the headquarters of fifteen other branches all over Malaysia. The respondents of this study consisted of teachers at the centre. They were selected for having experience in teaching dyslexic students in various subjects. These teachers are also exposed and taught through training on how to identify dyslexia. At the centre, dyslexic students are divided into three classes according to their level of learning, namely beginner, intermediate and advanced level. The sample consisted of 36 students from beginner, 29 students from intermediate and 15 students from advanced.

The instrument used in this study was a questionnaire prepared by the researcher to identify the visual dyslexia symptoms experienced by dyslexic students. The questionnaire was revised and adapted from Davis Dyslexia Assessment. The questionnaire was then filled by the teachers. The teachers filled the questionnaires based on three options, namely 'very significant', 'undetermined' "and" 'intangible' to measure the symptoms shown by dyslexic students. The 'very significant' classification is a when the symptom is very clearly shown numerous times. Teachers can also choose 'undetermined' if the symptoms are not so noticeable or significant. 'Intangible' is to indicate the absence of such symptom in dyslexic students. Overall, the questionnaire consists of 7 sections, general problems, behavioural, speech, spelling, reading, writing skills and numbers.

STUDY RESULTS

Objective 1: Visual dyslexia symptoms experienced by dyslexic students

Through observations and interviews with teachers at the dyslexia centre, visual dyslexia symptoms were identified and subsequently divided into seven categories. As referenced in table 1, the seven categories include:

- Category A: general problems
- Category B: behaviour
- Category C: speech
- Category D: spelling (written)
- Category E: reading
- Category F: writing skills
- Category G: numbers

Table 1: Visual Dyslexia Symptoms

<p>CATEGORY A: GENERAL</p> <p>Intelligent but unable to read, write, spell. Has problems in left and right coordination. Poor memory for sequences. High in IQ but may not test well academically. Forgetful. Has difficulty telling and managing time. Shows very low confidence level. Has a small memory span. Difficulty in sustaining attention. Possess a natural given talent.</p>	<p>CATEGORY B: BEHAVIOUR</p> <p>Always avoids answering questions in class. Can be aggressive at times. Unusually quiet. Appears soft-spoken. Inconsistent behavioural problems. Always avoid completing tasks given by doing something else. Easily distracted. Not attentive to dangerous situations. Always chooses to absent from school. Always redirects attention to something else.</p>
<p>CATEGORY C: SPELLING (WRITTEN)</p> <p>Often confuses letters with similar shapes. Writes words in an incorrect order. Adds incorrect additional letters to words. Leaves out letters when spelling a word. Writes letters in reversal. Difficulty in copying letters and words.</p>	<p>CATEGORY D: SPEECH</p> <p>Stutters under stress/confusion. Difficulty in understanding verbal explanations. Difficulty in carrying out a verbal order. Leaves sentences incomplete. Mispronounces long words. Often repeats the same words in a sentence. Difficulty putting thoughts into words.</p>
<p>CATEGORY E: READING</p> <p>Skip words when reading. Reading with little comprehension. Pronounces words wrongly when reading out loud. Often confuses letters with similar shapes when reading. Additions of words when reading. Spells phonetically when reading. Reads in an inconsistent manner. Reading shows repetitions.</p>	<p>CATEGORY F: WRITING SKILLS</p> <p>Has difficulty when copying words from whiteboard to paper. Handwriting varies and is inconsistent. Has difficulty in pencil grip. Does not write according to the lines given in a book. Uses eraser more than necessary. Untidy handwriting. Mixes up both uppercase and lowercase letters when writing.</p>
<p>CATEGORY G: NUMBERS</p> <p>Has difficulty reading numbers. Has problems remembering the multiplication table. Writes numbers in reversal. Incorrect when rewriting numbers. Does not write the numbers in the same line.</p>	

The study found that the symptoms identified is not influenced by the age factor. This is because the dyslexic students screened and diagnosed at Malaysia Dyslexia Association is then put in classes

based on their level of learning and not by age. Generally, all visual dyslexic students will show the visual symptoms of dyslexia as identified above.

Objective 2: Visual dyslexia symptoms according to the level of learning of dyslexic students

After identifying the visual dyslexia symptoms, questionnaire forms were given to analyze the dyslexic symptoms experienced by dyslexic children in different levels of learning. The teachers filled the questionnaires based on three options, namely 'very significant', 'undetermined' "and" 'intangible'. The study found that the visual dyslexia symptoms shown by students with dyslexia can be categorized according to the level of learning, ie, the beginner, intermediate and advanced levels.

DISCUSSION

The study concludes that dyslexic students are more likely to exhibit general symptoms when they are at a low level of learning compared to higher learning levels. This is because dyslexic pupils at low levels are generally children from age 4-7 years and general symptoms are difficult to measure significantly. In some cases, it's possible to detect symptoms of dyslexia before a child starts school. If the symptoms go undetected at an early stage, this may lead to the child having severe problems in reading and writing in school. Dyslexic students show more behavioural symptoms at a higher level of learning rather than beginner. This is because dyslexic students at higher learning levels are easier to observe and characterize their behaviours and personalities when interacting with others in their surroundings. Spelling symptoms are generally indicated by dyslexic students in all three stages of learning. This is because language disabilities particularly revolve around spelling, reading and writing. If dyslexic students do not practice an appropriate method of learning, spelling problems cannot be overcome in the long run. This will result in poor reading and writing skills. Problems in speech are often demonstrated by dyslexic students. Through observation, researchers found that dyslexic students find it difficult to understand and express their thoughts verbally. This becomes more critical when they cannot interact with friends in class, teachers or others. Speech problems do not have a very big difference when classified according to the level of learning as it is vastly experienced by most dyslexics. Dyslexic students are more likely to exhibit reading symptoms when they are at moderate level of learning compared to higher and lower learning levels. Symptoms of reading are most pronounced in the medium and high level of learning because deficiencies and problems in the reading process are more clearly shown. Dyslexic pupils are more likely to show symptoms of writing ability skills when in low learning levels as the problems described in these factors are further demonstrated in the early stages of the learning process of dyslexic students. Untidy handwriting, not writing in lines given, confusing uppercase and lowercase letters and all the other problems contained in this factor are appropriate to explain the difficulty of writing at the beginning level rather than the medium and high level of learning. This symptom is less noticeable in the simple and high level of learning. Based on the study carried out, all three levels of learning show the same insights. This is because the problem with numbers and figures is not so significant among dyslexic students who have visual dyslexia. Generally, visual dyslexia students have more problems in letters and reading. These symptoms might be more significant if tested on students with dyscalculia. Based on the findings described above, this study has found that dyslexic students display different visual dyslexia symptoms according to their level of learning, namely beginner, intermediate and advanced. This was clearly observed by the researcher and teachers at the place of study and proved that dyslexic students do not show symptoms according to their age.

CONCLUSION

Overall, this study has achieved the two objectives fixed, which is to identify the dyslexic symptoms experienced by dyslexic children and to discuss the dyslexic symptoms according to the level of learning of dyslexic students. This study shows that visual dyslexia symptoms evidently vary according to their level of learning, which are beginner, intermediate and advanced levels. With the knowledge of dyslexia identification, teachers are able to resort to many effective learning interventions suitable for dyslexic children. In a positive and encouraging environment, the confidence and enthusiasm to learn of dyslexic students will gradually improve.

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