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Long-term Management of Dyslexia: A Case Report of Social Emotional Problems in Dyslexia

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Abstract

Dyslexia may often be confused with other conditions, especially in people with dyslexia with behavioural complaints and social language disorders. Those who have difficulty interacting are often diagnosed with autism or other autism spectrum disorders such as Asperger's. In this case report the journey is described of a dyslexic boy, whose social language disorder was difficult to change over time. Louis (not his real name) was first diagnosed as dyslexic at the age of 9 years and 11 months. There followed various comprehensive interventions related to aspects of spoken language, written language, social language, and most importantly behavioural and social emotions, described in this case study. The importance of comprehensive diagnoses is emphasized, in order to identify all aspects of the difficulties that may be encountered by each individual child.

Keywords: Dyslexia, behaviour, Autism Spectrum Disorder (ASD), Asperger's Syndrome, Social Language Disorder, Assessment, Diagnosis

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BACKGROUND

In Indonesia, awareness of Dyslexia has been increasing over the last 10 years. More parents bring their children to a professional at different ages, with various problems and comorbidities. Dyslexia has become a burden in primary education, due to its complicated and varied conditions. Dyslexia is a disorder of the language system, more specifically, within a particular subcomponent of the system, phonological processing. (Saltz, 2017)

The Dyslexia definition by the Dyslexia Association of Indonesia has expanded not only in recognizing reading problems. The Dyslexia Association of Indonesia has stated that dyslexia is one form of specific learning difficulties, which is a condition characterized by learning difficulties that occur in individuals with intelligence potential that is at least normal or at the average intelligence level, where learning difficulties that occur include difficulties in language areas, including language. These include Verbal (which is mainly characterized by impaired phoneme awareness), written language, and social language (difficulty interpreting body language, attitudes, and postures), and difficulty displaying appropriate body language, attitude, and posture in response to a social situation), accompanied by disturbances in the area of executive function. Dyslexia is also often accompanied by other forms of specific learning difficulties, namely dysgraphia, and dyscalculia. In addition, dyslexia is often accompanied by other concomitant conditions such as Attention Deficit Hyperactivity Disorder and Motor Planning Disorder (Dyspraxia). (Solek & Soegondo, 2018) (Dyslexia Association of Indonesia, 2019).

Social language problems are often conveyed in various terms by parents, for example, shyness, not wanting to meet people, and being attached to parents. Parents assume this is a normal process in development. In the Social-Emotional-Personal development milestones based on the Griffith III Developmental assessment scale at the age of 3-4 years, a child should be able to separate easily from their parents. This age range (3-4 years) is equal to nursery in Indonesia, where most children go to school for 2-3 hours per day.

Expressive language disorders are known as predictors of learning difficulties in later life. This condition is easily notified and instantly taken care of by speech therapy sessions. But professionals or education administrators often miss information about the social language. The inability of a child to adapt to a new social situation can lead to attachment behaviour, emotional fluctuation, shouting, crying, and other challenging behaviour. In DSM V, social (pragmatic) communication disorder is described as persistent difficulties in the social use of verbal and nonverbal communication. (Association, 2013) In fact, if we further examine language processing (both spoken, written, and social language) in dyslexia, the symptoms of social communication disorder can be found in dyslexic individuals. As stated by Reid, the early years of dyslexia also show social-emotional problems that are often overlooked by parents and educators.

(Reid, 2017). Symptoms that can appear include easy frustration, difficulty in separating from parents, children often feeling uncomfortable, and often crying for a long time.

This case report aims to provide an overview of the management of dyslexic children who have severe social language disorders, and have received the intervention after reaching the age of 9 years. Conditions that are identified very late make it difficult to improve social behaviour.

First Look at Louis

Louis (not his real name) first came to our clinic at the age of 9 years and 11 months in 4th grade. The chief complaint from his mother was looking for the answer to what had happened to Louis. At the age of 3, Louis was not able to separate easily from his mother, had a language delay, and was uneasy following instructions at school. Louis was not diagnosed with dyslexia until he reached 9 years old. He has had difficulty socializing.

After going into therapy sessions from the age of 3, at the age of 6, his mother was told that Louis had passed all the necessities to enter school and he needed no further therapies. Even though it was stated no further therapy, the mother felt that there was something lacking in Louis's performance. At school, he is in 4th grade, very lazy to study, prefers multiple choice questions rather than essays, often says he is dizzy while studying, has difficulty making friends, feels uncomfortable easily, and gets angry easily. Children like Louis are often seen clinging to their mothers in public spaces.

In the first meeting, he did not look at the other person, and he had difficulty conveying the content of his thought, Louis had interaction skills, did not see autistic movements, and he was able to listen to instructions. When asked to enter without their parents, children need to be persuaded and often hide behind walls.

During the first assessment, it was found based on observations that Louis's attitude was not confident, indicated by not looking at the other person. When doing tasks Louis looks restless, shifts in the chair repeatedly, finds it difficult to sit up straight, and often puts his head on the table.

The diagnosis of dyslexia was concluded from observations, interviews with parents and children, and clinical assessments. In his early years, Louis was reported to have a lack of attention, was uneasily separated from his parents, and was not easy to follow instructions from preschool teachers. This is consistent with the description of the risk of dyslexia as described by Reid, 2017.

Assessment of dyslexia is a process that involves more than just using a single test. (Reid, 2011). The behavioural aspect is certainly an early observation, considering the many

comorbidities between dyslexia and behavioural problems such as ADHD, anxiety disorders, conduct disorder, and Oppositional defiant disorder. Louis showed unwillingness to look directly into the examiner's eyes, but Louis turned his face towards the examiner. When examined, Louis showed an uneasy attitude, repeatedly shifting from his seat, putting his head on the table, and rushing to do his assignments. The attitude shown is in accordance with the description of ADHD (predominantly inattentive). Dyslexia is also inseparable from executive function disorders. Executive function components such as cognitive flexibility, inhibition control, and weak working memory were seen during the assessment. Lous couldn't help but growl at a difficult answer. Louis didn't ask questions when he ran into trouble. The difficulties found could be identified ,but Louis did not express these difficulties verbally. After being given the opportunity to find the wrong answer, Louis needs to be given direction to find the right answer.

In the literacy assessment, Louis' reading ability was not according to his age of 9 years. There are several sight words in Indonesian that cannot be read. Louis has difficulty combining 4 or more syllables, for example, Indonesian verbs use affixes.

The following is a reading and writing checklist used in Louis's assessment.

Checklist Reading	**Comments**
Sight vocabulary	Unread, missed
Sound blending	Changed to a different sound
Use of contextual cues	Not understood
Attempting unknown vocabulary	Tried to read but slower rate
Eye tracking	The title between paragraphs isnot read
Difficulty keeping place	Yes
Speech development	New words that are not understood tend to be read in a mumble
Word naming difficulty	Yes
Omitting words	Yes
Omitting phrases	Yes
Omitting whole lines	Yes
Attention to punctuation	No
Reading intonation	Not variable
Comprehension	Difficult to memorize character names, events, places, and times that occurred in the story

Checklist Writing	**Comments**
Directional Difficulty	Not Found
Proportional	Disproportionate font size and shape
Ascender/descender	Descender letter (j, y, p) too short
Spacing	Too wide space
Handwriting difficulty	Yes
Difficulty with cursive writing	Yes
Using capital and lowercase interchangeably and inconsistently	Yes
Poor organization of work on page	Yes, Writing is too big in a small writing space. The spacing is too wide
Incoherent slope	Floating letters on plain paper
Vocabulary in writing	Limited
Organization of stories	Not coherent, not using correct conjunctions

During the assessment, Louis also has not memorized the names of the months in the year, including writing the name of the month. In math word problems, children seem to have difficulty working on story problems. The technique of counting down in addition has not placed the units and tens correctly. Correction of wrong answers needs to be repeated several times for Louis to understand.

These findings are also complemented by findings in the area of mathematics. In working on a math problem, Louis incorrectly places the units' results in the tens. Louis had difficulty understanding math word problems with more than one piece of information. Louis had difficulty changing sentences in word problems into mathematical operations. Louis also had difficulties in understanding fractions, difficulties in remembering multiplication, and in division operations. Observation during the assessment also revealed that Louis had difficulty mastering arithmetic facts by traditional methods, learning concepts of time and wind direction, trouble reading simple maps, and remembering facts for word problems and formulas for completing mathematical calculations. While solving math problems, Louis uses an arithmetic procedure that is immature and inefficient and has problems in sequencing steps of multistep procedures. He also makes frequent mistakes when using procedures.

Louis was observed to have poor posture, uneasy sitting upright, and leaning on a wall or table, or pole while standing. Performing motoric coordination activities such as standing on one foot, jumping with 2 feet and landing together, and catching and throwing a ball, produced a very clumsy performance from Louis.

During assessment and in the early intervention in remedial teaching, Louis showed a pattern of angry or irritable mood, defiant behaviour, and exhibited during interaction with at least one individual who were not siblings.

Then Louis takes an IQ test with a total IQ of 99, verbal IQ of 95, and Performance IQ of 104. From the results of this intelligence, the scores that were lacking are self-adjustment, self-confidence, and understanding of the rules. While the less value is the understanding of social values. And some have good scores, which are knowledge insight and analysis-synthesis. Intelligence test results that show differences in verbal ability and performance show that Louis has average intelligence with poor language performance. This is consistent with the description of the results of intelligence tests on dyslexia.

A diagnosis of Specific Learning Difficulty (Dyslexia, Dysgraphia, and Dyscalculia), comorbid ADHD along with Opposition defiant disorder, and Developmental Coordination Disorder was concluded.

First 6 months

First Louis was given therapy in individual sessions. This therapy aimed to manage learning readiness and emotional response, and increase interaction and expression. and in particular to train executive functions in learning, namely rushing to work on assignments, identifying mistakes, and correcting wrong answers. In individual therapy, a literacy program was given, namely answering questions according to what is read, correcting writing, improving how to hold a pencil, understanding word problems in math, and functional mathematics such as counting money, changing, discounted prices, etc.

In individual therapy, a very stooped posture, difficulty maintaining an upright posture, scoliosis, and the ability to maintain prolonged sitting and writing were seen.

The Intensive Phase

Then Louis was advised to take intensive remedial classes in special classes for children with dyslexia. Classes are held 5 days a week, for 4 hours each. Evaluation is performed every month. In each evaluation all teachers and parents were present. The series of evaluation activities consisted of exposure to behaviour, children's responses in adapting, and children's ability to count, literacy, and play in groups.

The Intensive phase ran for 18 months. We will explain the intensive phase in 4 phases. The first is the initial phase with the main behavioural problem. The second phase is the adjustment phase with changes in the response and improvement of social performance but accompanied by new behaviour as an impulsive response. The third is a phase of

ups and downs but not as great as phases 1 and 2. The fourth is in the phase of maintaining achievements.

Intensive remedial teaching is a structured and systematic curriculum designed for Louis, to decrease reluctance in reading, and increase engagement and motivation in reading and writing, the teacher in remedial teaching made personalized worksheets based on assessment results.

Strategies to improve behaviour:

1. Allowed a discussion on how to introduce yourself (staring at the other person, head straight, loud voice)
2. Make it a habit to introduce yourself when meeting new friends
3. Reinforcement is given with instant appraisal
4. Verbal and physical reminders constantly
5. Gives an example of the expected intonation, and replies with a smile
6. Louis was encouraged to do tasks independently, especially the task which had already been repeated.
7. Give Louis the opportunity to try higher difficulty tasks
8. Habit of asking for help sufficiently
9. Louis is given relatively easy questions, and he can work on them. Continue by slightly increasing the difficulty of the questions according to the needs
10. Make an agreement with the child to immediately do the task and no hesitation
11. Pay attention to the speed of completion of work, reminders along the task perform
12. Time-based assignments
13. Quality of work completion is supervised by giving more attention to the difficult question
14. Giving time to perform self-correction
15. Reminded to do the easy questions first
16. Learn flexibility when doing assignments
17. Items/equipment that are only needed are on the table
18. Maintaining focus even though there are lots of distractions (objects, environment, sounds)

Learning strategies to improve reading and comprehension

1. Adjustment of a reading worksheet, decrease font size and spacing gradually
2. Reading level start from below Louis's capability (grade 2)
3. Read aloud with attention to accuracy, punctuation, and speed

4. In practicing punctuation, the teacher made a highlighter with a colorful pen, so Louis recognizes the punctuation.
5. Read with respect to reading intonation
6. Listening to how to read with the correct intonation
7. Repeating the reading exemplified by the teacher
8. Read simple text stories
9. Mark words that are not understood
10. Look up the meaning of words that are not understood in the dictionary
11. Allow Louis to make a note of explanations about new vocabulary
12. Picture card with sentences
13. Stories with a sequential picture to help understand story sequences
14. Practice making suggestions, responses, and conclusions from an article

Learning strategies to improve writing

1. An explanation of conjunctions is given
2. Explanation of each connecting word with concrete examples in the surrounding environment
3. Arrange words into simple sentences
4. Worksheet adjustment using a large grid book and customized worksheet
5. Practice writing specific letters which are disproportionate
6. Reminder to make proportional spacing: not too wide or too narrow

Learning strategies to improve math

1. Using learning media in understanding multiplication and division. Multiplication is explained by the concept of repeated addition
2. Follow sequential directions
3. Teaches recognize patterns
4. Explain the steps on how to do tiered division
5. Explain estimation by forming a reasonable guess about the amount, magnitude, and size.
6. More practice on visualizes and mental pictures of numbers while counting
7. Practice spatial orientation and compass direction

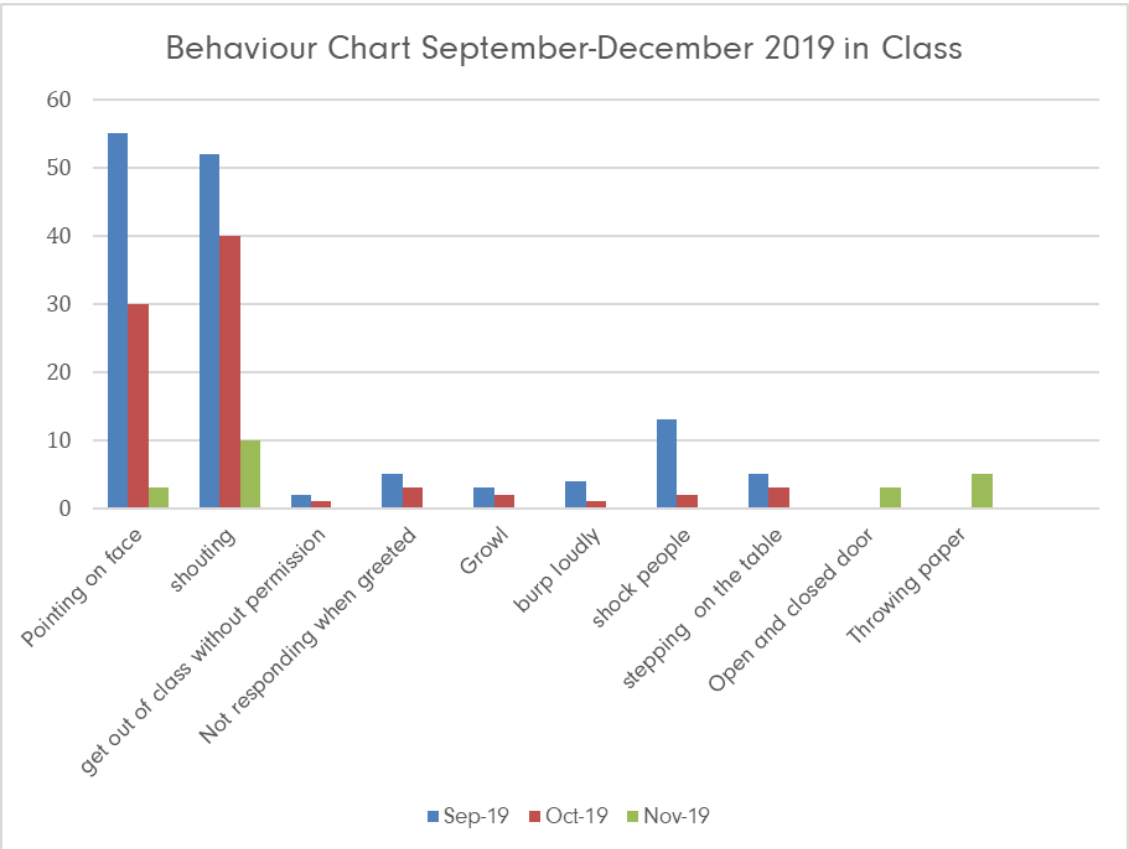
The most important thing is to give opportunity, proper reward, or reinforcement. The teachers also increased the difficulty step by step to get comprehension and retention of learning. Remedial teaching is carried out in a structured and systematic manner in order to achieve the overlearning stage and in the end, is automation.

Other than academic performance, Louis has a program in physical therapy due to his condition of dyspraxia. Learning strategies to improve posture and motoric performance are performed in physical therapy sessions including stretching exercises for flexibility,

endurance exercise, abdominal muscle strengthening exercise, and active exercise for posture correction.

During physical activity, Louis is constantly given feedback on how to perform in the right position, using verbal reminders, video and photos, and a mirror. These programs are evaluated every month during intensive remedial teaching and every three months after intensive remedial teaching is finished.

The following is detailed behaviour shown by Louis during the September-December 2019 period.



Timeline of Behaviour

During three months of detailed observations and frequency charts, Louis seems to have difficulty controlling himself to respond appropriately. Louis shows this attitude in uncomfortable, unpleasant situations or situations where he must respond verbally, but Louis has difficulty responding verbally. While reducing unwanted behaviour, what the teacher in the intensive remedial class does is provide verbal reminders, giving

January-April 2019	May-August 2019	September-December 2019	January-March ' 2020	April-June 2020
CHALLENGING BEHAVIOUR				
♦ Behavioural issues dominate. ♦ Make fun of friends ♦ Growling in response when asked ♦ Shout if he doesn't want to answer ♦ high intonation ♦ put up a middle finger ♦ shout if he doesn't like the food that is brought ♦ There is a desire to interact with friends, shown unnaturally: giving a chair to a friend in need. ♦ It's still hard to separate from mother when class is about to start sticking with mother, standing behind mother, being ushered into class	Social Skills and Social Norms adaptation was very difficult. Often misperceptions. Shaved his eyebrows because he thought others were paying attention to his eyebrows (he doesn't like being noticed or looked at directly by friends) thinks other children are cheating in the game, when in fact Louis is younger and doesn't understand the rules. Start following conversations with friends. Begin to be trained to lower the intonation of high voices.	Improvement in social skills. Ready to chat with friends (speaking intonation is still high) Already want to take part in sitting in a circle with other children.	Behaviour has begun to be easy to follow directions. Can follow the rules of the activity, participating in activities at the market: Following a friend who acts as group leader, does not understand standing in a queue, and does not want to ask the seller at the market.	Start online learning. Very shy in front of camera. Closed the camera, only showing eyebrows, wearing a hat while studying online.

January-April 2019	May-August 2019	September-December 2019	January-March 2020	April-June 2020
LEARNING ATTITUDE				
♦ Often sleepy ♦ Going in and out of class without permission ♦ Unwilling to be corrected, a learning attitude is shown by growling, shouting ♦ Need a reminder to stay seated doing assignments, can't be left by the teacher	♦ Rarely sleepy ♦ He was willing to be corrected by reducing shouting and growling.	Never sleepy in class Ready to be corrected for homework. Poking if he wants to ask a question.	Getting easier to correct if there is a wrong answer Math: does not want to re-calculate even though there is still time Does not always ask questions, even though found difficult.	Tends to be silent in online settings, does not want to be corrected, and answers short questions.
ACADEMIC ACHIEVEMENT				
Should have been in 5th grade, but his ability is at the level of 3rd grade. ♦ Reading comprehension ♦ Answering simple questions on the text ♦ when reading: punctuation not noticed. ♦ Difficulty in cutting with scissors, and folding papers.	Has entered the 4th-grade material: least common multiple & the greatest common divisor, identify moral value from stories.	Already want to try a presentation in front of the class. But not yet looking at the audience. Answering questions using descriptive sentences. Willing to follow handicraft activity.	Starts taking the school exam test preparation.	Elementary school final exam test questions, there are still difficulties in math problems that use formulas (such as area, and volume)
TREATMENT				
No pharmacotherapy	Pharmaco-therapy initiated.	Pharmacotherapy continued		Suggestions for taking medication further but discontinued by parents.

consequences for example by apologizing when burping or shouting in other people's faces, and cleaning up the torn pieces of paper that Louis threw away.

After Intensive Remedial

After intensive remedial ended, Louis completed the final elementary school exam. Then parents enroll him in inclusive schools with 5 children per class. Louis entered secondary school. Louis was placed in special classes and has some accommodation for tasks and teaching material. He sometimes joined the regular class (with a total of 20 students) for less literacy-based material, such as sports and art.

Louis remained to follow remedial therapy after school. In the last evaluation of the remedial session, there is still a note of behaviour that needs to be improved, namely reducing the attitude of opposition and behaviour that does not want to listen. In therapy sessions, emphasis is placed on social-emotional skills to increase self-confidence and how to socialize by starting conversations, asking questions, telling experiences), and using appropriate facial expressions.

Remedial Teaching

During the remedial teaching, Louis was taught to use math and literacy for functional activities, such as reading maps and counting discounts from the regular price. Activities in remedial teaching also included retelling the contents of paragraphs, being able to draw the floor plan of his own house, describing the trip according to the plan, and making his daily plans and daily expenses.

Louis was introduced to the terms debit, credit, and balance to make a simple note of his expenses. He also taught me to record financial expenditure and income data with a table in excel format.

Socio-Emotional Therapy

Louis joined an individual and group therapy session of a social-emotional class. The individual sessions lasted from July 2020-September 2022, once a week for 45 minutes. Louis planned to continue with group sessions that consist of four sessions, every week, each session lasting for 3 hours.

During the early individual sessions of the social class, which was held online due to the pandemic COVID-19, the therapist was putting in a great deal of work to get Louis on camera. Louis was presented with activities to improve his expressions, knowing his strengths, ability to use verbal cues, and ability to talk and make eye contact with others. Our team started to design and develop his social skills practically in these group sessions.

Physical Therapy

Physical therapy sessions were developed to correct his posture and the planning of a motoric activity. Physical fitness can be affected by inactivity and less preference or choice of exercise. Louis often complained of getting tired easily and showed poor endurance during exercise. Exercises consisted of strengthening, plank, and stretching of the lower extremity. Louis performed the exercise with monitoring and extra support, verbal reminders from his therapist, and repetition of instructions.

Follow-up and Outcomes

Louis is now entering grade 9th. He has some difficulties in building friendships, feeling as if he has no friends. He entered an inclusive school. His academic level overall is now equal to 9th grade except for science. He eats alone during the break.

He is in a class now with 5 children but still eats alone during breaks. He recently initiated buying a meal in the canteen, but after a long time, he wanted to bring his food and eat it himself. He tried to engage with other students by starting a conversation during mealtimes at the canteen.

His mother reported that Louis joined youth camping for 12 days. For the first two days, he cried and begged for home, but later he followed the activity until he finished. After camping finished, his parents noted that he was more expressive, and smiled more often. Louis also has a 3D drawing course that he enjoyed, and his parents see the result of his design as excellent.

At home, he likes to bake from recipes, learn to use online shopping to order food, and calculate pocket money and he has been given the task of taking care of the family pet.

During the latest interview with Louis, he realized he has difficulty building friendships, and he is willing to engage in activities that are provided by the Association to increase this skill. During the first group session, Louis was initiated to present in front of other participants. He answered questions with short sentences. He also tried to have eye contact with other participants. However, the vocal tone is not appropriate, with minimal effect and a very limited smile.

DISCUSSIONS

Early Identification

Louis has been going through some interventions toward better performance in social and emotional behaviour and academic achievement. Parents have usually seen the development of children with problems since preschool age, but these findings are not

always followed up with the right intervention. So Louis was still experiencing the difficulties he faced every day at preschool and the more severe challenges found in terms of language in elementary school. Repeated failures and difficulties encountered, without any appropriate accommodations had an impact on Louis' behaviour when he was diagnosed at the age of close to 10 years.

Early detection of dyslexia can start from the age of under 3 years. The most frequent complaints were speech delays and non-silent behaviour. Louis has a speech delay in his development. Early identification can also be done when children start school activities. The ability to self-regulate when temporarily separated from parents can be observed from preschool age. Louis has been found to have these symptoms. However, this matter has not been carried out in a structured manner and has not corrected his attitudes to conform to the social norm.

A dyslexic individual can have more than one comorbid condition and rarely even stand alone. Dyslexia conditions along with dyscalculia and overlapped attention deficit are very common, making reading numbers a real challenge. Dyslexia and dyscalculia also affect how children comprehend word problems, use formulas, and perform calculations using the right mathematical order. They also do not have visual images in their mind about clusters of numbers or arithmetical strategies. Those conditions make them use immature problem-solving and inefficient strategies to solve problems (Hayes, 2018).

Language development and behaviour are closely related. Behavioural problems are seen in executive function disorders. Executive function is a mental process that individuals have for self-control, working memory, and cognitive flexibility. Children with language disorders also have executive function problems, namely working memory. Good language skills require thought processes, memory work, and execution of the speech muscles. (Alia, Munadia, & Aufi, 2021)

In observing children with language development delayed, some indicators of language immaturity in dyslexia at risk are seen. The child does understand what is being said, but cannot articulate a suitable response. The child speaks in single words or disjointed sentences and struggles to learn new words. He relies on routines to understand what is being said and gets very upset when routines are changed. These sorts of communication difficulties can be very frustrating for a child with dyslexia, and this, in turn, can cause problems with behaviour, and impact overall learning and therefore his academic potential (Hayes, 2018).

The Up and Down: Behavioural Management

Behaviour that appears to be very difficult to manage is a form of impulsivity. Impulsivity is one of the predominant forms of ADHD. The ability to self-regulate is also part of the

executive functions. The behavioural journey found in Louis started from a young age, since the age of 3, parents have found that children have difficulty participating in joint activities at school. Since entering elementary school age, language difficulties are becoming more evident and parents find their children unable to follow lessons at school, especially in the language area.

Louis has a combination of symptoms and signs of ADHD, with a predominance of impulsivity. In the learning process, it is not only hyperactivity that becomes a learning barrier in ADHD. However, dominating inattention and impulsivity also interfere with the learning process. In DSM V hyperactivity and impulsivity are explained as 'often leaves seat in situations when remaining seated is expected, often unable to play or engage in leisure activities quietly, often interrupt or intrudes on others. (Association, 2013). Because there is a problem of impulsivity, Louis also has difficulty responding to signs of social language appropriately, so the behaviour that appears is behaviour that shows anger.

The impulsive behaviour shown by Louis occurs during the learning process, where it takes a readiness to learn, sit, listen, follow directions, understand new concepts, and ask questions. This learning readiness is shown in a good executive function. (Semenov & Zelazo, 2018).

The explanation for this fluctuating behaviour is due to several factors. The first is the condition of severe dyslexia (including social (pragmatic) communication disorder), the age at which dyslexia was first diagnosed, and inadequate intervention.

The delay in diagnosis is due to not many professions in Indonesia that can distinguish dyslexia from other conditions. So that delays in diagnosis can occur. Whereas dyslexia that is not managed until the age of 8 years can be left behind and will be difficult to catch up. Louis himself was diagnosed at the age of 9 years and 11 months.

If a determined assessor draws on enough cognitive measures, it is relatively easy to find strengths, weaknesses, and discrepancies and subsequently build a richer diagnosis. And for receiving institutions, there are also some challenges. The clinical judgment and processes behind what has been seen as behaviour and social-emotional problems in Louis are also not easy to translate into proper accommodations. It is hardly surprising, therefore, that a high level of heterogeneity exists in assessor practices, with significant inconsistency and reliability in the way that dyslexia is diagnosed. (Elliot, 2020)

Postponing diagnosis, and then basing a determination on the individual's response to educational intervention, poses a significant existential threat to a vast, growing, and often problematic dyslexia assessment (Elliot, 2020). It becomes more complex because it is not dyslexia that is late to treat but also ADHD. Evidence-based treatment for ADHD is initiated with behavioural parenting training, behavioural intervention, and medication.

Delaying evidence-based therapy is a future problem for mental health. (Jones & Rabinovitch, 2014)

Interventions for dyslexia before entering school prepare the child to be ready for school. School activities are complex, dynamic, and sometimes full of challenges, but should be fun. Aspects covered in school readiness include the child's health condition, evaluation of independence abilities, evaluation of psychological maturity, and evaluation of academic performance. (PMR Specialist Approach to Children's School Readiness, 2020)

The disturbances in behaviour due to the opposite disorder are associated with distress in the individual or his social context and impact negatively on social, educational, occupational, or other important areas of functioning. Behavioural issues related to language problems as the core of dyslexia are affected greatly in the matter of the development of cognitive functions, including perception, attention, and short-term memory. Delayed language development may hinder the development of sustained attention and can lead to poorer and more slowly developing receptive and expressive language disorders. The association between language and attention is very related to vocabulary development. (Maniadaki & Kakourus, 2018)

Parents Involvement

Parents' involvement is important in the overall cognitive development of a child. A child with genetically challenging behaviour is not easily managed. Therefore, parenting behavioural training should begin as early as possible. Parental behaviour training is proven as one of the core methods to manage behaviour in preschool hyperactivity and inattentive children. Hyperactive preschoolers need guidance on how to behave, how to control reactions, and flexibility in emotional response. While children in inattentive predominant should be given constant reminders, structured instructions, an activity that increase their awareness, and sometimes should involve all of their sensory modalities. Even in inattentive children, impulsivity can also be found. Emotional regulation is one of the cognitive flexibility contexts of executive functions sometimes become challenging in managing behaviour. That difficulty should be acknowledged by parents. Moreover, parents with the same problem during childhood, if they grow up with a lack of compassion, would perform the same way parenting to their child. That is why one of the biggest challenges is to make parents realize their condition and that their children are genetically inherited. Parents with ADHD and emotional disturbances also need to take treatment. Therefore, the first thing in parental involvement is full consideration and full awareness of parents about their condition.

Louis's parents had attended seminars and workshops about dyslexia held by the Dyslexia Association of Indonesia. They are also actively involved in community activity that gathers dyslexic children and families to support each other. Louis is encouraged to

join some clubs in the community such as the chess club, and Catholic Youth Club, and frequently meet up with peers and cousins.

From clinical experience, dyslexic children with severe social language disorders are usually accompanied by parents who also might have social language disorders. In clinical practice, in the observations during the assessment, parents of children with dyslexia and severe social language disorders, also have limitations in oral expression, rarely ask questions during consultations or evaluations, look stiff or less flexible, and have minimal facial expressions. Other parents with social language problems and adult ADHD look very anxious, often interrupt during explanations, or expect quick results.

Parental involvement is also key in drug administration. Louis's parents had a hard time getting Louis to take medicine for various reasons, and the parents did not adequately correct Louis's drug-hiding behaviour. During the program, Louis's parents followed each evaluation, listening to directions and input. However, in the evaluations, most of the parents did not do what was directed e.g., ask Louis to be responsible for the pets (toileting, feeding). This simple task is even carried out by a household assistant. Louis was also asked to do regular physical activities every day such as morning walks, walking the dog, and riding a bicycle. This directive was not carried out because Louis did not want it to.

During periodic evaluations, parents need to be given briefings to understand what is happening to their children, know strategies that need to be done at home, and monitor programs that are carried out at home. This all requires effort, creativity, struggle, and high tenacity from parents. Adults with ADHD and anxiety often have planning disorders or executive dysfunction. so that they also have difficulty starting to prioritize which one comes first for the child. This is where the role of parents (as individuals who monitor dyslexic children at home) needs to receive guidance, counseling, and periodic evaluation of their emotional status. Therefore, other professionals are also needed, such as psychologists, psychiatrists, and support groups.

Parents are a key role. Parents can be given homework as a helpline for both parents and students. Parents can also be a connector between professional and school institutions. Effective communication with the school can provide parents with considerable support. (Reid, 2011). Schools are expected to have sufficient knowledge of children's conditions and provide adequate resources to manage children's special learning needs. Parents are also expected to give feedback to teachers about their child’s learning profiles.

Communication between parents and school is important as it can help to clear up any misunderstanding and help both parents and school to work collaboratively and positively. (Reid, A complete guide for parents and those who help them, 2011). Parental involvement from early childhood, especially for ADHD children with language and social

skill problems should be helped by lesser verbal instructions. Teachers and parents should adopt a more directive and less interactional demanding and supportive verbal style of communication. (Maniadaki & Kakourus, 2018)

Social Competency Develop within Remedial Teaching

Social competency is one of the challenging skills to achieve. Entering a new social life (new school, new sports clubs, new dance club) for dyslexic learners needs preparations. In this case, we found Louis very hard to start a conversation, express his feeling (dislike or like), or join a fun game during break. These skills are important to enter social life. Likewise in the remedial teaching of dyslexia, social competence also should be taught in structured and systematic constructs. These layers of competency are not always seen as a learning curve for parents, professionals, or educators. It is the same as when we are teaching math.

What makes dyslexics have real difficulties in social languages, such as Louis experienced? The typical human brain is programmed to deal first with its owner's survival and emotional needs. Consequently, the human brain has learned over thousands of years that survival and emotional messages must have high priority when it filters through all the incoming signals from the body's senses. The pathway of emotional signals starts from the thalamus and takes two different routes through the amygdala. The first pathway, called the thalamic pathway, sends the signals directly from the thalamus to the amygdala. The second possibility called the cortical pathway is for the thalamus to direct the signals first to the cerebral cortex (in the cerebrum) for cognitive processing, and then to the amygdala. (Sousa D. A., 2016) The first pathway if it continues to rise then emotional responses become prominent.

However, if the second pathway (amygdala first then cerebral) is built through a series of environmental support and accommodation, the fear or anxiety will be resolvedwith good coping skills. An example of the first path, for example, the child hears the teacher asking children in the class to tell a story about a hobby, and the child is silent and cries. If this pathway is strengthened, because no correction has been made for this kind of behaviour, then it will progress into phobia, anxiety, antisocial, and other mental health issues. Meanwhile, if the second path is activated, the steps chosen by the child are (with the help of others, if the child has not found a way) asking for extra time, to think about his hobby, try self-talk, write it down and step in front of the class. Therefore, psychotherapy alone is rarely successful in treating anxiety and phobias without real-life implementation. (Sousa D. A., 2016)

What steps we made for Louis are divided according to his emotional and behavioural issues. First, we created opportunities to start a conversation. We We do not pursue the conversation always in two ways. Verbal responses and body gesture approval are welcome.

The teacher starts with a topic that is interesting to Louis, which is chess. He was allowed to present how to play chess. And we allowed him to speak on his level current abilities (chosen words, ideas, as much time as he needs) and sometimes we allowed him to have "thinking time". These are the strategies to teach communication skills to a starter like Louis.

A form of social language disorder in dyslexia is often considered a form of introverted character or part of a lack of stimulation. The forms of social language difficulties are listed in the detailed description of social communication disorder in DSM-V. This disorder is in the form of difficulty obeying social rules and conventions of language (ie, greeting by the context and sharing information), impairments in changing communicative style by the situation or needs of the listening party, waiting for conversational turns, reformulating communicative intent in case of misunderstandings, knowing how to use verbal and nonverbal iconic gestures in the context of the speech, and problems in inferring the implied message with metaphors/ironies/ similes/aphorisms. Features supporting diagnosis as per DSM-5 include a delay in acquiring spoken language, along with current/ lifetime structural language disorders. The affected children are also reported to display elevated levels of ADHD, LDs, and behavioural problems. (Topal, Samurcu, Taskiran, Tufan, & Semerci, 2018)

What is even more complicated is dyslexia is not a singular condition. Behaviour issues as part of ADHD altogether complete the complexity. These social skills difficulties negatively impact their social interactions, including forming positive peer relationships. Difficulties in early language development in children with dyslexia and ADHD in turn further minimize opportunities for language skills development. (Maniadaki & Kakourus, 2018) Therefore, early treatment of these problems is of paramount importance. Early treatment to reduce the severity of dyslexia will decrease the possibility of arising comorbidity in a later stage.

How can we build social competency? Social competency is the ability to handle social communication effectively. (Orpinas, 2010) Building competence in any form requires a strong base. Competence is built in stages like stairs or pyramids. However, there is no peak in social competence. Start social skills, it takes stages. This competence can be built from the smallest environment, namely the home, by starting communication with children. If the child has entered a group activity, such as a sports group, home environment group, or group with the same interest, teach the child to start a conversation. To choose what activities to participate in, choose relatively simple activities, go to a basic class first, or a class with a small number of participants. To help children overcome social anxiety, regularly observe child's interaction with other children, observe, and positively give feedback. (Franklin, 2018)

Therefore, we need a formal emotion-curriculum based. The program should be designed to provide a forum for open, non-judgmental discussion of social-emotional issues and to

teach specific social-emotional skills. Topics common to all grade levels include listening, cooperating, understanding other feelings, expressing feelings appropriately, responding to difficult behaviour, and problem-solving. (Stein, 2010)

In remedial intensive intervention for Louis, teachers use multisensory methods and creative and different ways of delivering concepts to make Louis understood. It is not an easy task to teach children with behaviour challenges like Louis. However, over time, using strategies that are structured and systematically given, instant feedback and appraisal needs are given, and the behaviour became calmer and easier to control. It is not enough to only use multisensory methods and give each dyslexic student the same task and material. Teachers in remedial classes also define the strengthened point of Louis. Louis is actually a holistic thinker; he can find a problem solver for some math problems after practicing the material. Therefore, it is also important to have objective observations. (Stacey & Fowler, 2020)

Remedial teaching described in various strategies could assist learning in many different ways. Techniques to assist learning in remedial include mental and visual mind exercises to manipulate information given. Chunking information into smaller parts helps working memory work efficiently. (Stacey & Fowler, 2020) A recall is also provided with taking notes, preferably with handwriting. All the information is collected and consolidated in certain ways needed. Using mind mapping to review all the information along with verbal self-talk. Finally, metacognition is practiced in highly demanding reading comprehension. (Scheff, Hudson, Tarsha, & Cutting, 2018)

Transitional Stages to Higher Education

Transition to the next school. Can dyslexia and its various co-morbidities give Louis the opportunity to attend university? Or the choices are limited, considering the complexity of assignments, lectures, and group learning that will be faced at the university level. We should not rule out anything that could happen. The most important thing is to provide readiness for Louis wherever he goes to school, it needs to be ensured according to his choice. Learning problems will always be there. What needs to be prepared, of course, are basic understanding skills in public places. For example, using public transportation, viewing class schedules, collecting assignments according to deadlines, and exam schedules. All these activities are summarized in the executive functions exercise. Therefore, executive functions must be an important part of the school readiness assessment which is continuously trained, corrected, and increased levels of difficulty in a child's daily life.

Entering college will make children face much bigger challenges. The increasingly tiered complexity and fast dynamics require an ability not only good executive function. But moreover, it requires metacognitive awareness. Metacognitive awareness refers to students' self-understanding of their learning profile, as well as their strength and

weaknesses in academic and social situations, influencing their selections of specific strategies for academic tasks. These processes should be reflected in executive function processes for example reading comprehension, written language, homework, and studying for exams. (Meltzer, 2018)

CONCLUSIONS

Labelling or diagnosing child development problems is important for professionals in the field of child development. Delay in establishing a diagnosis result in delays in intervention. Brain development takes a long time to accept something new, especially to change behaviour. Attitude correction, challenging behaviour correction, and unexpected behaviours must be carried out by all parties in a structured manner. Reading problems in dyslexia must also go hand in hand with improving social language skills.

Managing social emotions requires practice, learning, and settings that require children to adjust socially. Social competence is formed with a special strategy that is continuous so that the attitudes, thought patterns and actions shown by the child are as expected social norms.

Providing explicit instruction for specific emotional regulation skills is important throughout all activities. As we know with dyslexia, learners have difficulty in working memory and slow processing speed. Schools and other higher-graded institutions also must provide appropriate academic support to decrease emotional triggers.

In the future, it is hoped that more parties will be open to deepening dyslexia and looking at dyslexia comprehensively. Organizations working in the field of dyslexia are also expected to develop terminology that includes conditions other than reading difficulties. The agreement and the common vision of all parties are expected to provide more understanding for professionals and to join hands to prevent failure in dyslexic children.

REFERENCES

Alia, D., Munadia, & Aufi, A. (2021). *Language Disorders in Children-Relationship with Future Quality of Life.* Banda Aceh: Syiah Kuala University Press.

Association, A. P. (2013). *Desk Reference to the Diagnostic Criteria from DSM-5*. Arlington: American Psychiatric Publishing.

Elliot, J. G. (2020). It's Time to Be Scientific About Dyslexia. *Reading Research Quarterly*, pp. S61-S75.

Franklin, D. (2018). *Helping your child with language-based learning disabilities*. Oakland: Raincoast Books.

Hayes, C. (2018). Developmental Dyslexia from Birth to Eight. New York: Routledge.

Jones, H. A., & Rabinovitch, A. E. (2014). Evidence -BAsed Treament of Attention-Deficit/ Hyperactivity Disorder in Children and Adolescent. In C. A. Alfano, & D. C. Beidel (Eds.), *Comprehensive Evidence-Based Interventions for Children and Adolescent* (pp. 177-189). Hoboken, New Jersey: John Wiley & Sons.

Maniadaki, K., & Kakourus, E. (2018). *The Complete Guide to ADHD Nature, Diagnosis, and Treatment.* New York: Routledge.

Meltzer, L. (2018). Creating Strategic Classroom and School Emmbedding Executive Function Strategies in Curriculum. In L. Meltzer, *Executive Functionin Education from Theory to Practice* (pp. 263-299). New York : Guilford Publications.

Orpinas, P. (2010). Social Competence. In I. B. Weiner, & W. E. Craighead (Eds.), *The Corsini Encyclopedia of Psychology* (pp. 1623-1625). New York: John Wiley & Sons.

Reid, G. (2011). *A complete guide for parents and those who help them*. West Sussex: John Wiley & Sons.

Reid, G. (2012). *Dyslexia* 3rd Ed. London: Bloomsbury Publishing.

Reid, G. (2017). *Dyslexia in early years*. London: Jessica Kingsley.

Saltz, G. (2017). *The Power of Different*. New York: Flatiron Books.

Scheff, J. D., Hudson, N. M., Tarsha, M., & Cutting, L. E. (2018). Executive Function and Reading Difficulties. In L. Meltzer, *Executive Function in Education from Theory to Practice* (pp. 201-17). New York: Guilford Publications.

Semenov, A. D., & Zelazo, P. D. (2018). The development of hot and cool executive function, a foundation for learning in the preschool years. In L. Meltzer, *Executive Function in Education* (pp. 86-93). New York: Guilford Press.

Solek, P., & Soegondo, K. D. (2018). *Dyslexia Today Genius Tomorrow* (2 ed.). Bandung: Dyslexia Association of Indonesia.

Sousa, D. A. (2016). How the special needs brain learns, 3rd ed. London: SAGE Publications.

Specialist, I. A. (2020). PMR Specialist Approach to Children's School Readiness. In M. S. Prananta, Munadia, & R. N. Hartanto, *School Readiness, Assessment Guide and Recommendations for Physical Medicine and Rehabilitation* (pp. 29-37). Jakarta: Indonesia Association of Physical Medicine and Rehabilitation Specialist.

Stacey, G., & Fowler, S. (2020). *Development of Dyslexia and other SpLDs*. New York: Routledge.

Stein, J. A. (2010). Emotional self-regulation: A critical component of executive function. In L. Meltzer, *Promoting Executive Function in the classroom* (pp. 175-188). New York: Gilford Press.

Topal, Z., Samurcu, N. D., Taskiran, S., Tufan, A. E., & Semerci, B. (2018). Social communication disorder: a narrative review on current insights. *Neuropsychiatric Disease and Treatment*, 2039–2046.