

SPECIFIC LEARNING DISABILITY: UNDERSTANDING DYSCALCULIA

by:

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Specific Learning Disability (SLD) refers to a group of neurological impairments that affect a student's ability to learn, understand, or utilize academic skills like reading, writing, or math, a concept widely recognized in current special education literature (Kirk et al., 2015). A less commonly acknowledged yet important type of SLD is dyscalculia, which mainly impacts mathematical comprehension and processing of numbers. Dyscalculia is unrelated to intelligence; numerous people with dyscalculia have average or higher intelligence yet find it challenging to comprehend numbers, remember mathematical facts, and execute calculations (Butterworth, 2019). These challenges stem from variations in the brain's processing of numerical data, especially in regions linked to number sense and the representation of quantities (Dehaene, 2011). Aside from mathematical challenges, dyscalculia can impact working memory, sequencing, and spatial reasoning; however, individuals might demonstrate strengths in creativity, verbal reasoning, and problem-solving outside of mathematical situations (Dowker, 2019).

Common indicators of dyscalculia consist of struggles with number recognition, difficulties in grasping quantity relationships, regular mistakes in simple arithmetic, and issues in recalling math facts like multiplication tables. Students might also find it difficult to grasp concepts of time, measurement, and monetary calculations. Timely recognition is crucial, since unresolved numerical challenges can greatly impact long-term academic and practical abilities (Butterworth, 2019). In the Philippines, the Department of Education (DepEd, 2021) highlights inclusive education and mandates that schools provide accommodations and interventions for students with disabilities, including those

facing learning challenges like dyscalculia, to ensure fair access to quality education. Educators and guardians might notice challenges in counting, contrasting amounts, or comprehending mathematical symbols.

To properly evaluate dyscalculia, medical and educational experts like psychologists and developmental specialists employ thorough assessments utilizing standardized instruments. These comprise cognitive evaluations, numerical reasoning assessments, memory tests, and mathematics proficiency examinations. Typical tools consist of the Wechsler Intelligence Scale for Children (WISC-V), the Woodcock-Johnson IV Tests of Achievement (2014), and the Test of Early Mathematics Ability (TEMA-3). These instruments assist in pinpointing particular strengths and weaknesses, directing suitable intervention methods.

Educational institutions are vital in assisting students with dyscalculia by offering adjustments that enable them to engage with mathematical concepts successfully. As per Dowker (2019), personalized teaching methods are crucial for tackling challenges in numerical learning. Accommodations might involve permitting calculators, granting additional time for exams and assignments, utilizing visual tools like charts or number lines, and dividing math tasks into more manageable steps. Instructors can also utilize manipulatives, practical examples, and incremental guidance to enhance comprehension. Structured, multisensory strategies and direct instruction of number sense are frequently advised within the inclusive education practices endorsed by DepEd (2021). Establishing an inclusive classroom atmosphere aids in diminishing math anxiety, promotes involvement, and fosters learner self-assurance. Cooperation between educators, caregivers, and experts guarantees reliable and efficient assistance.

In summary, dyscalculia is a prevalent and manageable learning disorder based on variations in numerical processing instead of a deficiency in intelligence or effort. By identifying early, conducting suitable assessments, and applying supportive educational methods, students with dyscalculia can surmount difficulties and acquire valuable

mathematical abilities. According to Butterworth (2019), acknowledging the challenges and possible strengths of individuals with dyscalculia is crucial for enhancing their academic development and self-esteem.

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