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# The Problem Of Numeration Difficulties (Dyscalculia) In Children: Systematic Literature Review

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### Masalah Kesulitan Berhitung (Diskalkulia) Pada Anak: Sistematik Literatur Review

#### ARTICLE HISTORY

#### **ABSTRACT**

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Abstract: This research aims to find the main themes and research categories regarding numeracy difficulties (Dyscalculia). For the data taken to fulfil the objectives of this research, the author searched for several relevant sources from Google Scholar and Scopus (SAGE et al. & Francis). Four combinations of keywords determined articles; then the articles were included in the data collection, and researchers applied a systematic literature review method. Articles that will be research sources are limited to the last six years. The dominant research methodology of the articles reviewed is qualitative. The four main themes revealed from the qualitative content analysis are dyscalculia, causes of dyscalculia, cases of dyscalculia, and solutions to overcome dyscalculia. Articles are filtered starting from topic description, eligibility criteria and search strategy. The total number of articles reviewed was 198 from different sources, namely Springer, Elsevier, SAGE, Eric, and Taylor & Francis. Then, it was reviewed again to obtain 87 articles. Then, reviewed again according to the theme in the title, 50 articles were found that were most suitable. Of the 50 articles that are most suitable for deeper study, dyscalculia occurs throughout the world. The cause of dyslexia can be due to developmental errors during pregnancy or other factors such as physical defects or the child's habits. The solution offered by the teacher is to use several learning methods and media that are appropriate for the child's condition.

Keywords: Dyscalculia, difficulty calculating, causes, solutions

Abstrak: Tujuan dari penelitian ini adalah untuk menemukan tema utama dan kategori penelitian tentang kesulitan berhitung (Diskalkulia). Data yang diambil untuk memenuhi tujuan penelitian ini, penulis melakukan pencarian dari beberapa sumber yang relevan dari google scholar dan scopus (SAGE, Elsevier, springer Eric, dan taylor & francis). Artikel ditentukan dengan empat kombinasi kata kunci, kemudian artikel dimasukkan dalam kumpulan data, peneliti menerapkan metode tinjauan pustaka sistematis. Artikel yang akan menjadi sumber penelitian dibatasi enam tahun tahun terakhir. Metodologi penelitian yang dominan dari artikel yang diulas adalah kualitatif. Empat tema utama yang terungkap dari analisis konten kualitatif adalah: diskalkulia, penyebab diskalkulia, kasus diskalkulia, solusi mengatasi diskalkulia. Artikel disaring mulai dari Deskripsi topik, kriteria kelayakan dan strategi pencarian. Total artikel yang dikaji adalah 198 dari sumber yang berbeda yakni springer, Elsevier, SAGE, Eric, dan Taylor & Francis. Kemudian di kaji lagi sehingga didapat 87 artikel. Kemudian dikaji lagi sesuai tema pada judul didapat 50 artikel yang paling sesuai. Dari 50 artikel yang paling sesuai dikaji lebih dalam bahwa diskalkulia terjadi diseluruh dunia. Penyebab diseleksia bisa karena kesalahan perkembangan pada saat kehamilan atau factor lain seperti cacat fisik maupun kebiasaan yang dilakukan anak. Solusi yang ditawarkan guru adalah menggunakan beberapa metode dan media pembelajaran yang sesuai dengan kondisi anak

Kata Kunci: Diskalkulia, Kesulitan berhitung, Penyebab, solusi

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#### INTRODUCTION

Education is basically a right for every public without exception. Must study 9 years Already planned government, then from That No There are parents' reasons No provide education to his son. In accordance with the 1945 Constitution, Article 31 Paragraph 1 reads that every citizen has the right to education. Regulation Government Number 47 of 2008 Article 12 paragraph 3 Government district/city must strive for each Indonesian citizen age must Study follow the mandatory program studied nine years (PP No. 47 Tahun 2008 Tentang Wajib Belajar, 2008).

It is just that there is still a poor society to get a decent education. We Look at many news struggles struggling children tens of kilos until to school; some have even arrived bet life with spread river and up and down the mountain. Of course, This must become the attention of a special government To fix it. Problems aside, a lot of experienced children \_ have difficulty learning. That is caused Because there exists disturbance in the development of the child. In 2019, the Ministry of Research and Technology Higher Education took note that around 3 million children experience difficulty in studying (Suartini, 2022). the data Keeps going to change every year.

Mathematics is one Subject considered difficult by Most students, especially in Indonesia. This becomes a problem that goes down hereditary and becomes a mindset for Society. That thing Can caused by the means of teaching and the methods used in teaching. Learning mathematics is often faced with a number of people's possible problems that influence the experience of Study students. One main problem is difficulty understanding concepts based on mathematics, which can make students feel hampered in understanding more complex (Graven et al., 2022). Apart from that, many students experience a lack of motivation to learn mathematics Because perception about the subject is difficult and lacks relevance in life every day. Lack of practice and fear of errors also occur in general because mathematics needs consistent exercise and tolerance to error. In some cases, a problem environment, good in form disturbance or incompatibility method teaching with style Study individual, can hinder understanding mathematics (Kilpatrick; Jeremy, 2002). In overcoming problems, It is important To look for suitable solutions to the needs and style of each student's learning, as well as put forward important motivation, understanding draft basics, and regular practice in learning mathematics.

Apart from the problems above, in learning mathematics, there is the term dyscalculia. Namely, problems experienced by students with difficulty in counting or known term dyscalculia. Numeracy problems, otherwise known as dyscalculia, is disturbance influencing the learning ability of somebody To understand and use draft mathematics. Individuals who experience dyscalculia face various challenges, such as difficulty in remembering facts in mathematics (Mutlu & Levent Akgün, 2017), difficulties in operation arithmetic basic, or difficulty in understanding connection mathematical. Dyscalculia is not simply inability or reluctance in mathematics; This is a problem involving neuropsychology, a dysfunctional brain in processing information mathematics. For those who experience dyscalculia, the learning process of mathematics Can become very difficult and challenging. Therefore, educators and experts in health need to identify symptoms of dyscalculia early and give appropriate support to affected individuals so that they Can overcome problem counting and reach success in mathematics education (Anobile et al., 2018).

#### **Literature Review**

Difficulty Studying is often called a *learning disability, which is a* symptom Where a child is No capable of learning. Researchers have classified and identified various types of difficult learning (*learning disabilities*), their causes, and their solutions. The researcher quotes a number of relevant



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sources related to a study in between related articles with resultant learning (*learning disabilities*), including dyslexia, dysgraphia, and dyscalculia.

### Dyscalculia

Dyscalculia is one of the most difficult learnings experienced by Indonesian children. Cuskelly describes dyscalculia as interference with the ability to solve problems in normal math, resulting in a dysfunctional brain (Cuskelly & Faragher, 2019). Another definition reveals that Dyscalculia is difficulty Studying to understand mathematics (including symbols mathematics ) (Castaldi et al., 2020; Peters et al., 2018). In Wikipedia, media Dyscalculia is mentioned as something abnormality that is difficult to Study, especially in understanding Arithmetic; for example, it is difficult to process something numbers, it is hard to change numbers, count, and study knowledge other in mathematics. Informally, sometimes dyscalculia, also called " dyslexia math ", can just become confused under Lots of different conditions (Morsanyi et al., 2018; Wilkey et al., 2020). Based on the Diagnostic and Statistical Manual Of Mental Disorders, disturbance mathematics is one disturbance Study (van Luit, 2019; Vandervert, 2017). Dyscalculia is initially identified, in study cases, with suffering patients' inability in arithmetic as a consequence of damage to the brain. Draft difficult math understood sometimes is draft number basic. Children with disturbance dysculia must handled with good and special (McCaskey et al., 2018). Parents must pay attention and make notes on the growth of their child and share them with doctors and teachers. Dysaculia tend to be detected the moment the child starts to move on to adulthood.

Children with dyscalculia are different from children who think of mathematics as a difficult lesson (Monei & Pedro, 2017). Children who think mathematics is difficult can do so because of the teacher factor that provides learning that is not fun. However, it could also be because of the use of methods or media that are not right. So simple questions are considered difficult Because planting is the wrong concept. Child sufferers with dyscalculia are No capable of differentiating symbols in the simplest mathematics, although given good models, methods and media.

Dyscalculia is understood as the condition in which a person experiences difficulty in Studying mathematics (De Visscher et al., 2018a; Juniawan, 2021). Students with dyscalculia often experience difficulty in mentioning things that are known and asked about, doing calculations, and applying formulas. This article also notes that students with dyscalculia often make errors in conceptual, procedural, and technical moment finish question mathematics, in particular question logarithm.

Dyscalculia be marked by difficulty in processing information numeric and arithmetic, with cognitive decline in this area affecting 5-7% of the population brain student dyscalculia (Fauzan et al., 2022). Although there is a challenge, students' dyscalculia own average intelligence and not nerve disorders or their brain. Reason main dyscalculia is often linked with a cognitive decline in the brain, especially in memory processes. Decline cognitive This can cause a loss of trust in self and anxiety in Studying mathematics, which can hinder processing information in memory Work (De Visscher et al., 2018a). As a result, students with dyscalculia can experience a decline in their abilities to do calculations in an academic or in life every day. They may also be more often dependent on other methods, like counting with a finger, which can increase the possibility of error calculations.

Characteristics of child sufferers of dyscalculia include panic every time they meet lesson mathematics or disappointment If they find games or games that require ability counting (De Visscher et al., 2018b; Michels et al., 2018). Suffering children with dyscalculia Still count with fingers when other children his age Already. No, Again, do it. Apart from that, they find it difficult to estimate size; for example, how tall is something or how long does the journey take? From One place to another. Calculating the most basic mathematics, such as addition, subtraction, multiplication and division,



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makes it difficult for children to understand and learn dyscalculia (Cheng et al., 2020; Haberstroh & Schulte-Körne, 2019). They are confused with similar numbers, such as 75 and 57, 65 and 56 and other numbers the like. A dyscalculic child can question mathematics on a day, but tomorrow the day, The same will forget The method (Álvarez; Cristina De-La-Peña, 2018; Bulthé et al., 2019).

Difficulties Study can owned by anyone. However, along with it, time, Of course, will be lost If given proper treatment. Besides, it is the child who suffers difficulty Studying on Of course own excess in field others, for example, own skill draw or superior from the motor aspect. Researchers are very interested in discussing difficulties learned that have been stated above, but we will limit it to the theme of difficulty Study mathematics (dyscalculia),

From the explanation above, inside the study, This writer gives a number of questions research:

- RQ 1: How is the distribution article related to difficulty counting (dyscalculia)?
- RQ 2: What many methods \_ are used To overcome difficulty counting (dyscalculia)?
- RQ 3: What reason is the main difficulty counting (dyscalculia)?

#### **METHOD**

#### **Research Design**

Study This uses a systematic method review Where the writer research article related to difficulty. Study dyscalculia and How alternatives are offered. As Uman points out in the review References systematic, findings study previously checked For identify consistent and recurring themes (Uman, 2007). Review methods are systematically different from review References, with the monitoring process managed qualitatively well and very organised, where researchers tend to cover more material from more databases. A little For writing Literature review (Irshad & Yasmin, 2022; Robinson & Lowe, 2015).

### **Procedure Study**

Study systematically in the form of a literature review, something approach methodology that is detailed and structured to evaluate relevant literature with topic study. The research process A systematic literature review was initiated with the identification topic clear research and questions specific research. The first step involves searching literature in academic databases, digital libraries, or journal scientific. Selection of literature is made based on criteria inclusion and exclusion that have been set, which include type publication, year publication, or relevant topic.

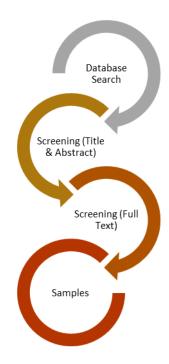
After the relevant literature is identified, the next step is to evaluate the quality of the selected literature. This includes evaluating the methodology research used, strengths and evidence, and the reliability of the data presented in the literature. The result of evaluation quality This can used To determine level proof or enforceability results in literature review analysis.

After the literature is selected and assessed, the step further is the preparation and presentation of findings from the literature. It involves the synthesis of information from various sources For answer question studies or goals that have been determined. Finally, in a deep study systematic literature review, there is a step critical others, viz compile conclusion and identification gap existing knowledge in the reviewed literature. It will help formulate the direction of future research and provide valuable insight to readers and researchers.



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**Figure 1. Article Selection Process** 

#### **Population and Sample**

To support the objective study, three important databases were selected that focus on difficulty Studying dyslexia, dysgraphia and dyscalculia (Elsevier et al.). The population will use related articles with difficulty counting (dyscalculia), which is the English language. Samples will be used in related articles with dyscalculia.

#### **Data Collection**

Search done from April to May 2023 in the part title and abstract of every language article in English. We search and collect article-related journals and books with titles. The goal is To identify related articles with difficulty counting (dyscalculia) or related topic areas with title. To make it easier to search, we used the keywords: "learning disability" and "dyslexia" to make it easier for us to look for an appropriate article with a goal. The following three combinations of keywords were used in the search: "dyslexia AND systematic review". Search systematic sequential done in the two databases mentioned above. Therefore, from one database to another database, papers are issued manually to extract unique results and to make the study more fluent.

#### **Data Analysis**

Researchers identify all related topics with difficulty counting (dyscalculia) acquired from different sources. Next, researchers independently analyse findings and analysis qualitative done manually with count frequency theme major in all where did you get the article? All data are compared and contrasted (Fraenkel et al.). The researcher makes a list of words and then categorises every article obtained. Lastly, it is necessary to remember that the review References article Was written after the identification theme appeared as a results analysis. Therefore, the writer decides To form a structured review of References based on a theme.



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### **Screening and Assessment**

Screening involves inspection of the title and abstract; provisional evaluation involves reading and checking the complete text paper. In every stage of the process, the author archives data automatically, systematically and structured in the application management reference to make it easier to search history. Screening and assessment results are presented in the following table.

**Table 1. Description Topic** 

Table 1. Description Topic			
Criteria	Information		
Population and Problems	Difficulty counting (dyscalculia) in students school base		
	-		
Intervention	Solutions and alternatives to proper learning for Child sufferer dyscalculia		
Comparison			
Results	Issues related to difficulty Studying dyscalculia in students' school base		
Context			

Table 2. Criteria Appropriateness

Table 2. Criteria Appropriateness			
Criterion (C)	Inclusion (IC)	Exceptions (EC)	
Study Topics	- The study discusses about difficulty counting (dyscalculia) ( IC 1)	- The study discusses about difficulty counting (dyscalculia) regularly general (EC1)	
	- Study studies difficulty numeracy (dyscalculia) (IC2)	- Related studies with difficulty numeracy (dyscalculia) ( EC2)	
Document Type	- Articles published in journals Scientific Indexed Scopus (IC3)	<ul> <li>Articles presented at the conference, summary dissertation, or thesis (EC3)</li> <li>Article in see related reviews with title (EC4)</li> </ul>	
Language		- Apart from English (EC5)	
Period	- Retrieved online articles is six-year-old article last (2017 – 2022) (IC4)	-	



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**Table 3. Search Strategy** 

Database	Information
Springer	[ All:" learning disabilities ( dyscalculia )"] OR [ all:" all dyscalculia"] AND [ All:" child "] AND [ All:" students school base basic "] AND [ all:" alternative learning "] AND [ all:" dyscalculia "] AND [ Publication Date:01/01/2017 TO 12/31/2022] Access Type: Open Access and Purchase
Elsevier	[ All:" learning disabilities ( dyscalculia )"] OR [ all:" all dyscalculia"] AND [ All:" child "] AND [ All:" students school base basic "] AND [ all:" alternative learning "] AND [ all:" dyscalculia "] AND [ Publication Date:01/01/2017 TO 12/31/2022] Access Type: Open Access and Purchase
SAGE	[ All:" learning disabilities ( dyscalculia )"] OR [ all:" all dyscalculia"] AND [ All:" child "] AND [ All:" students school base basic "] AND [ all:" alternative learning "] AND [ all:" dyscalculia "] AND [ Publication Date:01/01/2017 TO 12/31/2022] Access Type: Open Access and Purchase
ERIC	[ All:" learning disabilities ( dyscalculia )"] OR [ all:" all dyscalculia"] AND [ All:" child "] AND [ All:" students school base basic "] AND [ all:" alternative learning "] AND [ all:" dyscalculia "] AND [ Publication Date:01/01/2017 TO 12/31/2022] Access Type: Open Access and Purchase
Taylor & Francis	[ All:" learning disabilities ( dyscalculia )"] OR [ all:" all dyscalculia"] AND [ All:" child "] AND [ All:" students school base basic "] AND [ all:" alternative learning "] AND [ all:" dyscalculia "] AND [ Publication Date:01/01/2017 TO 12/31/2022] Access Type: Open Access and Purchase

### **Data Analysis**

Furthermore, it fulfils article standards in accordance with specified criteria through appropriate data extraction with themes and questions research. The data studied form title, author, year publication, purpose and type of research, methods of research, and findings. Data analysis and synthesis were carried out using Excel with grouping titles, years, and publishers for further identification.

Encoding via identification of categories and themes through three stages, i.e. coding initial, coding focused or categories, and coding theoretical or theme.

### RESEARCH RESULTS

### 1. Deployment-related articles \_ with dyscalculia

Here, we present the amount netted articles with a theme of dyscalculia based on the publisher (Springer et al. & Francis). Data obtained with the use of publish or perish applications, i.e. special applications that look for sourced articles from Crossref, Google Scholar, Scopus, web of Science, Semantic Scholar search, etc.



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Table 4. Number of articles searched for published and perish sources

No	Publisher	Search the beginning article related to	Selection based on Title and Abstract	Selection based on Full Paper
		dyscalculia	11010 0110 11000 000	I um I upvi
1	Springer	60	29	17
2	Elsevier	59	22	10
3	Sage	29	16	10
4	Eric	27	7	5
5	Taylor & Francis	23	13	8
Tota	al Amount	198	87	50

We also provide graphs from spread themes related to difficulty scattered numeracy (dyscalculia). From 2017 to 2022 at source Google Scholar and Scopus search before selection in accordance with the theme from title, abstract and contents:

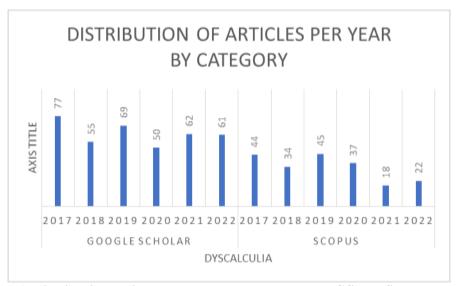


Figure 1. Distribution articles per year based on category GS and Scopus searches

Apart from graphics distribution, it also presented a distribution article based on the connection between the primary theme ( Dyscalculia ) and other related themes. The connection between articles obtained based on the application VoS Viewer:



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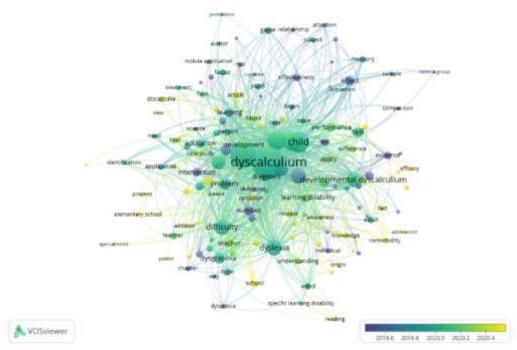


Figure 2. Distribution article related to dyscalculia and relationships between dyscalculia and other themes

### 2. Reason Suitable counting ( Dyscalculia )

Dyscalculia is a disturbance influencing the learning ability of somebody to understand and use draft mathematics. Reason Certain from dyscalculia Not yet fully understandable, but a number of possible factors have a role in reason disturbance. This includes:

Table 5. Aspects reason difficulty counting (dyscalculia)

No	Causal factors	Information
1	Genetic	Nothing a single gene that is a direct result of dyscalculia, as can happen to some disease genetic certain. However, there is proof that factor genetics can play a role in the increased risk of a child experiencing dyscalculia. A study of twins and family research with a history of dyscalculia shows that There is a possibility that component genetics exist that contribute to the disorder.
2	Oak development	A number of studies have shown that children with dyscalculia Possibly have differences in structure or function related to the brain with processing numbers and concepts in mathematics. For example, some neuroimaging research has to identify the difference in activity of brain moment do task mathematics in individuals with dyscalculia compared to individuals without disturbance this.
3	Environment	encouraging and supportive environment from teachers, parents, and specialists. Education is very important in helping children with dyscalculia overcome difficulties and develop the Skills required for mathematics. Influence environment This can help create a supportive environment for learning mathematics and the



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4	Cognitive		development of a child with dyscalculia.  Influence cognitive in children with dyscalculia is very significant
	$\mathcal{E}$		because dyscalculia is a disturbance related to learning closely with
			the cognitive processes involved in understanding and using draft
			mathematics. A number of aspects of cognitive influences for a child
			with dyscalculia include Processing numbers, memory work,
			perception of numbers, understanding draft mathematics, spatial
			ability, and ability solution problems.
5	Lack of Pra	actice and	dyscalculia is a possible disturbance overcome with appropriate
	alternatives		intervention. Influence training and intervention are positive, and
			with appropriate support from teachers, specialists in education, and
			parents, children with dyscalculia can develop Skills required in
			mathematics and achieve success at school.

It is important to remember that dyscalculia is a disturbance, not simply a lack of interest or business in Studying mathematics. Identification of early and appropriate intervention is important To help children with dyscalculia overcome difficulties and gain Skills required in mathematics. Consult with professional health or education if you suspect your child perhaps has dyscalculia.

### 3. Solutions Used For Overcome Difficulty Counting (Dyscalculia) from Article Source

Difficulty counting (dyscalculia) often becomes a problem in learning. Children who have problems with dyscalculia will left behind with students here. Of course, they will Work hard for teachers to look for ways for children to follow learning. Quoted from a number of journals, There are a number of ways that teachers can repair matters in the

Table 7. Percentage alternative solution overcome dyscalculia in 6-year-old children final.

No	Article Source	Media	Method	Environment family	Environment school
1	Springer	20%	6%	4%	8%
2	Elsevier	0%	6%	6%	6%
3	Sage	10%	6%	8%	8%
4	Eric	2%	2%	6%	10%
5	Taylor & Francis	0%	0%	4%	6%
Amo	ount	32%	20%	28%	38%

Following served several media and methods offered For overcome dyscalculia in children:



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Table 8. Media and methods offered For overcoming dyscalculia in children

No	Media	Method
1	Notes Sketches and Memories(Ziadat,	RME – Based learning(Fauzan et al., 2022)
	2022)	
2	Augmented Reality(Avila-Pesantez et al.,	Study repeated (Rulyansah, 2023)
	2019)	
3	VisualStream(Laws et al., 2022)	Training numerosity period short(Cheng et al., 2020)
4	Utilisation digital (Wang et al.,	Multi-method brain imaging(Bulthé et al., 2019)
	2017)application	
5	Assisted Teaching Materials Computer	
	(Mutlu & Levent Akgün, 2017)	
6	Math games education (Torres-Carrión et	
	al., 2018)	

The data above is sorted based on the appropriate title with the theme of dyscalculia. A number of different authors from various countries offer solutions. Naturally, every country with the same case Can be solved differently.

#### DISCUSSION

Deployment-related articles with dyscalculia Enough Lots discussed. That thing shows that themes related to dyscalculia are Still interesting to discuss. Search articles are categorised as search from two sources, namely search on Google Scholar and search based on source Scopus. Article from netted Google Scholar sources based on all articles (article reputable sinta or non-site). At the same time, articles from scholarly sources are reputable international (publishers: Springer, Elsevier, Sage, Eric dan Taylor & Francis). If seen from the graph, spread articles with the theme dyscalculia every year Good from Google Scholar or Scopus Lots studied by researchers. It means sufferers of dyscalculia Still have a lot in several countries and become attention (Avila-Pesantez et al., 2019).

Figure 2 shows the connection between theme dyscalculia with other themes. Circle big show that theme the Lots studied by researchers (authors). For example, dyscalculia with children, dyscalculia with development children, dyscalculia with problem learning, dyscalculia with dyslexia, and dyslexia with difficulty. At the same time, the circle show that the theme of dyscalculia is Still seldom used in the title article. For example, dyscalculia with memory, dyscalculia with need specifically, dyscalculia with applications and dyscalculia with game. Spread the taken using the application Vos viewer with a population of 3850 articles with a sample of 125 articles.

A number of influencing aspects of dyslexia in children are explained as follows: *First*, Relationship Genetics: There is evidence that factor genetics can play a role in the development of dyscalculia. If there is a history of a family with a disturbance in learning mathematics, the risk of a child experiencing dyscalculia can be high (Wilkey et al., 2020). *Second*, Development Brain: The development of an abnormal brain or neurological disturbance can influence the ability to process information mathematics. Sometimes, distractions to the brain, like dyslexia (disorder reading) or disturbance development, can simultaneously with dyscalculia (Cheng et al., 2018). *Third*, Environmental Factors: Experience in environmental study and home can also play a role. Lack of dedication, support, or teaching that is not in accordance can complicate things development ability mathematics child (Wang et al., 2017). *Fourth*, Cognitive Factors: Several individuals with dyscalculia Possibly experience difficulty with functioning cognitive-related particulars with understanding math, like processing visual information- space, memory work, or perception number. (Torres-Carrión et al., 2018). Moreover, *there is* a lack of Training or Intervention: Sometimes, if a



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child does not get help or necessary intervention, they show difficulty beginning with mathematics problems. This can develop into more dyscalculia (Ziadat, 2022).

Table 7 shows a discussion of alternative solutions For overcoming child dyslexia. Results from a number of articles that have been sorted based on title, abstract and appropriate contents with the theme of as many as 50 articles. Media use is the most common solution offered to overcome dyslexia in children. We assume that it is an interesting medium as a liaison between teachers and students, so what the teacher says is easily understood. An alternative solution is to use the method. In the study, a number of literature shows that the method is one alternative for child dyscalculia. The fun method will interest the attention student in Studying mathematics (Torres-Carrión et al., 2018). Influence environment, family and school also become alternative solutions in overcoming dyscalculia in children.

### **CONCLUSION**

Study results in literature obtained \_ can conclude that distribution spread articles with theme difficulty numeracy (dyscalculia) with the keywords "Learning disabilities" AND "Dyscalculia" AND "Child Dyscalculia" were obtained from thousand articles discussing. However, we fixed the search theme about associated dyscalculia \_ with problem learning and alternative solutions so that 198 articles were obtained from source publications (Springer et al. & Francis). After sorting based on title, abstract and content, I narrowed to 50 articles. Every year, the theme of dyscalculia is always interesting. For the study, demonstrated by the data above.

The results of the study also show that the reason children have difficulty numeracy (dyscalculia) is present in a number of aspects, including 1) genetic factors, 2) developmental factors brain, 3) cognitive factors, 4) environmental factors and 5) training factors or intervention. There are a number of solutions offered so that children who have difficulty in counting (dyscalculia) can follow learning with good. Alternative solutions offered include the use of learning media developed by researchers. Method varied learning \_ customised with conditions and needs of the child, attention more parents, and attention more from the teacher.

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