

Caregiver's Mental Health of Children with Learning Disabilities: A Scoping Review

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Abstract

The caregivers face their own challenges in dealing with children with learning disabilities that may impact their own mental and physical health. Recently, there has not been much discussion about caregivers' mental health. This review aims to capture the caregiver's mental health of children with learning disabilities during a crisis and understand several factors related to it. A scoping review method was used to review literature published across seven databases between 2020 and 2023. Fifteen articles were included in this study. The result highlights three important issues related to the mental health of caregivers. First, caregivers experienced several mental health problems such as worry, fear, changes in mood and behavior, depression, and anxiety. Second, support is needed to help caregivers cope with daily problems. Third, demographic characteristics contribute to the mental health quality of caregivers. Strengthening supporting programs for caregivers to promote their mental health should be considered.

Pengasuh yang memiliki anak dengan gangguan belajar menghadapi tantangannya sendiri dan hal ini dapat berdampak pada kesehatan mental dan fisik mereka. Belakangan ini, belum banyak diskusi mengenai kesehatan mental pengasuh. Penelitian ini bertujuan untuk mengetahui kesehatan mental pengasuh yang memiliki anak dengan gangguan belajar di masa krisis serta memahami beberapa faktor yang terkait dengan kesehatan mental pengasuh. Metode tinjauan ruang lingkup digunakan untuk meriviu artikel yang terbit di tujuh database antara tahun 2020 hingga 2022. Lima belas artikel digunakan dalam penelitian ini. Hasil penelitian ini menyoroti tiga isu penting terkait kesehatan mental pengasuh. Pertama, pengasuh dapat mengalami beberapa masalah kesehatan mental seperti kekhawatiran, ketakutan, perubahan mood dan perilaku, depresi, serta kecemasan. Kedua, diperlukan dukungan untuk membantu pengasuh dalam mengatasi masalah sehari-hari. Ketiga, karakteristik demografi berkontribusi terhadap kualitas kesehatan mental pengasuh. Hasil penelitian ini menunjukkan perlunya dukungan yang lebih baik untuk meningkatkan kualitas kesehatan mental pada pengasuh.

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A. Introduction

Learning disabilities is a condition where a person has difficulties learning a new thing. This condition is a part of a neurodevelopmental disorder with onset in the developmental period. The disorders typically manifest early in development, often before the child enters school, and are characterized by developmental deficits or differences in brain processes that produce impairments of personal, social, academic, or occupational functioning (American Psychiatric Association, 2022). A person with learning disabilities may struggle in one of these various tasks, namely, speaking, reading, writing, paying attention, processing information, remembering things, performing mathematical calculations, or coordinating movements. Children with learning disabilities look no different from typical developing children. However, when they enter school age, they have difficulty in doing schoolwork that requires the ability to learn new things. Thus, they need full support from parents, teachers, and the education system to go through the learning process well.

One of the valuable supports for children with learning disabilities is from caregivers. Caregivers are usually defined as parents, both father and mother or other family members such as grandparents or siblings responsible for the child's care. Caregivers provide support to children to function and perform daily tasks well (Savage & Bailey, 2004). Parenting children with a disability is harder than parenting typically developing children. It requires a lot of time, focus, and knowledge on how to help them. Thus, the caregivers of children with disabilities are more vulnerable to mental health problems than those of typical developing children (Gallagher et al., 2008).

Caring for people with disabilities is demanding, resulting in high levels of perceived stress and burnout (Panicker & Ramesh, 2019). A study by Willner et al. (2020) reported that caregivers of children with disabilities have significantly higher levels of anxiety, depression, defeat/entrapment, and fulfillment of wishes (Willner et al., 2020). Previous study by Wang (2021) showed the mental health problems experienced by caregivers, such as parents of children with autism spectrum disorder (ASD) (Wang, 2021). Her study showed the need to promote caregivers' engagement in functional social support and behavioral interventions for children to reduce the impact of stress, anxiety, and depression. Another study showed when parents have higher mental health, they will show a better parenting style. whereas the lower mental health status will be affected by psychological problems, such as depression and anxiety (Derakhshanpour et al., 2016).

Problems faced by caregivers increase when there is a crisis situation such as the Covid-19 pandemic or another situation that requires social isolation. This recent COVID-19 pandemic has had a huge impact on the mental health problems of the caregivers of children with disabilities. A study by Lee et al. (2021) reported that

in social isolation, a number of demands have increased caregivers' risk of mental health challenges, and there are potential impacts on family well-being (Lee et al., 2021). This situation is also supported by a study by Dhiman et al. (2020) which identified a high prevalence of depression and significant change in strain displayed by caregivers during the COVID-19 outbreak (Dhiman et al., 2020).

Among all studies concerning the mental health status of caregivers of children with disabilities, there are still limited studies discussing the mental health issues of parents with learning disabilities or sometimes called specific learning disorders. The understanding of the caregivers of children with learning disabilities experience during crises is essential as they deal with both infectious diseases and their children's demands at the same time. This information is vital to control such crises in the future and to support the caregivers and their children. Thus, the aim of this research is to capture the caregiver's mental health of children with learning disabilities and understand several factors related to the caregiver's mental health in a crisis.

B. Method

The review followed the methodological framework proposed by Arksey and O'Malley (2005), included (1) identifying the research question, (2) identifying relevant studies, (3) selection of eligible studies, (4) data extraction, and (5) collating and summarizing the results (Arksey & O'Malley, 2005). This scoping review was reported by the PRISMA extension for scoping review guidelines (Tricco et al., 2018).

1. Stage 1: Identifying Research Questions

A scoping review started with identified research questions to guide the research. In this paper, the central question of this study is "How to describe the mental health status of caregivers of children with learning disabilities?"

The sub-questions include:

- 1) What kind of mental health problems are experienced by caregivers?
- 2) Are demographic variables related to mental health problems?
- 3) What kind of support is needed to improve the quality of mental health caregivers?

2. Stage 2: Identifying Relevant Studies

A scoping review should have been as comprehensive as possible to identify primary studies, so the result could answer the central question. To achieve this goal, possible strategies were using electronic databases, reference lists, hand-searching key

journals, existing networks, relevant organizations, and conferences. In this paper, we used related references using electronic databases which were scattered in some digital libraries. Before using electronic databases, we already considered some potential issues related to electronic database usage, such as database sources, key terms, technical skills to use the search, and potential costs to access the electronic databases.

Searches will be conducted in EBSCO, SpringerLink, Oxford Journal, ProQuest, Sage, Taylor & Francis, and Scopus. The language used in the publication is limited to English. In this study, we used keywords: learning disabilities AND mental health AND (parent OR caregiver OR mother OR father) AND (Covid-19 impact OR quarantine).

3. Stage 3: Selecting Eligible Studies

The study selection goal was to select several relevant studies from the databases. The researcher developed inclusion and exclusion criteria as a systematic review system to achieve this goal. In this paper, the inclusion and exclusion criteria are presented in Table 1. This study included all types of articles published in peer-reviewed scientific journals, ranging from qualitative and quantitative to mixed methods approaches.

Table 1. Inclusion & Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Peer-reviewed scientific journals	Books, Opinions, Grey Literature, Non-Peer Reviewed Journals
Published in English	Non-English Publications
Provides data about mental health status of caregivers of learning disabilities children (0-18 years old)	Parents With Other Disabilities
Publication year between 2019-2023	Publication Before 1 January 2020 and After 31 December 2023

4. Stage 4: Data Charting

After the study selection process, the next step was charting the data. In this process, researchers mapped the data that have been reviewed. The data was then charted in data charting using the Microsoft Excel program. Arksey and O'Malley (2005) mentioned some information should be recorded, including authors, years of publication, study location, intervention type and comparator, if any, duration of the intervention, study population, aims of the study, methodology, outcome measure, and some important results (Arksey & O'Malley, 2005). In this study, due to some

limitations, we extracted data based on the type of journals, publication years, objectives, country, participants, method, and results.

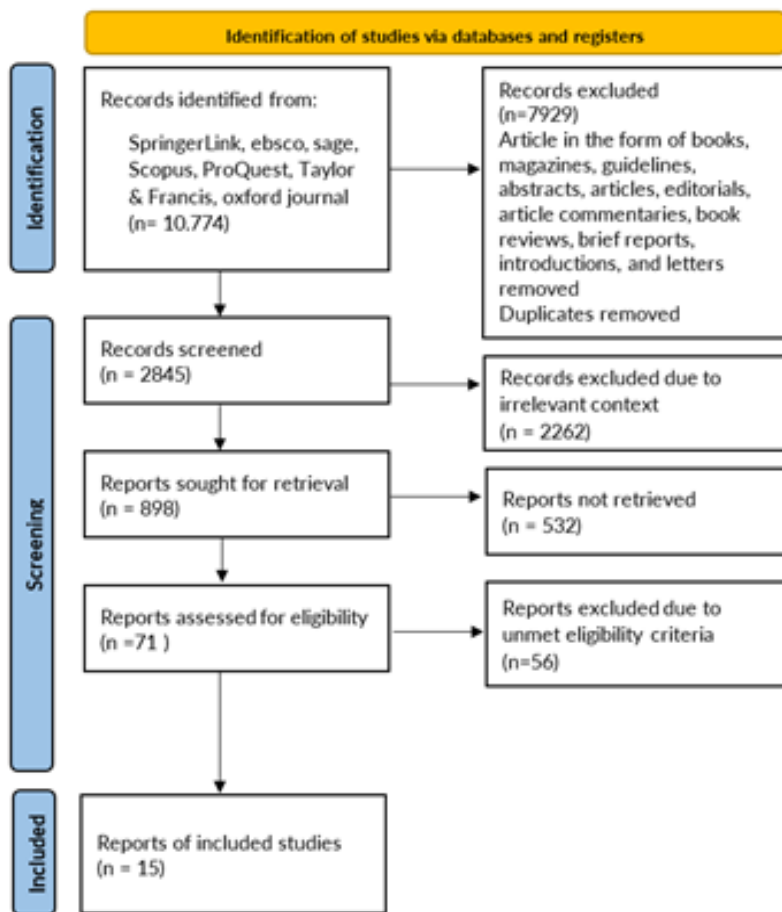
5. Stage 5: Collating, Summarizing, and Reporting the Result.

In this step, researchers collated, summarized, and reported the results. The researchers should have considered some aspects to collate and summarise the results. It includes clear reports to the readers. Then, researchers needed to present the data in narrative ways.

C. Result

1. Characteristics of the Articles

Figure 1. PRISMA Flow Diagram



In the initial search, we found 10,774 articles. The articles came from several electronic databases, such as SpringerLink, EBSCO, SAGE, Scopus, ProQuest, Taylor & Francis Online Journals, and Oxford Journals. In the initial search, we used only journal articles. We excluded the information from books, magazines, guidelines, abstracts, articles, editorials, article commentaries, book reviews, brief reports, introductions, and letters. After that, we screened 2845 articles. We excluded 2262 articles because the subject was not relevant or not in the psychology field. Then, we extracted 898 full-paper articles for the process and excluded 532 articles. Then we assessed 71 articles and searched for eligibility until we found 15 articles to be reviewed. The screening of the articles included in this review is presented in Figure 1.

All articles were published between 2020-2022. Almost half of the articles came from Asia. We found seven articles from Asia (Turkey, Japan, India, Hong Kong, and Singapore). We found one article from Singapore, two articles from Turkey, two articles from Japan, one article from India, and one article from Hong Kong. We also found six articles from Europe (UK, Italy, and Spain). There was one article from Spain, two articles from the United Kingdom, and three articles from Italy. We only found two articles from North America (Canada and the US), including one article from Canada and one article from the United States.

In the reviewed process, we only found one study from Spain that had subjects specifically caregivers of learning disabilities children (dyslexia). One article from Italy focused on caregivers of typically developed children and caregivers of children with specific learning disorders. Most of the articles focused on families with special needs children, developmental disabilities, developmental disorders, or neurodevelopmental disorders.

2. Methodologies Used in Studies

The methodologies used in the fifteen articles were quantitative (survey, cross-sectional study), qualitative (inductive content analysis, phenomenology), and mixed method (survey combined with interview). Eleven articles used quantitative design. Three articles used qualitative design and one article used mixed method design. In quantitative design, almost all the articles used online surveys to retrieve the data. In qualitative design, telephone or online interviews were used as a strategy to retrieve the data. In mixed method design, online surveys combined with video call or phone chat technology were used by researchers to retrieve the data.

3. Demographic Variables Related to Mental Health Problems

In this review, some demographic variables have been noticed to be related to mental health problems. The demographic variables included gender, workplace, marital status, other family members living at home (parents or elder people), number of children, and financial problems. These variables would be the predictors of mental health problems in caregivers. In gender, males were more resilient than females. Conditions of the workplace also influence caregivers' mental health. Caregivers who have spouses who worked in essential areas were more resilient than those who have not. Working conditions, such as inflexible working hours caused poor mental health quality. Families also influence caregivers' mental health conditions. The more children at home, the higher resiliency of the caregivers. But, when caregivers have an extra role at home, such as nursing older people, they might be shown some potential mental health problems. Socioeconomic factors, for example, financial matters, are also related to mental health conditions. When families face financial problems, it influences emotional conditions that have led to caregivers' mental health.

4. Mental Health Problems Experienced by Caregivers

Several mental health problems or symptoms were found in caregivers. The problems range from symptoms such as distress, experiencing loss, worry, fear, and changes in mood & behavior to some internalizing problems such as depression, anxiety, and generalized anxiety disorder (GAD). The problems, such as anxiety and depression, impacted the negative quality of life of caregivers.

Table 2. Data Extraction Table

Author(s)/ Journal title	Study Title	Participants	Key Findings
(Lim et al., 2022) <i>Journal of Autism and Developmental Disorders</i> (Lim et al., 2022)	Factors Contributing to Psychological Ill-Effects and Resilience of Caregivers of Children with Developmental Disabilities During a Nation-wide Lockdown During the COVID-19 Pandemic	N=107 (Dyslexia n=3) peer-reviewed, quantitative	Parents of children with developmental disorder suffered higher rates of depression, anxiety, and stress symptoms than the general population. Resilience and Contributors to Resilience: Gender, number of children, guidance from teachers/therapist, Spouse Need for specific guidance to clinicians and professionals working with children with disabilities, proactive approach towards screening the mental health of caregivers, identify the need and provide various types of support

Author(s)/Journal title	Study Title	Participants	Key Findings
(Asbury et al., 2021) Journal of Autism and Developmental Disorders (Asbury et al., 2021)	How is COVID-19 Affecting the Mental Health of Children with Special Educational Needs and Disabilities and Their Families?	N=241 (Dyslexia n=21, DCD n=24) peer-reviewed, qualitative	Both parents and children appear to be experiencing loss, worry, and changes in mood and behavior often leading to an increase in anxiety and fear. Supporting these families in ways that will help to alleviate or reduce their anxiety should be a priority for education, health, and social care professionals. Provide appropriate tasks and resources for home learning
(Sideropoulos et al., 2022) Journal of Autism and Developmental Disorders (Sideropoulos et al., 2022)	The Impact of COVID-19 on Anxiety and Worries for Families of Individuals with Special Education Needs and Disabilities in the UK	N=402 (Learning Difficulties/Dyslexia n=8, DCD = 2)	Caregivers' who only had a special education need (SEN) child exhibited higher anxiety compared to those who also had a typical developing child. Understanding caregivers' mental health is also important; especially since it predicts anxiety in children. Provide an important routine and structure that helps to reduce anxiety, and provide caregivers with access to specialist advice that would not only benefit individuals with SEN but also their caregivers' anxiety.
(Chan & Fung, 2022) Journal of Autism and Developmental Disorders (Chan & Fung, 2022)	Elevated Levels of COVID-19-Related Stress and Mental Health Problems Among Parents of Children with Developmental Disorders During the Pandemic	N=129 (Learning Disorder n=20) peer-reviewed, quantitative	Parents of children with developmental disorders showed significantly higher levels of parenting stress, depressive symptoms, and anxiety symptoms than did their counterparts. Positive parenting support is necessary to reinforce parent-child relationships and alleviate parents' psychological distress Counseling and support group services should be made available to facilitate their coping with health worries and parenting stress

Author(s)/Journal title	Study Title	Participants	Key Findings
(Meral, 2022) Journal of Autism and Developmental Disorders (Meral, 2022)	Parental Views of Families of Children with Autism Spectrum Disorder and Developmental Disorders During the COVID-19 Pandemic.	N = 32 (n = 2, SLI =1, LD=1)	The overall parental perception of family distress was low level Parents indicated their overall satisfaction with their family's quality of life.
(Ueda et al., 2022) Scientific Reports (Nature Publisher Group) (Ueda et al., 2022)	Quality of life of children with neurodevelopmental disorders and their parents during the COVID-19 pandemic: a 1-year follow-up study	N = 89 (SLD n = 7) peer-reviewed, quantitative	Lower quality of life (QOL) associated with higher parental depressive Socio-economic status negatively correlated with the QOL status
(Ueda et al., 2021) Neuropsychiatric Disease and Treatment (Ueda et al., 2021)	The quality of life of children with neurodevelopmental disorders and their parents during the Coronavirus disease 19 emergency in Japan	N = 136 (SLD n = 9) Quantitative, peer-review	3 factors were associated with decreased QOL of parents and children with Neurodevelopmental disorder (NDD). First, the changes in the sleep rhythm of the NDD children. Second, inflexible mothers' job after the COVID-19 pandemic. Third, the absence of grandparents' support, who can play as important role in helping parents with NDD children. internalizing and externalizing symptoms associated to parental stress that affected their QOL
(Lipkin & Crepeau-Hobson, 2023) Psychology in the Schools (Lipkin & Crepeau-Hobson, 2023)	The impact of the COVID-19 schools' closures on families with children with disabilities: A qualitative analysis	N = 15 (SLD N = 2) Qualitative, peer-review	Collaboration among multidisciplinary teams with expertise in assessment, consultation, collaboration and working with children with disabilities Team should consider developing communication plans that include a component of conjoint behavioral consultation Pandemic/long term school closure address specific concerns related to students with disabilities, such as clarifying how

Author(s)/Journal title	Study Title	Participants	Key Findings
			<p>individual educational program (IEP) will be implemented during school closures.</p> <p>Providing parents with information about what they can expect from schools and school districts in terms of communication could ease frustration and help maintain the home-school connection</p>
(Benassi et al., 2022) European Journal of Special Needs Education (Benassi et al., 2022)	Quality of life and its relationship to maternal experience and resilience during COVID-19 lockdown in children with specific learning disabilities	N = 120 (SLD) N = 35 Quantitative	<p>The mothers of the children with Specific Learning Disorder (SLD) reporting lower scores than those of the typical developing (TD) children for the evaluation of learning processes and for the child's emotional difficulties at school</p> <p>The welfare system and psychologists should also take particular care of the mothers of the children with SLD</p> <p>Supporting the families in their coping with mental health issues might prevent negative effects on the general and school well-being of the children, so that the child QOL children closely related to the family</p>
(Gulkaya & Sorakin, 2021) Cypriot Journal of Educational Sciences (Gulkaya & Sorakin, 2021)	Problems of children who need special education and their families during the COVID-19 pandemic process	N = 29 parents (SLD N = 2) Qualitative, peer-review	<p>Five main themes were established:</p> <ul style="list-style-type: none"> - Identification of social isolation during the pandemic - Behavioural changes in children during the pandemic - Changes in daily life during the pandemic such as isolation, change in daily routines and diet, increase in phone-tablet-tv usage, fatigue (housework, laundry, kitchen, cleaning, etc), spending quality time with child - Daily activities of parents during the pandemic - Parents' need for support in the

Author(s)/ Journal title	Study Title	Participants	Key Findings
			pandemic, namely educational support, general cleaning (housework, hygiene, provisioning, etc), economic support, psychological support, support for health problems
(Soriano-Ferrer et al., 2021) Frontiers in Psychology (Soriano-Ferrer et al., 2021)	Psychoeducational Challenges in Spanish Children with Dyslexia and Their Parents' Stress During the COVID-19 Pandemic	N = 32 (children with dyslexia and their mothers) Quantitative	Dyslexic children's mothers reported higher scores on the subscales of Parental Distress and Parent-child Dysfunctional Interaction, and "Difficult Child" (a parent's perceptions of the child's behaviors that often make parenting easier or more difficult) Predictors of parental distress: Number of children, marital status (divorced or single) and the child's behavior problems.
(Whitley et al., 2021) Exceptionality Education International (Whitley et al., 2021)	Perspectives of Parents of Children with Special Education Needs: Self-Efficacy and School Supports During COVID-19 School Closures	N = 397 (SLD N = 99) Mixed method	Parents reported that they do not feel confident in their ability to support the learning of their children. They would feel more self-efficacious if they and their child were supported in social-emotional ways by schools.
(Dhiman et al., 2020) Research in Developmental Disabilities (Dhiman et al., 2020)	Impact of COVID-19 outbreak on mental health and perceived strain among caregivers tending children with special needs	N = 264 (LD N = 12) Quantitative	High prevalence of depressive symptoms among caregivers tending children with special needs, and also prevalence of anxiety and stress symptoms Caregiver's anxiety symptoms and poor mental health increase because of Lack of telerehabilitation, no knowledge of home-care therapy, working from home, and there are elders living at home Caregivers of older children were less prone for depression, anxiety, and stress symptoms because they are likely to be more autonomous, independent in function and less demanding for caregivers.

Author(s)/ Journal title	Study Title	Participants	Key Findings
(Burnett et al., 2021) International Journal of Environmental Research and Public Health (Burnett et al., 2021)	Distress Levels of Parents of Children with Neurodevelopmental Disorders during the COVID-19 Pandemic: A Comparison between Italy and Australia	N = 200 (Italy) + 296 (Australia) Quantitative	Higher parental stress levels were associated with the worsening symptoms in children with Intellectual or Learning Disability Disorder (ILD) as compared to other NDD. Predictors: Children with ILD require more face-to-face educational support than other children
(Giacomo et al., n.d.) <i>Rivista di Psichiatria</i> (De Giacomo et al., 2021)	Psychological impact of the SARS-CoV-2 pandemic in children with neurodevelopmental disorders and their families: Evaluation before and during covid-19 outbreak among an Italian sample	N = 71 (n = 10 LD, n = 18 SpLD) Quantitative	Parent Stress Index (PSI): Problematic scores emerged in the following sub-scales: parenting distress (PD), dysfunctional interaction parent-child (P-CDI), and difficult child (DC). Predictors: Increased challenges/burden in trying to meet the demands inherent to their parental role and difficulties in having to balance personal life, work, and the education and management of their children. This condition leads to dysfunctional parent-child relationship and worsening of behavioral problems and children's emotional well-being.

5. Supports Needed by Caregivers to Improve the Quality of Mental Health

Eleven out of fifteen studies used in this review state that support is essential for the caregivers of children with learning disabilities. Sources of support can be from professional healthcare, educational institutions, teachers, or other family members. Professional healthcare provides support in the form of counseling and consultation, personal or group therapy, and rehabilitation programs for both parents and children. Meanwhile, educational institutions provide integrative programs, guidance, and policies between home and school in order to facilitate caregivers to provide integrated in-home programs and training for children with learning disabilities. Other family members provide emotional and financial support towards the caregivers.

D. Discussion

This review collects the mental health status of the caregivers of children with learning disabilities, especially when facing a crisis. Our findings suggest that the caregivers of children with disabilities are susceptible to various mental health problems. The most common mental health problems facing caregivers were parental stress and distress. Social isolation makes the caregivers vulnerable to psychological distress. Findings show high levels of depression, stress, anxiety, and distress in the caregivers. This finding is in line with Doody and Keenan (2021) who stated that families face growing challenges in quarantine where they have to care for the children with a lack of assistance and guidance from schools or therapists (Doody & Keenan, 2021). The caregivers are also concerned about whether the healthcare system can provide for their children's needs if they are infected by the virus or need to quarantine far from their children (Jalali et al., 2020; Rotarou et al., 2021).

In this review, several demographic factors have been contributed to mental health. There was gender, marital status, workplace, the presence of other family members, such as grandparents or elderly people, the number of children, and socioeconomic status. Female caregivers were reported to be affected more from mental health consequences. This review finds that females are more vulnerable than males to run into mental health problems. Isa et al. (2016) also said that parental health would not be the same between mothers and fathers (Isa et al., 2016). Mothers tend to be more stressed than fathers. Financial problems are also correlated with mental health issues in caregivers. This finding is similar to Isa et al. (2016) which stated that factors affecting caregivers' health are sociodemographic factors. The family's socioeconomic status, as well, plays an important role as the factors related to caregivers' mental health. And some potential indicators such as wealth, and poverty should determine caregivers' health (Isa et al., 2016).

Some psychosocial factors are also related to mental health problems. As per the previous study by Isa et al. (2016), some psychosocial factors such as coping strategies, social support, parenting stress, self-efficacy, and self-esteem were related to mental health problems. In this review, we found that parental stress or distress were common mental health symptoms that occur in caregivers. This review reported some mental health problems potentially faced by caregivers. Some potential problems including depression (Chan & Fung, 2022; Lim et al., 2022; Ueda et al., 2021, 2022), anxiety (Lim et al., 2022; Sideropoulos et al., 2022; Ueda et al., 2021), Generalized Anxiety Disorder (GAD; (Chan & Fung, 2022)), parental stress/distress (Burnett et al., 2021; Chan & Fung, 2022; Dhiman et al., 2020; Lim et al., 2022; Lipkin & Crepeau-Hobson, 2023; Meral, 2022; Soriano-Ferrer et al., 2021; Ueda et al., 2021), experiencing loss (Asbury et al., 2021), worry (Asbury et al., 2021; Chan & Fung, 2022; Sideropoulos et al., 2022), fear (Asbury et al., 2021), and Changes in mood & behavior (Asbury et al., 2021; Ueda et al., 2021, 2022). These findings

were in line with another study conducted by Lohrasbi et al. (2023) that stated that caregivers had challenges, such as psychological suffering during their time taking care of families with disabilities (Lohrasbi et al., 2023). Caregivers experienced different types of mental health problems. They could have experienced shock, sadness, depression, fatigue, helplessness, and inability to understand the situation. The psychological problems would have affected their quality of life because when someone experiences mental health problems, this will affect their quality of life (Connell et al., 2012).

There were some suggestions to prevent or reduce caregiver's mental health problems. A study by Lim et al. (2022) proposed support from the stakeholders, communities, and schools to work with caregivers (Lim et al., 2022). It is important to understand the needs of caregivers so that they can cope with problematic situations (Asbury et al., 2021; Sideropoulos et al., 2022). Fitryasari et al. (2021) reported that some factors contributed to preventing or increasing the risk of mental health problems among families of patients with chronic mental illness (Fitryasari et al., 2021). That includes protective and risk factors, besides personal factors such as family and patients' factors. The risk factors such as stress are influenced by caregivers' resiliency. When caregivers become more resilient, they can manage their stress and have been able to treat their family with mental illness in a better way. This statement is in line with Gayatri and Irawaty (2022) research that stated that high-resilient families are related to lower anxiety, stress, and depression (Gayatri & Irawaty, 2022).

The results of this study show that crises, such as the COVID-19 pandemic, cause the emergence of mental health issues such as anxiety, stress, and depression for the caregivers of children with learning disabilities. Therefore, families need to increase their resilience in facing crises. Gayatri and Irawaty (2022) proposed ways to increase family resilience by having healthy relationships, maintaining communication, and carrying out positive activities with family in times of crisis (Gayatri & Irawaty, 2022). A study by Meral (2022) in Turkey shows that even though there are several unmet education needs during the Pandemic for children, the family quality of life is satisfied because they can share more time and have more interaction in quarantine (Meral, 2022).

Another way to maintain a caregiver's mental health during crises is by providing support for them. Most studies in this review show the importance of support for caregivers in dealing with pandemic situations and their children's behavior. There are four dimensions of support suggested by Sarafino and Smith (2011), namely real/instrumental, emotional, informational, and companionship support (Sarafino & Smith, 2014). Real/instrumental support is providing direct assistance, such as helping the person in need with the task and lending or giving them money or equipment in crisis. This review found that the caregivers of children with learning disabilities

need general cleaning assistance and financial support (Gulkaya & Sorakin, 2021) in times of crisis. Instrumental support in the form of financial assistance is essential during the pandemic because almost half of the people affected by the pandemic have experienced disruptions in their work setting, which impacts their finances (Northrup et al., 2023). Moreover, families who struggle with finances during the pandemic are more likely to prioritize their basic needs over their children's therapy (Lim et al., 2022). Therefore, a family-friendly policy is needed to ease the caregiver's burden, especially for working parents and caregivers, so they can compromise their work schedule and their child's therapy (Chan & Fung, 2022).

Emotional or esteem support involves caring, concern, empathy, and encouragement toward the person in crisis. Lim et al. (2022) suggested that caregivers also need emotional support to maintain their well-being (Lim et al., 2022). A study by Kishore (2011) points out that emotional support can facilitate effective coping (Kishore, 2011). Caregivers who seek emotional support practice more effective coping strategies such as practicing their hobbies, taking time for themselves, and trying to get advice from others or professionals. A study by Taanila et al. (1998) also claimed emotional support is important for a family to maintain their family cohesion (Taanila et al., 1998).

One of the essential supports for the person in crisis is informational support. Informational support conveys giving advice, directions, suggestions, or feedback about how the person is doing. The covid-19 Pandemic situation is a new phenomenon for everyone. Accordingly, people need information, direction, and suggestions on how to deal with this phenomenon. The result of this review suggests some ways to help the caregivers of children with disabilities by providing informational support in the form of educational support (Burnett et al., 2021; Gulkaya & Sorakin, 2021), which gives the caregiver advice and feedback on how to continue their children education/activity at home; positive parenting supports (Chan & Fung, 2022) that give the caregiver directions on how to deal with their child behavior; telerehabilitation program (Dhiman et al., 2020) to continue their child's therapy or rehabilitation at home/remote; web-based parenting skills program (Chan & Fung, 2022) and videos and visual supports (Lim et al., 2022) that providing the caregiver with information about parenting tips and suggestions online and can be access from anywhere.

In a crisis, people need to connect with others who face the same situation as them. Thus, they need companionship support. Companionship support refers to the availability of others to spend time with other people and being a member of a group that shares interests and social activities. Chan and Fung (2022) suggested that the caregivers of children with disabilities utilize online counseling and support groups to connect with each other and share their ideas on how to deal with the situation (Chan & Fung, 2022). This is in line with Gulkaya and Sorakin (2021) and Asbury et al. (2021) who proposed that there need to form psychosocial and remote face-to-face

support for the caregiver. Benassi et al. (2022) and Lim et al. (2022) offer conjoint behavioral therapy and virtually-based therapy for the caregiver who has a mental health issue during the pandemic.

A crisis is inevitable these days. In the last twenty years, the world has experienced various crises namely Ebola virus disease (EVD), Middle East respiratory syndrome (MERS), severe acute respiratory syndrome (SARS), and Corona Virus Disease (Covid-19; (Cheng et al., 2004; Grinnell et al., 2015)) which require human to quarantine and social distancing. The findings of this research can be utilized as a reference and prevention to cope encounter further crises. Most of the problems faced by the caregivers of children with disabilities during pandemic were because they had difficulties in dealing with their children's behavior and couldn't find help because of social distancing. Thus, they need to familiarize themselves with online-based therapy and telerehabilitation programs in order to get support from others and professionals.

Tele-rehabilitation and other online-based therapies are proven effective in reducing the treatment gap for mental health issues by increasing access to mental health services (Jayarajan et al., 2020). It is also cost-effective, particularly when dealing with a large number of patients, in remote communities, or communities with limited professional resources (Langarizadeh et al., 2017). There are some problems with using telerehabilitation and online-based therapy stated in a study by Leochico et al. (Leochico et al., 2020). Those are slow internet speed, legal concerns, and skepticism. Jayarajan et al. (2020) are also concerned about the lack of access and difficulty in using devices for telerehabilitation (Jayarajan et al., 2020). Consequently, to maximize the use of telerehabilitation in the future, mental health professionals need to increase the community's internet literacy by introducing telerehabilitation programs for caregivers. The government can also increase the community's internet literacy by building telecommunication infrastructure so everyone can access the internet.

1. Limitations and Future Directions

The limitation of this research was the use of articles in the COVID-19 pandemic era. This was unavoidable because the latest research still uses the pandemic situation as their background research. This scoping review identified research gaps pertaining to the challenges that have been experienced by caregivers of children with learning disabilities as part of neurodevelopmental disorders, which so far has not received much attention from scientists. Most research has focused on neurodevelopmental disorders in general. Further research should be considered strengthening supporting programs (from prevention to curation) of children with learning disabilities by involving schools, stakeholders, and the community to promote caregivers' mental health.

E. Conclusion

This scoping review had some important findings related to mental health caregivers. First, several mental health problems could be experienced by caregivers that range from psychological or behavioral symptoms such as worry, fear, changes in mood, and changes in behavior to clinical diagnoses such as depression and anxiety. Second, because caregivers might be exposed to mental problems, they need support that could help them cope with daily problems. Caregivers needed educational, psychosocial, emotional, financial, visual, and positive parenting support. Also, some online intervention programs identified could benefit caregivers. Third, some demographic characteristics are known to contribute to the mental health quality of caregivers. The variables such as gender, workplace, marital status, families, and socioeconomic condition have been correlated with mental health problems in caregivers. More support from the school, stakeholders and the community was needed to promote positive mental health in caregivers.

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