

International Journal of Pharma Growth Research Review



Maternal Mental Health and Parenting Children with Disabilities: A Systematic Review of Psychological and Social Challenges

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Article Info

ISSN (online): 3049-0421

Volume: 02

Issue: 02

March-April 2025

Received: 15-02-2025

Accepted: 12-03-2025

Page No: 16-27

Abstract

This systematic review explores the psychological and social challenges faced by mothers of children with disabilities and their impact on maternal mental health and parenting. Raising a child with a disability often brings unique stressors, including emotional distress, social isolation, and significant caregiving burdens. This review synthesizes existing literature to examine the prevalence and types of mental health issues such as depression, anxiety, and post-traumatic stress disorder among these mothers. It highlights the psychological challenges stemming from caregiving responsibilities, societal stigma, and the emotional toll of coping with a child's disability. Additionally, it explores the social challenges mothers face, such as limited support systems, financial strain, and the barriers to accessing adequate healthcare and social services. The review also delves into the impact of maternal mental health on parenting styles and child development, noting that maternal stress can affect parenting behaviors and, in turn, influence the emotional and behavioral development of children with disabilities. Various psychological interventions, including cognitive-behavioral therapy, mindfulness-based approaches, and peer support programs, are discussed as potential solutions for improving maternal mental health. Furthermore, the review emphasizes the importance of social support networks and community-based resources in mitigating the negative effects of caregiving on mental health. Finally, policy recommendations are provided to address systemic issues, including the need for better healthcare access, economic support, and more inclusive social policies to support mothers of children with disabilities. This review calls for further research to enhance interventions and inform policies that can improve the mental health and overall well-being of mothers in these caregiving roles.

DOI: <https://doi.org/10.54660/IJPGRR.2025.2.2.16-27>

Keywords: Maternal mental health Parenting children, Disabilities, Psychological, Social challenges, Systematic review

1. Introduction

Maternal mental health is an essential aspect of overall well-being that profoundly impacts both the mother and the child, especially during the child-rearing years (Forbes *et al.*, 2021). Maternal mental health refers to the psychological state and emotional well-being of mothers during pregnancy, childbirth, and the early years of their children's lives. It is a period when mothers undergo significant emotional and psychological changes due to hormonal fluctuations, physical recovery, and the demands of caregiving. Mental health conditions such as depression, anxiety, and stress can occur at various points during this period and can have long-lasting consequences for both mothers and their children (Schwab and Rakers, 2022). Addressing mental health issues in mothers is crucial as their emotional well-being directly influences their ability to care for and bond with their children, which is particularly significant in the case of mothers who have children with disabilities.

These mothers may experience unique stressors, and their mental health needs require specific attention to ensure positive parenting outcomes and a supportive family environment (Roos *et al.*, 2021; Planalp *et al.*, 2022). In mothers raising children with disabilities, the challenges are even more complex and profound. Parenting children with disabilities introduces a range of psychological, emotional, and social challenges that can significantly affect a mother's mental health (Keleynikov *et al.*, 2023). These challenges include the emotional strain of coping with the diagnosis and ongoing care of a child with special needs, the physical and financial demands of providing specialized care, and the emotional toll of witnessing their child's struggles. Many mothers of children with disabilities also face heightened stress due to the constant need for medical care, therapy sessions, and navigating complex healthcare and educational systems (Wagner *et al.*, 2022; Nicholson *et al.*, 2023). Additionally, societal stigma and misconceptions about disabilities often lead to social isolation, further exacerbating mental health challenges. These stressors are compounded by feelings of guilt, frustration, and self-doubt, leading to increased vulnerability to mental health issues such as anxiety, depression, and burnout.

The long-term impact of these challenges on maternal mental health is significant. The ongoing strain of caregiving, coupled with the lack of adequate social support or understanding from society, can lead to chronic mental health problems. Research has shown that mothers of children with disabilities are more likely to experience symptoms of depression and anxiety than mothers of typically developing children, with the burden often increasing as the child grows older and the caregiving responsibilities intensify (Fatima *et al.*, 2021; Brekke and Alecu, 2023). This prolonged emotional and psychological strain can have detrimental effects on the mother's overall health, her relationships with family members, and her capacity to provide optimal care for her child. Additionally, the mental health of mothers can impact their children's well-being, as a mother's emotional state influences the caregiving environment, parent-child interactions, and the child's emotional development. Therefore, addressing the mental health needs of mothers with children with disabilities is essential not only for the mother's well-being but also for the long-term developmental outcomes of the child (Merrick *et al.*, 2023).

The purpose of this systematic review is to examine and synthesize the existing literature on the psychological and social challenges faced by mothers of children with disabilities. This review aims to identify common psychological struggles such as depression, anxiety, stress, and burnout that these mothers experience. It will analyze how these challenges affect maternal mental health, focusing on the emotional, social, and financial stressors that contribute to poor mental health outcomes. Furthermore, the review will explore how these challenges impact the overall parenting experience, including caregiving practices, emotional bonding with the child, and the ability to meet the child's developmental needs. By identifying the key challenges and understanding the broader context of maternal mental health, this review seeks to provide a deeper understanding of the complex factors at play in the lives of mothers raising children with disabilities. The review will also highlight gaps in the current literature and offer insights into the kinds of interventions and support systems needed to improve maternal mental health and promote positive

parenting outcomes in this population.

2. Methodology

The PRISMA methodology for this systematic review on maternal mental health and parenting children with disabilities involved a comprehensive, transparent, and structured approach to identify, select, and synthesize relevant literature. The review's research question focused on examining the psychological and social challenges faced by mothers of children with disabilities, as well as the impact on their mental health and parenting outcomes. The review adhered to PRISMA guidelines to ensure rigor and reproducibility.

A comprehensive search strategy was implemented to identify relevant studies published in English from electronic databases, including PubMed, PsycINFO, Scopus, and Google Scholar. The search terms included "maternal mental health," "parenting children with disabilities," "psychological challenges," "social challenges," and related keywords. The search was conducted for studies published between January 2000 and December 2023. Inclusion criteria encompassed peer-reviewed articles, such as original research studies, systematic reviews, and meta-analyses, which focused on maternal mental health in the context of raising children with disabilities. Studies addressing psychological and social challenges, mental health outcomes, coping strategies, and interventions for mothers were considered eligible. Articles that did not focus on the target population (i.e., mothers of children with disabilities) or lacked data on mental health outcomes were excluded.

Two independent reviewers screened titles, abstracts, and full-text articles for eligibility. Discrepancies between reviewers were resolved through discussion, ensuring consensus. Data extraction was performed using a standardized form to collect relevant information on study design, sample characteristics, mental health outcomes, coping mechanisms, and interventions. The quality of the included studies was assessed using the Cochrane Risk of Bias Tool for randomized controlled trials and the Joanna Briggs Institute Checklist for non-randomized studies and qualitative research.

A narrative synthesis was employed to summarize and analyze the findings across studies, with an emphasis on psychological and social challenges, coping mechanisms, and the effectiveness of interventions. The PRISMA flow diagram was used to document the study selection process. This systematic review adhered to the PRISMA checklist to ensure that the methodology was transparent, and the findings could be easily interpreted and replicated in future research. The results provide valuable insights into the mental health and social challenges faced by mothers of children with disabilities and inform strategies for improving support and interventions for this population.

2.1 Understanding maternal mental health in the context of parenting children with disabilities

Parenting is a transformative and demanding role for any mother, but for those raising children with disabilities, the psychological and emotional challenges can be particularly profound (Smythe *et al.*, 2022). The pressures of caregiving, coupled with societal and financial stressors, can significantly impact a mother's mental health. As mothers of children with disabilities navigate the complex caregiving demands, they often face increased risks of developing

mental health conditions such as depression, anxiety, and chronic stress. Understanding the prevalence of these mental health issues, the unique stressors involved in parenting a child with a disability, and the broader social and psychological context is essential for developing effective support systems and interventions (Brown *et al.*, 2022; Yu *et al.*, 2023). This explores the prevalence of mental health issues among mothers of children with disabilities, the psychological and social stressors they face, and the role of stigma and socio-economic factors in shaping mental health outcomes.

The prevalence of mental health issues among mothers of children with disabilities is alarmingly high, reflecting the significant emotional and psychological burden these mothers face. Studies have shown that mothers of children with disabilities experience higher rates of depression, anxiety, and stress compared to mothers of typically developing children (Rydzewska *et al.*, 2021). Another study indicated that as many as 40-50% of mothers of children with disabilities report experiencing significant emotional distress, with anxiety and depression being the most prevalent conditions. The mental health challenges these mothers face are often exacerbated by the continuous caregiving responsibilities and the long-term nature of the disability. Given that the emotional and financial demands of raising a child with a disability can be persistent and intense, it is essential to recognize the long-term impact on maternal mental health. These statistics highlight the need for targeted interventions and mental health support tailored to the unique needs of mothers in this context.

The caregiving responsibilities associated with raising a child with a disability often have a profound impact on the mental health of mothers (Gilson *et al.*, 2021). These responsibilities can result in physical, emotional, and psychological exhaustion, commonly referred to as caregiver burnout. Mothers frequently report feelings of fatigue, as the care demands of their child can be constant and intense. This includes managing medical appointments, therapies, and daily care routines, in addition to typical parental duties. Moreover, the emotional distress associated with the caregiving role is significant. Mothers often experience feelings of inadequacy or guilt, as they may feel that they are unable to meet their child's needs or achieve the same parenting outcomes as mothers of typically developing children. The isolation that often accompanies caregiving, especially when the child's needs prevent participation in social activities, can also lead to feelings of loneliness and alienation (Gutowska, 2022). These emotional burdens can increase vulnerability to mental health issues such as anxiety, depression, and chronic stress.

Socio-economic factors play a crucial role in shaping the mental health outcomes of mothers of children with disabilities (Bixby, 2023). Financial instability is a common concern, as the costs associated with caring for a child with disabilities can be overwhelming. These costs include medical bills, therapies, specialized educational programs, and other resources that may not be fully covered by insurance or public programs. Financial strain can exacerbate the psychological stress that these mothers experience, leading to feelings of helplessness and depression. Access to resources is another critical factor that impacts maternal mental health. Inadequate access to mental health services, support groups, or respite care can leave mothers feeling unsupported and overwhelmed. Many mothers may also face

difficulties in accessing healthcare services that accommodate the specific needs of their child's disability. Geographic location, the availability of specialized services, and health insurance coverage all influence the degree of support available to these mothers, shaping their mental health outcomes (Salam *et al.*, 2022; Mutahi *et al.*, 2022). Stigma and societal attitudes also play a significant role in the mental health of mothers raising children with disabilities (Dobener *et al.*, 2022). The societal stigma surrounding disability often leads to negative judgments and misconceptions, which can be internalized by mothers. These mothers may experience feelings of shame or guilt for their child's disability, even though they have no control over the situation. Societal expectations of "perfect" parenting can further exacerbate these feelings, as mothers may feel inadequate or as though they are being judged for their child's differences. In addition to stigma surrounding disability, mothers may also face societal judgment regarding their ability to "properly" care for their child. This can be especially distressing when mothers are already feeling overwhelmed by caregiving responsibilities. The lack of understanding or empathy from others can contribute to feelings of isolation and emotional distress, which can worsen mental health outcomes. Furthermore, societal attitudes towards mothers of children with disabilities often fail to acknowledge the strengths and resilience of these women. The focus on the challenges rather than the triumphs can perpetuate a narrative of victimhood, which does not reflect the complexity of the experiences of these mothers. Promoting more positive representations and fostering understanding of the challenges and strengths of mothers of children with disabilities is essential for combating stigma and improving their mental well-being (Zhuang *et al.*, 2023; Long and Guo, 2023).

The mental health of mothers of children with disabilities is a complex issue influenced by a range of psychological, social, and economic factors. The prevalence of mental health issues, such as depression, anxiety, and stress, is significantly higher among these mothers, reflecting the immense emotional and physical strain of caregiving. Unique stressors such as caregiver fatigue, isolation, and emotional distress, combined with socio-economic challenges and societal stigma, further exacerbate mental health difficulties. Addressing these issues requires targeted interventions that focus on providing emotional and practical support, improving access to resources, and reducing stigma (Javed *et al.*, 2021). By understanding the unique challenges faced by these mothers and creating systems of support that are responsive to their needs, we can improve maternal mental health and promote better outcomes for both mothers and children.

2.2 Psychological challenges faced by mothers

Mothers of children with disabilities face significant psychological challenges that can impact their mental health, emotional well-being, and overall functioning (Alsa *et al.*, 2021). Raising a child with a disability often involves navigating a complex web of emotional, social, and psychological stressors. These mothers are at an increased risk for mental health conditions, which, if not addressed, can negatively affect their ability to care for their children and maintain a healthy family dynamic (Sameroff and Seifer, 2021; Saharoy *et al.*, 2023). This section will explore the common mental health disorders that mothers of children

with disabilities experience, the emotional and behavioral impacts, and the coping mechanisms and resilience that shape their ability to navigate these challenges.

Mothers of children with disabilities are particularly vulnerable to mental health disorders such as depression, anxiety, and post-traumatic stress disorder (PTSD). Studies have shown that these mothers are more likely to experience depression compared to mothers of typically developing children, with the prevalence of depression ranging from 30% to 50% in this population (Lanjewar *et al.*, 2021; Urizar and Muñoz, 2022). The constant demands of caregiving, the stress of navigating medical systems, and the emotional strain of witnessing their child's struggles contribute to high levels of anxiety and depressive symptoms. Additionally, PTSD can occur as a result of the emotional and psychological trauma mothers experience after receiving a disability diagnosis for their child or witnessing difficult caregiving situations (Hammarlund *et al.*, 2023; Agarwal *et al.*, 2023). Several causal factors contribute to these mental health issues. One significant stressor is caregiving itself, which can be physically and emotionally exhausting. The continuous demand for attention, medical care, and emotional support for a child with disabilities can leave mothers feeling overwhelmed and drained. Furthermore, many mothers express concerns about their child's future, particularly regarding the child's long-term development, independence, and quality of life (Semendric *et al.*, 2023). The uncertainty about their child's future and the fear of social stigma can exacerbate feelings of stress and anxiety. Another factor that contributes to mental health struggles is the impact on a mother's personal identity. The shift from traditional roles and expectations of motherhood to the specialized caregiving required for children with disabilities can result in feelings of loss of self, diminished self-worth, and isolation. The psychological toll of raising a child with disabilities leads to significant emotional burdens. Feelings of guilt, helplessness, and grief are common among mothers. Guilt often arises from the belief that they are not doing enough for their child or that they are failing to provide the best possible care (Jackson *et al.*, 2021). Some mothers also experience guilt related to the perceived inadequacy of their own responses to their child's disability, often internalizing feelings of blame for the diagnosis or the child's struggles. Helplessness emerges when mothers feel they lack control over their child's condition, leading to a sense of powerlessness in their caregiving efforts. Additionally, many mothers experience grief not only in response to the loss of the expected trajectory of their child's life but also for their own personal experiences and dreams. This grief can be compounded over time, leading to prolonged sadness and emotional exhaustion. The emotional strain can also manifest in behavioral changes. Many mothers report increased irritability and frustration due to the continuous caregiving demands and the emotional stress they experience (Kerr *et al.*, 2021; Findling *et al.*, 2023). These behavioral changes can affect their relationships with family members, friends, and even healthcare providers. The heightened irritability can lead to difficulties in communication and emotional connection, resulting in strained relationships with partners and other children. Furthermore, social withdrawal is another common behavioral outcome for mothers of children with disabilities. The stigma associated with disability, coupled with the lack of understanding and support from others, can make mothers feel isolated. This sense of isolation can worsen mental health

issues, as mothers may feel that they cannot share their struggles or seek help.

Mothers of children with disabilities develop a variety of coping mechanisms to manage the psychological challenges they face. Some coping strategies are adaptive and contribute to positive outcomes, while others are maladaptive and may exacerbate mental health issues. Effective coping strategies often include seeking support from family, friends, and support groups. Emotional and practical support can help mothers feel validated and understood, reducing feelings of isolation and loneliness. Additionally, some mothers engage in problem-solving strategies, seeking out resources, therapy, or specialized services to better care for their child (Bristow *et al.*, 2022). These adaptive strategies help mothers feel more in control of their circumstances and can reduce emotional distress. However, maladaptive coping mechanisms can also emerge in response to the stress and strain of caregiving. Some mothers may turn to avoidance behaviors, such as withdrawing from social activities, avoiding help-seeking, or denying the emotional impact of their caregiving responsibilities (Sorsa *et al.*, 2021; Gueta and Shlichove, 2022). Others may engage in unhealthy coping strategies, such as substance use, emotional eating, or overworking, in an attempt to manage their stress. These maladaptive coping mechanisms may provide short-term relief but can worsen mental health over time and increase the risk of developing chronic mental health conditions. The role of resilience plays a crucial part in how mothers navigate the psychological challenges associated with raising a child with disabilities (Mohan, 2021). Resilience is the ability to bounce back from adversity, and it can vary based on individual characteristics, experiences, and coping resources. Some mothers demonstrate remarkable resilience in the face of overwhelming stress, showing flexibility, determination, and a sense of purpose despite the challenges. Resilience can be enhanced through supportive relationships, access to mental health care, and the ability to make meaning of the caregiving experience. However, the level of resilience may vary depending on the mother's background, social support network, and personal coping skills. Mothers of children with disabilities face significant psychological challenges that can result in mental health conditions such as depression, anxiety, and PTSD. These challenges are driven by factors such as caregiving stress, concerns about the child's future, and the impact on the mother's personal identity. The emotional burden of guilt, helplessness, and grief, combined with behavioral effects such as irritability and social withdrawal, further complicates their mental health. Coping mechanisms, both adaptive and maladaptive, play a crucial role in how mothers navigate these challenges, and resilience can serve as an important factor in their ability to cope (Ronen, 2021; Nkansah *et al.*, 2022). Understanding these psychological challenges is essential for developing effective support systems and interventions to improve the mental health and well-being of mothers raising children with disabilities.

2.3 Social challenges and support systems

Mothers of children with disabilities often face a complex set of social challenges that can significantly impact their mental health and overall well-being (Sarwar *et al.*, 2022). These challenges, which include social isolation, stigma, and economic strain, are often exacerbated by a lack of adequate support systems as shown in figure 1. Social networks, community resources, and supportive policies are crucial in

helping these mothers navigate the demands of caregiving. However, the lack of support and the barriers posed by stigma and economic hardship can lead to increased stress and mental health struggles. This explores the social challenges faced by mothers of children with disabilities, focusing on the impact of caregiving on social relationships, the effects of stigma and discrimination, and the economic and policy barriers that hinder access to resources.

One of the most significant social challenges faced by mothers of children with disabilities is social isolation. The demands of caregiving, which can be physically and emotionally exhausting, often limit a mother's ability to participate in social activities, maintain friendships, or nurture romantic relationships (Graham, 2022; Rahmani *et al.*, 2022). Many mothers report a sense of being "locked in" to their caregiving role, with little opportunity for social interaction outside of their immediate family or caregiving duties. This isolation can lead to a diminished sense of community and emotional distress, as the mother may feel unsupported or disconnected from the broader social network. The impact of caregiving responsibilities on social relationships can be profound. Marriages are often strained due to the emotional and physical stress of raising a child with a disability (Schiltz *et al.*, 2021). Couples may face challenges in maintaining intimacy or communicating effectively when one or both partners are overwhelmed by caregiving tasks. These strains can lead to increased conflict, emotional distance, or even separation. Additionally, friendships often become less frequent or fade entirely as mothers may feel that their friends cannot relate to the challenges they face. The lack of shared experiences with friends who do not have children with disabilities can result in feelings of loneliness or alienation (Tarvainen, 2021). Furthermore, the difficulty in seeking and maintaining support from family, friends, or community networks exacerbates the isolation mothers experience. Despite the importance of a strong social support system, many mothers find it hard to ask for help, either because they feel they should be able to manage on their own or because they worry about burdening others. This reluctance to seek support may stem from fears of judgment or a lack of understanding from those in their social circle. In many cases, family members or friends may not fully understand the specific needs of the child or the intensity of caregiving, making it difficult to receive the necessary support.

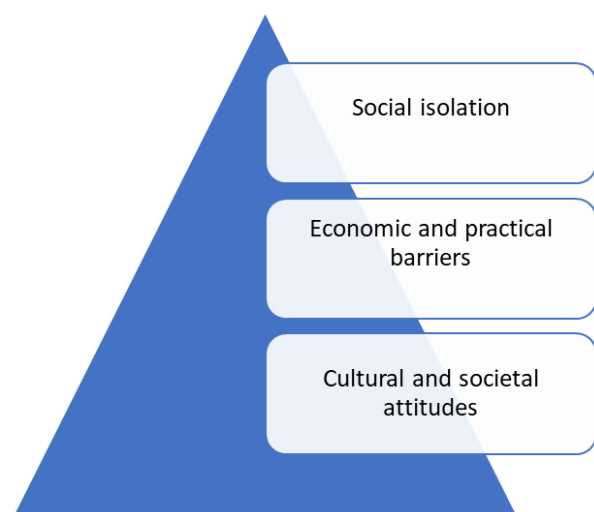


Fig 1: Social challenges

Stigma and discrimination are significant barriers that affect the mental health and social well-being of mothers raising children with disabilities (McLean and Halstead, 2021). The stigma surrounding disability often extends beyond the child to affect the mother, who may be seen through a lens of pity, judgment, or marginalization. This stigma can have a profound effect on maternal mental health, leading to feelings of shame, guilt, and inadequacy (Dirlikov *et al.*, 2021). Mothers may feel that they are judged for their child's disability or that they are perceived as less competent parents due to their child's condition. The societal views on disability often shape how mothers perceive themselves and how they are perceived by others. These views can influence a mother's self-esteem, as they may internalize negative stereotypes about disability and parenting (Adegoke *et al.*, 2022). These societal attitudes can also limit the social acceptance of mothers of children with disabilities, preventing them from feeling fully integrated into social or community networks. Moreover, mothers of children with disabilities may face discrimination in various aspects of their lives, including in healthcare settings, the workplace, and educational institutions. Discrimination based on their child's disability can lead to further stress, making it more difficult for mothers to access services, resources, or opportunities for personal growth. These social barriers not only affect the well-being of mothers but also perpetuate the cycle of social exclusion and mental health difficulties.

Economic strain is another critical challenge that affects mothers of children with disabilities. The financial costs associated with raising a child with disabilities can be overwhelming. These costs include medical treatments, therapies, special education services, and additional care needs that are not always covered by insurance. The financial burden can be exacerbated for single mothers or families with limited financial resources, leading to chronic stress and anxiety. The financial strain associated with caregiving can also have broader mental health implications. The constant worry about meeting basic financial needs or affording necessary services can increase feelings of helplessness and despair (Nnagha *et al.*, 2023). Additionally, the need for flexible work hours or the possibility of staying home to care for the child may result in loss of income, further compounding financial difficulties. Furthermore, gaps in social policies, healthcare accessibility, and parental leave significantly impact the well-being of mothers raising children with disabilities. Inadequate parental leave policies can leave mothers without sufficient time to bond with their child or to navigate the complex medical and educational systems that often accompany disability. Without adequate leave or financial support, mothers are forced to return to work too soon, sacrificing both their own well-being and their ability to care for their child. Healthcare accessibility is another major barrier (Matthew *et al.*, 2024). Many mothers report challenges in accessing the specialized medical care and therapy services that their children need, due to geographic location, financial constraints, or a lack of insurance coverage. The lack of comprehensive support services for both children and their caregivers often leads to feelings of frustration and exhaustion. Policies that fail to address the unique needs of families raising children with disabilities can exacerbate existing mental health issues, leaving mothers feeling unsupported by the system (Al Hasan *et al.*, 2024).

The social challenges faced by mothers of children with

disabilities are complex and multifaceted. Social isolation, strained relationships, stigma, discrimination, and economic barriers can significantly impact maternal mental health (Matthew *et al.*, 2024). The caregiving role often leads to social withdrawal, emotional distress, and difficulties in maintaining support from family, friends, and community networks. Stigma surrounding disability further exacerbates feelings of shame and inadequacy, while economic and policy barriers prevent many mothers from accessing the resources and support they need. Addressing these social challenges requires a multi-dimensional approach that includes enhancing support systems, promoting awareness and understanding of disability, and implementing policies that reduce financial and logistical barriers (Opia *et al.*, 2022; Matthew *et al.*, 2024). By providing more comprehensive, accessible, and compassionate support, society can help improve the well-being of mothers raising children with disabilities and promote better outcomes for both mothers and children.

2.4 Psychological interventions and support strategies

Psychological interventions and support strategies play a crucial role in addressing the mental health challenges faced by mothers raising children with disabilities (Jahun *et al.*, 2021). These mothers often experience high levels of psychological distress, emotional burden, and caregiving stress, which can significantly impact their mental well-being. Effective therapeutic interventions, social support programs, and policy changes are necessary to provide the comprehensive care and resources that mothers need to cope with these challenges (Bidemi *et al.*, 2021; Temedie-Asogwa *et al.*, 2024). This section discusses various psychological interventions, the role of social support systems, and recommendations for policy and public health improvements to better support mothers of children with disabilities.

Psychological therapies are among the most effective tools for alleviating maternal stress and improving mental health in mothers of children with disabilities. Cognitive Behavioral Therapy (CBT) has been widely researched and proven to be effective for treating depression, anxiety, and stress in this population. CBT focuses on helping individuals identify and reframe negative thought patterns, providing mothers with practical tools to manage the emotional and cognitive challenges they face (Fagbule *et al.*, 2023). Several studies have demonstrated that CBT significantly reduces maternal stress, enhances emotional regulation, and improves overall mental health outcomes. Mindfulness-based interventions, such as Mindfulness-Based Stress Reduction (MBSR), have also shown promise in supporting mothers of children with disabilities. Mindfulness techniques focus on increasing awareness and acceptance of the present moment, which can help reduce the emotional impact of caregiving stress. Mindfulness practices enable mothers to develop better emotional resilience, improve coping skills, and decrease symptoms of burnout and depression. Additionally, these interventions can promote self-compassion, which is essential for mothers who often experience guilt and self-blame related to their child's disability (Amafah *et al.*, 2023). Parent Training Programs are another form of psychological intervention that focuses on enhancing mothers' parenting skills while managing their own emotional well-being. These programs provide mothers with strategies for improving child

behavior, managing daily routines, and fostering positive parent-child interactions. Training programs are particularly beneficial in reducing stress and increasing maternal confidence, as they empower mothers with practical skills and knowledge to navigate the challenges of raising a child with disabilities. Counseling and support groups are also valuable tools for mitigating maternal stress and improving mental health. Individual counseling offers mothers a private and supportive environment to explore their emotional challenges, develop coping strategies, and address the psychological toll of caregiving (Dirlikov *et al.*, 2021; Al Zoubi *et al.*, 2022). Support groups, on the other hand, provide opportunities for mothers to connect with others who share similar experiences (Obi *et al.*, 2023). These groups offer emotional validation, shared coping strategies, and a sense of community, which can significantly reduce feelings of isolation and stress.

Social support programs are vital in helping mothers of children with disabilities manage the psychological and emotional challenges of caregiving (Efobi *et al.*, 2023). Social work interventions play a key role in providing mothers with practical and emotional support. Social workers can help mothers navigate complex systems such as healthcare, education, and financial aid, ensuring they have access to the resources they need. These professionals also offer counseling and advocacy, empowering mothers to seek the services and support they require to improve their mental well-being. Peer support groups have become an essential tool for helping mothers connect with others in similar situations. Peer support provides a sense of solidarity and reduces isolation by creating spaces where mothers can share their experiences and feelings without judgment. These groups can help normalize the challenges of raising a child with disabilities, provide emotional support, and offer practical advice on managing caregiving stress. Many mothers find strength in knowing that others understand their unique struggles and that they are not alone in their journey (Uwumiro *et al.*, 2023). Community-based interventions are also critical in supporting mothers of children with disabilities. These programs can range from local support groups and parent education programs to community activities that foster social inclusion and reduce isolation. Community-based initiatives often provide a network of resources, including respite care, financial assistance, and educational support, which can alleviate some of the burdens mothers face (Okpuije *et al.*, 2024; Akinmoju *et al.*, 2024). These programs play a vital role in ensuring that mothers have access to services that enhance both their mental and emotional well-being.

Policy and public health interventions are essential in improving the support systems for mothers raising children with disabilities. One of the primary recommendations is improving access to mental health services. Mental health support for mothers of children with disabilities should be included as part of comprehensive healthcare programs, ensuring that these mothers have access to timely psychological interventions. Funding for mental health services should be increased, and healthcare providers should be trained to recognize and address the unique challenges faced by mothers of children with disabilities (Adenusi *et al.*, 2024; Mbakop *et al.*, 2024).

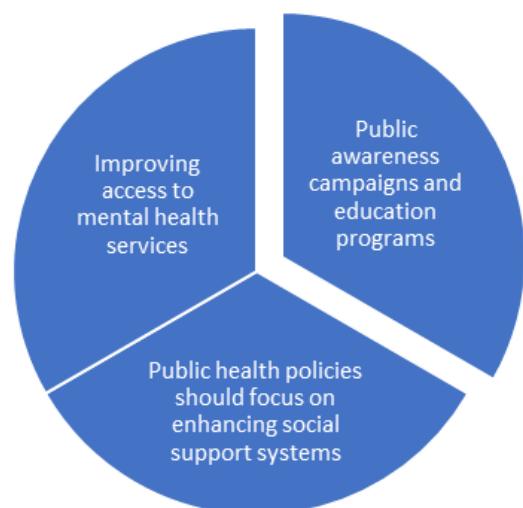


Fig 2: Policy and public health interventions recommendation

In addition to improving access to mental health services, public health policies should focus on enhancing social support systems. Programs that provide financial support, respite care, and home-based services can significantly reduce the emotional and financial strain on mothers (Uwumiro *et al.*, 2204). Policies should also promote the inclusion of mothers with children with disabilities in public health programs, ensuring they receive the same level of care, support, and resources as other mothers. This can include access to parenting programs, mental health care, and specialized support services that are tailored to the needs of mothers in this population. Furthermore, policies should aim to reduce the societal stigma associated with disability and caregiving. Public awareness campaigns and education programs can help shift societal attitudes, making it easier for mothers to seek help and reducing feelings of shame or guilt associated with their caregiving role. By fostering a more inclusive and supportive society, these policies can improve maternal mental health outcomes and enhance the quality of life for both mothers and their children (Schuver *et al.*, 2024). Psychological interventions, social support programs, and policy changes are essential to addressing the unique mental health challenges faced by mothers of children with disabilities. Effective therapeutic interventions, such as CBT, mindfulness, and parent training, offer valuable support in managing stress and improving emotional well-being. Social support programs, including peer support groups and social work interventions, provide critical emotional and practical assistance. Finally, policy and public health recommendations aimed at improving access to mental health services, enhancing social support systems, and reducing societal stigma can help improve the overall quality of life for mothers and their families. Through these efforts, mothers raising children with disabilities can receive the comprehensive care and support they need to navigate the challenges of caregiving and maintain positive mental health (Olatunji *et al.*, 2024; Uwumiro *et al.*, 2024).

2.5 Barriers to effective support

Mothers of children with disabilities often encounter a wide array of challenges when it comes to accessing and receiving effective support (Neupane *et al.*, 2024). These challenges are multifaceted, ranging from limitations within the healthcare system to cultural and social barriers as shown in figure 3.

Despite the growing awareness of the mental health struggles these mothers face, substantial barriers remain in ensuring they receive the appropriate care and assistance. This explores the primary barriers to effective support for mothers of children with disabilities, focusing on healthcare system challenges and cultural and social factors.

One of the most significant barriers to effective support for mothers of children with disabilities is the limited access to mental health services. Many mothers experience considerable psychological distress due to the complexities of caregiving, and yet, they often encounter difficulties in accessing mental health care. Mental health services, particularly those tailored to the unique needs of these mothers, are frequently inadequate or inaccessible. In many regions, mental health services are already underfunded and overwhelmed, which results in long wait times and a lack of specialized care (Ugwuoke *et al.*, 2024). This issue is compounded by the fact that mothers of children with disabilities may face geographical or financial barriers that prevent them from accessing available mental health services.

Furthermore, there is often a lack of integration between psychological care and child disability services. Mothers are typically expected to navigate two separate systems: one for addressing their child's needs and another for addressing their own mental health. This fragmentation makes it more difficult for mothers to receive holistic care, as the psychological aspects of their caregiving role are not always adequately addressed in parallel with their child's medical and therapeutic needs (Koroma *et al.*, 2024; Aderinwale *et al.*, 2024). In many cases, mental health professionals may not be well-versed in the specific stressors that come with raising a child with disabilities, which further limits the effectiveness of support. Integrated care models, where both the child's and the mother's needs are simultaneously addressed, have been shown to be more effective, but such models are not universally available or promoted.

Moreover, healthcare systems often lack resources to train professionals in understanding the intersection between disability and mental health, which can result in inadequate or mismatched support for mothers (Bidemi *et al.*, 2021; Matthew *et al.*, 2021). There is also a lack of coordination among healthcare providers, social services, and community organizations, which can further hinder access to comprehensive care. A lack of communication between these providers leads to gaps in support, as mothers may not receive the full spectrum of services they need to manage both their mental health and their caregiving responsibilities.

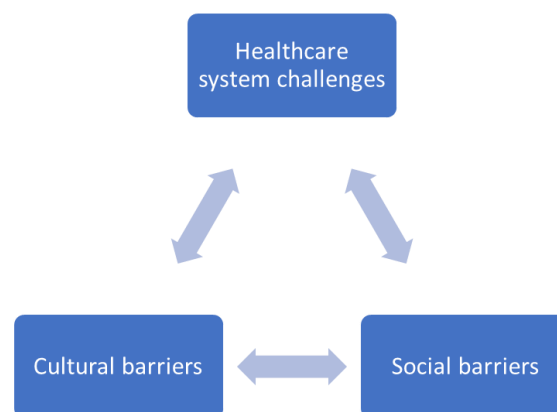


Fig 3: Barriers to effective support for mothers of children with disabilities

In addition to healthcare system challenges, cultural and social barriers also significantly affect the willingness and ability of mothers to seek help. Cultural attitudes toward disability play a critical role in shaping how mothers perceive their caregiving roles and their mental health needs (Jahun *et al.*, 2021; Obi *et al.*, 2024). In many societies, there is still a prevalent stigma surrounding disability, which can create feelings of shame or guilt for mothers. In some cultures, disability may be seen as a punishment, a source of family embarrassment, or a reflection of parental inadequacy (Matthew *et al.*, 2022). These cultural norms can discourage mothers from seeking professional help, as they may fear judgment or social exclusion. These cultural expectations can significantly impact a mother's willingness to seek support for both her child and herself. Mothers may also fear being labeled as inadequate parents or receiving negative attention from their community, which can contribute to their reluctance to reach out for help. As a result, they may suffer in silence, leading to worsening mental health outcomes and feelings of isolation.

There is also a need for more inclusive and culturally sensitive programs that can effectively address the diverse needs of families raising children with disabilities. Support programs must recognize the varying cultural attitudes toward disability and adapt their services to meet the specific needs of different communities (Folorunso *et al.*, 2024). Culturally sensitive mental health services, for instance, take into account the values, traditions, and practices that are important to families, ensuring that mothers feel respected and understood in their cultural context. Without this sensitivity, mothers may not feel comfortable engaging with support systems, which reduces the likelihood that they will access the care they need. Moreover, families come in many diverse structures, and support programs must be flexible enough to accommodate various family dynamics. For example, single mothers or grandmothers raising children with disabilities may face unique challenges that require different types of support than those typically offered. Support systems that focus on a one-size-fits-all approach fail to address the varied needs of these families and may further marginalize those who do not fit into conventional family models. A lack of inclusive programming also extends to the educational and social support available to families. Mothers from marginalized communities may encounter difficulties in accessing resources, as these communities often face both systemic barriers to healthcare and socio-economic challenges (Bello *et al.*, 2024).

To overcome these barriers, it is crucial to focus on several areas for improvement. First, integrating mental health services with child disability care is essential to providing comprehensive support for mothers (Adaramola *et al.*, 2024). This can be achieved by creating multidisciplinary teams that include healthcare providers, social workers, and mental health professionals who work together to address both the child's and mother's needs. Healthcare systems should also provide more resources to train professionals in understanding the unique challenges faced by mothers of children with disabilities. Furthermore, cultural and social barriers can be mitigated by offering culturally competent care and programs that recognize the diversity of family structures and cultural beliefs (Ajayi *et al.*, 2024). This includes offering community-based support systems, peer support networks, and culturally tailored mental health services. It is important that these programs are designed in

collaboration with the communities they serve to ensure they meet the real needs of mothers in a respectful and meaningful way. Finally, increasing public awareness and reducing the stigma associated with disability and mental health is essential to encourage mothers to seek the support they need. Public health campaigns can help change societal attitudes toward disability, promote understanding, and reduce the shame and stigma that often prevent mothers from reaching out for help (Adigun *et al.*, 2024; Adewuyi *et al.*, 2024).

Mothers of children with disabilities face significant barriers to effective support, including limitations within the healthcare system, cultural and social stigma, and a lack of inclusive and culturally sensitive services. These challenges make it difficult for mothers to access the care they need to maintain their own mental health while caring for their children. Addressing these barriers requires comprehensive changes in healthcare systems, cultural sensitivity in support programs, and public awareness campaigns aimed at reducing stigma. By focusing on these areas, society can improve the quality of support provided to mothers, helping them better manage their caregiving roles and ensuring their mental and emotional well-being.

3. Conclusion

In conclusion, this review highlights the significant psychological and social challenges faced by mothers raising children with disabilities. These mothers often experience a range of mental health issues, including depression, anxiety, and stress, which are exacerbated by the emotional burden of caregiving, societal stigma, and concerns about their child's future. The impact on maternal mental health can be profound, affecting not only the mother's well-being but also her ability to care for and bond with her child. The emotional toll of guilt, helplessness, and grief, along with the behavioral effects such as irritability and social withdrawal, further complicate the caregiving experience. Additionally, the lack of adequate social support and mental health resources can contribute to a prolonged sense of isolation and emotional exhaustion for these mothers.

Based on these findings, it is clear that more attention is needed to address the unique mental health needs of mothers raising children with disabilities. Future research should explore the long-term mental health outcomes of these mothers, particularly the effects of sustained caregiving stress and the impact on maternal well-being over time. Longitudinal studies could provide deeper insights into how mental health challenges evolve and what interventions are most effective in supporting mothers throughout the child-rearing years. Moreover, further investigation into the efficacy of specific psychological interventions, such as cognitive-behavioral therapy (CBT), mindfulness practices, and parent training programs, would help identify best practices in supporting maternal mental health.

Additionally, there is a need for research that examines the systemic factors affecting mothers, including social support networks, healthcare access, and public health policies. Understanding how these factors contribute to or alleviate maternal mental health challenges will inform more effective policy recommendations and help improve the quality of care for these mothers. In sum, continued research is essential to develop evidence-based interventions that can better support mothers of children with disabilities, ultimately enhancing both their mental health and the well-being of their families.

4. Reference

- Adaramola TS, Omole OM, Wada I, Nwariaku H, Arowolo ME, Adigun OA. Internet of thing integration in green fintech for enhanced resource management in smart cities. *World Journal of Advanced Research and Reviews*. 2024;23(2):1317–27.
- Adegoke SA, Oladimeji OI, Akinlosotu MA, Akinwumi AI, Matthew KA. HemoTypeSC point-of-care testing shows high sensitivity with alkaline cellulose acetate hemoglobin electrophoresis for screening hemoglobin SS and SC genotypes. *Hematology, Transfusion and Cell Therapy*. 2022;44(3):341–5.
- Adenusi A, Obi E, Asifat O, Magacha H, Ayinde A, Changela M. S843 Social determinants of therapeutic endoscopy and procedure time in patients with acute upper gastrointestinal bleeding. *The American Journal of Gastroenterology*. 2024;119(10S):S581.
- Aderinwale O, Zheng S, Mensah EA, Boateng I, Koroma FB, Nwajugo RC, *et al.* Sociodemographic and behavioral determinants of cervical cancer screening among adult women in the United States. [Pending journal and pagination].
- Adewuyi AY, Anyibama B, Adebayo KB, Kalinzi JM, Adeniyi SA, Wada I. Precision agriculture: leveraging data science for sustainable farming. *International Journal of Scientific Research Archive*. 2024;12(2):1122–9.
- Adigun OA, Falola BO, Esebre SD, Wada I, Tunde A. Enhancing carbon markets with fintech innovations: the role of artificial intelligence and blockchain. *World Journal of Advanced Research and Reviews*. 2024;23(2). [Pending pagination].
- Agarwal S, Prasad R, Mantri S, Chandrakar R, Gupta S, Babhulkar V, *et al.* A comprehensive review of intimate partner violence during pregnancy and its adverse effects on maternal and fetal health. *Cureus*. 2023;15(5). [Pending pagination].
- Ajayi AM, Omokanye AO, Olowu O, Adeleye AO, Omole OM, Wada IU. Detecting insider threats in banking using AI-driven anomaly detection with a data science approach to cybersecurity. [Pending journal and pagination].
- Akinmoju OD, Olatunji G, Kokori E, Ogieuhi IJ, Babalola AE, Obi ES, *et al.* Comparative efficacy of continuous positive airway pressure and antihypertensive medications in obstructive sleep apnea-related hypertension: a narrative review. *High Blood Pressure & Cardiovascular Prevention*. 2024;1–11.
- Al Hasan SM, Matthew KA, Toriola AT. Education and mammographic breast density. *Breast Cancer Research and Treatment*. 2024;1–8.
- Al Zoubi MAM, Amafah J, Temedie-Asogwa T, Atta JA. [Pending title]. *International Journal of Multidisciplinary Comprehensive Research*. 2022. [Pending pagination].
- Alsa A, Sovitriana R, Ekasari A, Endri E. Psychological well-being of mothers with autistic children. *Journal of Educational and Social Research*. 2021;11(6). [Pending pagination].
- Amafah J, Temedie-Asogwa T, Atta JA, Al Zoubi MAM. The impacts of treatment summaries on patient-centered communication and quality of care for cancer survivors. [Pending journal and pagination].
- Bello S, Wada I, Ige O, Chianumba E, Adebayo S. AI-driven predictive maintenance and optimization of renewable energy systems for enhanced operational efficiency and longevity. *International Journal of Science and Research Archive*. 2024;13(1).
- Bidemi AI, Oyindamola FO, Odum I, Stanley OE, Atta JA, Olatomide AM, *et al.* Challenges facing menstruating adolescents: a reproductive health approach. *Journal of Adolescent Health*. 2021;68(5):1–10.
- Bixby LE. Disability is not a burden: the relationship between early childhood disability and maternal health depends on family socioeconomic status. *Journal of Health and Social Behavior*. 2023;64(3):354–69.
- Brekke I, Alecu A. The health of mothers caring for a child with a disability: a longitudinal study. *BMC Women's Health*. 2023;23(1):639.
- Bristow S, Usher K, Power T, Jackson D. Understanding maternal resilience; lessons learnt from rural mothers caring for a child with a chronic health condition. *Journal of Clinical Nursing*. 2022;31(17–18):2593–604.
- Brown HK, Tint A, Heifetz M, Abou Chacra M, Bluestein D, Vigod S, *et al.* Barriers and requirements for parenting supports and mental health care among mothers with intellectual disabilities: health and social service-provider perspectives. *Research in Developmental Disabilities*. 2022;126:104237.
- Dirlikov E, Jahun I, Odafe SF, Obinna O, Onyenuobi C, Ifunanya M, *et al.* Rapid scale-up of an antiretroviral therapy program before and during the COVID-19 pandemic—nine states, Nigeria, March 31, 2019–September 30, 2020. *MMWR Morbidity and Mortality Weekly Report*. 2021;70(12):421–6.
- Dobener LM, Fahrer J, Purtscheller D, Bauer A, Paul JL, Christiansen H. How do children of parents with mental illness experience stigma? A systematic mixed studies review. *Frontiers in Psychiatry*. 2022;13:813519.
- Efobi CC, Nri-ezedi CA, Madu CS, Obi E, Ikediashi CC, Ejiofor O. A retrospective study on gender-related differences in clinical events of sickle cell disease: a single centre experience. *Tropical Journal of Medical Research*. 2023;22(1):137–44.
- Fagbule OF, Amafah JO, Sarumi AT, Ibitoye OO, Jakpor PE, Oluwafemi AM. Sugar-sweetened beverage tax: a crucial component of a multisectoral approach to combating non-communicable diseases in Nigeria. *Nigerian Journal of Medicine*. 2023;32(5):461–6.
- Dirlikov E, Jahun I, Odafe SF, Obinna O, Onyenuobi C, Ifunanya M, *et al.* Section navigation rapid scale-up of an antiretroviral therapy program before and during the COVID-19 pandemic—nine states, Nigeria, March 31, 2019–September 30, 2020. *MMWR Morbidity and Mortality Weekly Report*. 2021. [Pending pagination].
- Bidemi AI, Oyindamola FO, Odum I, Stanley OE, Atta JA, Olatomide AM, *et al.* Challenges facing menstruating adolescents: a reproductive health approach. *Journal of Adolescent Health*. 2021;68(5):1–10.
- Fatima N, Chinnakali P, Rajaa S, Menon V, Mondal N, Chandrasekaran V. Prevalence of depression and anxiety among mothers of children with neuro-developmental disorders at a tertiary care centre, Puducherry. *Clinical Epidemiology and Global Health*. 2021;11:100792.
- Findling Y, Barnoy S, Itzhaki M. Burden of treatment, emotion work and parental burnout of mothers to

- children with or without special needs: A pilot study. *Current Psychology*. 2023;42(22):19273–85.
28. Folorunso A, Mohammed V, Wada I, Samuel B. The impact of ISO security standards on enhancing cybersecurity posture in organizations. *World Journal of Advanced Research and Reviews*. 2024;24(1):2582–95.
 29. Folorunso A, Wada I, Samuel B, Mohammed V. Security compliance and its implication for cybersecurity. *World Journal of Advanced Research and Reviews*. 2024;24(1):2105–21.
 30. Forbes LK, Lamar MR, Bornstein RS. Working mothers' experiences in an intensive mothering culture: A phenomenological qualitative study. *Journal of Feminist Family Therapy*. 2021;33(3):270–94.
 31. Gilson KM, Davis E, Gains J, Brunton S, Williams K, Reddihough D. Experiences and barriers to accessing mental health support in mothers of children with a disability. *Child: Care, Health and Development*. 2021;47(5):697–704.
 32. Graham H. Caring: a labour of love. In: *A Labour of Love*. Routledge; 2022. p. 13–30.
 33. Gueta K, Shlichove T. Barriers to and facilitators of help-seeking behavior among Israeli men who experience intimate partner violence: A qualitative study. *Psychology of Men & Masculinities*. 2022;23(2):233.
 34. Gutowska A. The care of adults with intellectual disabilities: Informal (family) caregivers' perspectives. *International Journal of Environmental Research and Public Health*. 2022;19(23):15622.
 35. Hammarlund M, Granqvist P, Forslund T. Experiences of interpersonal trauma among parents with intellectual disabilities: A systematic review. *Trauma, Violence, & Abuse*. 2023;24(4):2843–62.
 36. Jackson L, De Pascalis L, Harrold J, Fallon V. Guilt, shame, and postpartum infant feeding outcomes: A systematic review. *Maternal & Child Nutrition*. 2021;17(3):e13141.
 37. Jahun I, Dirlikov E, Odafe S, Yakubu A, Boyd AT, Bachanas P, *et al.* Ensuring optimal community HIV testing services in Nigeria using an enhanced community case-finding package (ECCP), October 2019–March 2020: Acceleration to HIV epidemic control. *HIV/AIDS-Research and Palliative Care*. 2021;13:839–50.
 38. Jahun I, Said I, El-Imam I, Ehoche A, Dalhatu I, Yakubu A, *et al.* Optimizing community linkage to care and antiretroviral therapy initiation: Lessons from the Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) and their adaptation in Nigeria ART Surge. *PLoS One*. 2021;16(9):e0257476.
 39. Javed A, Lee C, Zakaria H, Buenaventura RD, Cetkovich-Bakmas M, Duailibi K, *et al.* Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. *Asian Journal of Psychiatry*. 2021;58:102601.
 40. Keleynikov M, Benatov J, Cohen N. Emotion regulation among parents raising a child with disability: A systematic review and conceptual model. *Journal of Child and Family Studies*. 2023;32(3):858–75.
 41. Kerr ML, Rasmussen HF, Buttitta KV, Smiley PA, Borelli JL. Exploring the complexity of mothers' real-time emotions while caregiving. *Emotion*. 2021;21(3):545.
 42. Koroma F, Aderinwale OA, Obi ES, Campbell C, Itopa MO, Nwajiugo RC, *et al.* Socio-demographic and behavioral predictors of depression among veterans in the USA. *Pending journal and pagination*.
 43. Lanjewar S, Nimkar S, Jungari S. Depressed motherhood: Prevalence and covariates of maternal postpartum depression among urban mothers in India. *Asian Journal of Psychiatry*. 2021;57:102567.
 44. Long T, Guo J. Moving beyond inclusion to belonging. *International Journal of Environmental Research and Public Health*. 2023;20(20):6907.
 45. Matthew A, Opia FN, Matthew KA, Kumolu AF, Matthew TF. Cancer care management in the COVID-19 era: Challenges and adaptations in the global south. *Cancer*. 2021;2(6):Pending pagination.
 46. Matthew KA, Getz KR, Jeon MS, Luo C, Luo J, Toriola AT. Associations of vitamins and related cofactor metabolites with mammographic breast density in premenopausal women. *The Journal of Nutrition*. 2024;154(2):424–34.
 47. Matthew KA, Opia FN, Matthew A, Kumolu AF, Matthew TF. Achieving personalized oncology care: Insights and challenges in sub-Saharan Africa. *Pending journal and pagination*.
 48. Matthew KA, Vanapali GK, Getz KR, Jeon MS, Luo C, Guo X, *et al.* Steroid hormone metabolites and mammographic breast density in premenopausal women. *Cancer Research*. 2024;84(6_Supplement):4431.
 49. Mbakop RNS, Forlemu AN, Ugwu C, Soladoye E, Olaosebikan K, Obi ES, *et al.* Racial differences in non-variceal upper gastrointestinal (GI) bleeding: A nationwide study. *Cureus*. 2024;16(6):Pending pagination.
 50. McLean S, Halstead EJ. Resilience and stigma in mothers of children with emotional and behavioural difficulties. *Research in Developmental Disabilities*. 2021;108:103818.
 51. Merrick H, Driver H, Main C, Kenny RP, Richmond C, Allard A, *et al.* Impacts of health care service changes implemented due to COVID-19 on children and young people with long-term disability: a mapping review. *Developmental Medicine & Child Neurology*. 2023;65(7):885–99.
 52. Mohan R. Counseling Parents of Special Children: Insight from Resilient Parents. In: *Learning Disabilities-Neurobiology, Assessment, Clinical Features and Treatments*. London: IntechOpen; 2021.
 53. Mutahi J, Larsen A, Cuijpers P, Peterson SS, Unutzer J, McKay M, *et al.* Mental health problems and service gaps experienced by pregnant adolescents and young women in Sub-Saharan Africa: a systematic review. *EClinicalMedicine*. 2022;44:101300.
 54. Neupane H, Ahuja M, Ghimire A, Itopa MO, Osei PA, Obi ES. Excessive alcohol consumption and increased risk of heart attack. *Journal TBD*. 2024.
 55. Nicholson J, Mazel S, Faughnan K, Silverman A. Mothers with Intellectual/Developmental Disabilities and Behavioral Health Conditions and Community Experts Provide Recommendations for Treatment/Services, Systems, and Research. *International Journal of Environmental Research and Public Health*. 2023;20(10):5876.
 56. Nkansah JO, Ababio MO, Awuviry-Newton K. Life-

- Changing Coping Mechanisms and Resilience Strategies of Post-Natal Unmarried Teenage Mothers in the Central Region, Ghana. *Journal of Education, Society and Behavioural Science*. 2022;35(7):13–26.
57. Nnagha EM, Ademola MK, Izevbizua EA, Uwishema O, Nazir A, Wellington J. Tackling sickle cell crisis in Nigeria: the need for newer therapeutic solutions in sickle cell crisis management—short communication. *Annals of Medicine and Surgery*. 2023;85(5):2282–6.
 58. Obi E, Aderinwale OA, Ugwuoke U, Okam O, Magacha H, Itopa MO. Evaluating and Improving Patient and Family Satisfaction with Hemato-Oncological Services at an Outpatient Clinic in East Tennessee: A Service Excellence Initiative. *Journal TBD*. 2024.
 59. Obi ES, Devdat LNU, Ehimwenma NO, Tobalesi O, Iklaki W, Arslan F, *et al.* Immune Thrombocytopenia: a rare adverse event of Vancomycin Therapy. *Cureus*. 2023;15(5):e45237.
 60. Okpujie VO, Uwumiro FE, Bojerenu M, Alemenzohu H, Obi ES, Chigbu NC, *et al.* Increased ventilator utilization, ventilator-associated pneumonia, and mortality in non-COVID patients during the pandemic. *Baylor University Medical Center Proceedings*. 2024;37(2):230–8.
 61. Olatunji G, Kokori E, Ogieuhi II, Abraham IC, Olanisa O, Nzeako T, *et al.* Can CSL-112 Revolutionize Atherosclerosis Treatment? A Critical Look at the Evidence. *Current Problems in Cardiology*. 2024;49:102680.
 62. Opia FN, Matthew KA, Matthew TF. Leveraging Algorithmic and Machine Learning Technologies for Breast Cancer Management in Sub-Saharan Africa. *Journal TBD*. 2022.
 63. Planalp EM, Nowak AL, Tran D, Lefever JB, Braungart-Rieker JM. Positive parenting, parenting stress, and child self-regulation patterns differ across maternal demographic risk. *Journal of Family Psychology*. 2022;36(5):713–26.
 64. Rahmani F, Roshanghar F, Gholizadeh L, Dickens GL. Caregiver or care receiver: Adolescents' experience of caregiving to a parent with severe mental illness: A qualitative study. *Child & Family Social Work*. 2022;27(4):795–804.
 65. Ronen T. The role of coping skills for developing resilience among children and adolescents. In: *The Palgrave Handbook of Positive Education*. Cham: Springer International Publishing; 2021. p. 345–68.
 66. Roos LE, Salisbury M, Penner-Goeke L, Cameron EE, Protudjer JL, Giuliano R, *et al.* Supporting families to protect child health: Parenting quality and household needs during the COVID-19 pandemic. *PLOS One*. 2021;16(5):e0251720.
 67. Rydzewska E, Dunn K, Cooper SA, Kinnear D. Mental ill-health in mothers of people with intellectual disabilities compared with mothers of typically developing people: a systematic review and meta-analysis. *Journal of Intellectual Disability Research*. 2021;65(6):501–34.
 68. Saharoy R, Potdukhe A, Wanjari M, Taksande AB. Postpartum depression and maternal care: exploring the complex effects on mothers and infants. *Cureus*. 2023;15(7):e72815.
 69. Salam Z, Odenigbo O, Newbold B, Wahoush O, Schwartz L. Systemic and individual factors that shape mental health service usage among visible minority immigrants and refugees in Canada: A scoping review. *Administration and Policy in Mental Health and Mental Health Services Research*. 2022;49(4):552–74.
 70. Sameroff AJ, Seifer R. Accumulation of environmental risk and child mental health. In: *Children of Poverty*. London: Routledge; 2021. p. 233–58.
 71. Sarwar F, Panatik SA, Jameel HT, Wan Mohd Yunus WMA, Muhamad SN. Psychological capital, social support and wellbeing in mothers of children with autism spectrum disorder. *Sage Open*. 2022;12(3):21582440221121773.
 72. Schiltz HK, Van Hecke AV. Applying the vulnerability stress adaptation model of marriage to couples raising an autistic child: a call for research on adaptive processes. *Clinical Child and Family Psychology Review*. 2021;24(1):120–40.
 73. Schuver T, Sathiyaseelan T, Ukoha N, Annor E, Obi E, Karki A, *et al.* Excessive Alcohol Consumption and Heart Attack Risk. *Circulation*. 2024;150(Suppl_1):A4146639–A4146639.
 74. Schwab M, Rakers F. Long-term effects of prenatal maternal stress and mental health. *Developmental Origins of Health and Disease*. 2022;pp.46–55.
 75. Semendric I, Pollock D, Haller OJ, George RP, Collins-Praino LE, Whittaker AL. “Chemobrain” in childhood cancer survivors—the impact on social, academic, and daily living skills: a qualitative systematic review. *Supportive Care in Cancer*. 2023;31(9):532.
 76. Smythe T, Almasri NA, Moreno Angarita M, Berman BD, Kraus de Camargo O, Hadders-Algra M, *et al.* The role of parenting interventions in optimizing school readiness for children with disabilities in low- and middle-income settings. *Frontiers in Pediatrics*. 2022;10:927678.
 77. Sorsa MA, Kylmä J, Bondas TE. Contemplating help-seeking in perinatal psychological distress—a meta-ethnography. *International Journal of Environmental Research and Public Health*. 2021;18(10):5226.
 78. Tarvainen M. Loneliness in life stories by people with disabilities. *Disability & Society*. 2021;36(6):864–82.
 79. Temedie-Asogwa T, Atta JA, Al Zoubi MAM, Amafah J. Economic impact of early detection programs for cardiovascular disease.
 80. Ugwuoke U, Okeke F, Obi ES, Aguele B, Onyenemezu K, Shoham DA. Assessing the relationship between sleep duration and the prevalence of chronic kidney disease among Veterans in the United States: A 2022 BRFSS cross-sectional study.
 81. Urizar GG Jr, Muñoz RF. Role of maternal depression on child development: A prospective analysis from pregnancy to early childhood. *Child Psychiatry & Human Development*. 2022;53(3):502–14.
 82. Uwumiro F, Anighoro SO, Ajiboye A, Ndulue CC, Goddowell OO, Obi ES, *et al.* Thirty-day readmissions after hospitalization for psoriatic arthritis. *Cureus*. 2024;16(5).
 83. Uwumiro F, Bojerenu MM, Obijuru CN, Osiogo EO, Ufuah OD, Obi ES, *et al.* Rates and predictors of contrast-associated acute kidney injury following coronary angiography and intervention, 2017–2020 US hospitalizations. Available at SSRN 4793659.
 84. Uwumiro F, Nebuwa C, Nwevo CO, Okpujie V, Osemwota O, Obi ES, *et al.* Cardiovascular event

- predictors in hospitalized chronic kidney disease (CKD) patients: A nationwide inpatient sample analysis. *Cureus*. 2023;15(10).
85. Wagner K, Pennell SM, Eilert M, Lim SR. Academic mothers with disabilities: Navigating academia and parenthood during COVID-19. *Gender, Work & Organization*. 2022;29(1):342-52.
86. Yu R, Perera C, Sharma M, Ipince A, Bakrania S, Shokrane F, *et al*. Child and adolescent mental health and psychosocial support interventions: An evidence and gap map of low-and middle-income countries. *Campbell Systematic Reviews*. 2023;19(3):e1349.
87. Zhuang S, Tan DW, Reddrop S, Dean L, Maybery M, Magiati I. Psychosocial factors associated with camouflaging in autistic people and its relationship with mental health and well-being: A mixed methods systematic review. *Clinical Psychology Review*. 2023;105:102335.