

Parental Education, Income, and Emotional Resilience: Impact on Children with Disabilities – A Literature Review

Fitrah Hayati Dwi Rezka¹, Aditya Denny Pratama^{2*}

^{1,2}Faculty of Vocational Education, Physiotherapy Program, Universitas Indonesia, Depok, West Java.

*Correspondence author at: Jl. Margonda Raya, Pondok Cina, Beji, Depok, West Java, Indonesia, 16424
E-mail address: Pratama.aditya@ui.ac.id

Received 05 April 2025; Received in revised form 25 April 2025; Accepted 27 April 2025; Published 01 May 2025

© 2025 The Authors. Published by the Physiotherapy Study Program, Faculty of Medicine, Udayana University, in collaboration with the Indonesian Physiotherapy Association (Ikatan Fisioterapi Indonesia).

This is an open-access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

Abstract

Introduction: Children with disabilities, such as those with Down syndrome, cerebral palsy, or autism spectrum disorder (ASD), often face complex challenges in physical, intellectual, and emotional development. Parental factors—including education level, financial status, and emotional resilience—play a crucial role in shaping the quality of life and well-being of these children. This systematic review aims to evaluate how these parental factors influence the well-being of children with disabilities.

Methods: Following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, relevant studies were identified through searches in Google Scholar, PubMed, Scopus, and the Cochrane Library. Inclusion criteria included studies examining the relationship between parental characteristics and quality of life outcomes among children with disabilities.

Results: Higher parental education levels were associated with improved healthcare access and stronger advocacy for children's rights. Emotional resilience in parents contributed to more effective caregiving and positive psychological outcomes in children. Moreover, better economic conditions facilitated access to healthcare and specialized educational programs, improving children's development and overall well-being.

Conclusion: The well-being of children with disabilities is significantly influenced by parental support in emotional, educational, and financial domains. Interventions should focus on empowering parents through education, mental health support, and economic strengthening to promote inclusive development for their children.

Keywords: Disability; Emotional Well-being; Parental Education; Socioeconomic Factors; Quality of Life.

Introduction

Children with disabilities—including conditions such as cerebral palsy, autism spectrum disorder (ASD), intellectual disabilities, and sensory impairments—face challenges that affect nearly every aspect of their lives, including motor, cognitive, emotional, and social development.^{1,2} The role of parents as primary caregivers is essential in ensuring the optimal growth and well-being of these children.³ Parental factors such as education level, economic status, and psychological well-being significantly influence access to quality healthcare, education, and social inclusion for children with disabilities.⁴

Although several studies have examined specific types of disabilities individually, there is a lack of comprehensive research addressing the interplay between various parental factors and different types of disabilities. Existing literature indicates that the quality of life of children with disabilities is highly influenced by family support, particularly the emotional, physical, and educational contributions of parents.⁵ Studies on cerebral palsy and ASD, for instance, have highlighted the importance of parental involvement in rehabilitation and educational processes.^{6,7} However, the social and emotional well-being of parents is often overlooked in research that focuses predominantly on inclusive education and healthcare access.^{8,9}

This study is crucial as previous research has not adequately integrated parental factors such as education, economic conditions, and emotional well-being into a holistic framework. Such an integrated perspective is essential for designing inclusive and effective interventions, not only for children but also for their parents as central figures in care and education. Recent evidence shows that parental stress, anxiety, and depression can directly or indirectly impact children's development and quality of life. These psychological pressures may lead to inconsistent caregiving, reduced healthcare access, and disrupted family dynamics, ultimately hindering the child's emotional and social development. These challenges are further exacerbated in low-resource settings and among socioeconomically disadvantaged populations.

Nevertheless, gaps remain in integrating psychosocial, economic, and educational parental factors into a unified framework for understanding the quality of life of children with disabilities. Prior research often separates disability interventions into medical or educational domains, without sufficiently considering the psychosocial context of parents as a critical component of intervention outcomes.

This study aims to explore how parental factors—including education level, economic status, and psychological well-being—are associated with the quality of life of children with disabilities. It also seeks to identify how these factors interact and contribute to child well-being across various disability contexts. The central research question is: What is the relationship between parental education, economic conditions, and psychological health and the quality of life of children with disabilities?

Furthermore, many quantitative studies fail to capture the lived experiences of parents, their socio-cultural expectations, and the coping mechanisms they employ in their caregiving roles. Therefore, an interdisciplinary research approach is needed—one that incorporates perspectives from psychology, sociology, education, and health sciences—to provide more comprehensive and contextually relevant policy recommendations.

Another critical issue is the underrepresentation of developing countries in disability-related literature. Cultural challenges, limited healthcare infrastructure, and distinct economic conditions in these regions are often overlooked in global studies. Hence, research grounded in local contexts is necessary to better understand systemic barriers and the unique experiences of families across different socioeconomic settings.

By understanding the relationship between parental factors and the quality of life of children with disabilities, this study aims to inform the development of more effective and context-sensitive interventions. Interventions that focus solely on the child, without strengthening support for parents, risk suboptimal outcomes. Therefore, the role of parents as primary caregivers must be seriously considered in any strategy aimed at improving the quality of life of children with disabilities.

Methods

This systematic review examined studies investigating the relationship between parental factors—such as educational attainment, household income, and psychological well-being—and the quality of life of children with disabilities. Eligible studies employed a quantitative cross-sectional design, were published between 2018 and 2024, and were written in English or Indonesian. A comprehensive literature search was conducted between January and April 2024 across several reputable databases, including PubMed, Scopus, the Cochrane Library, Google Scholar, ProQuest, ClinicalKey, and SpringerLink. These databases were selected for their strong reputation in indexing high-quality research relevant to health, psychology, and disability.

The search strategy followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. Keywords included “children with disabilities,” “parents OR parent's income OR parent's education,” and “quality of life AND children.” These terms were combined using Boolean operators to enhance search accuracy and comprehensiveness. All retrieved records were imported into reference management software (e.g., Mendeley), and duplicates were removed.

Studies were included if they met the following criteria: used a quantitative cross-sectional design, involved parents of children with disabilities as participants, measured outcomes related to the child's quality of life, were published in English or Indonesian, and were released between 2018 and 2024. Studies were excluded if they did not involve parents of children with disabilities, employed designs other than cross-sectional (e.g., qualitative or experimental), were published in languages other than English or Indonesian, or were published before 2018. To avoid redundancy, the description of keyword use was integrated directly into the search strategy.

The study selection process was conducted by two independent reviewers who screened titles and abstracts to assess relevance based on the inclusion and exclusion criteria. Any disagreements were resolved through discussion or, if necessary, consultation with a third reviewer. Full-text articles deemed eligible were then reviewed in detail. This two-stage screening approach ensured methodological transparency and minimized the risk of selection bias.

Data extraction was carried out using a standardized form to ensure consistency and completeness. Extracted data included study characteristics (authors, publication year, country), participant demographics (sample size, age of children, type of disability, and family socio-economic background), parental factors (education level, income, and psychological condition), instruments used, and outcomes related to the child's quality of life. These variations in study populations were noted and considered during synthesis to support the interpretation of findings and assess their generalizability.

The included studies utilized validated instruments to assess both parental factors and children's quality of life. Common tools included the WHOQOL-BREF, the Pediatric Quality of Life Inventory (PedsQL), and the Depression Anxiety Stress Scales (DASS-21) for evaluating parental psychological well-being. Only studies that employed instruments with reported psychometric properties, such as reliability and validity, were included in the review.

To assess the methodological quality of the selected studies, the Joanna Briggs Institute (JBI) critical appraisal checklist for cross-sectional studies was employed. Only studies that met acceptable standards of methodological rigor were included in the final synthesis. These assessments helped ensure that the review's conclusions were supported by credible and trustworthy evidence.

Quantitative data were analyzed descriptively and comparatively, depending on the reporting methods of the original studies. Statistical analyses included correlation analyses (e.g., Pearson or Spearman coefficients), simple and multivariate linear regression, and group comparisons using t-tests or ANOVA. When there was sufficient homogeneity in study design and outcome measures, a narrative synthesis was conducted to identify recurring patterns and themes. In cases where studies were methodologically compatible, meta-analytic comparisons were considered.

This review was limited to quantitative cross-sectional studies, which constrains the ability to draw causal inferences. Additionally, variation in the instruments and outcome measures across studies may affect consistency and comparability of the results. Despite these limitations, the review offers important insights into the influence of parental

factors on the quality of life of children with disabilities. Future research is encouraged to adopt longitudinal or experimental designs to enhance the strength and applicability of causal interpretations.

Results

The systematic literature search yielded a total of 3,175 articles across several academic databases. Following the initial screening of titles and abstracts, 1,488 records were excluded due to irrelevance to the topic, duplication, or methodological shortcomings. A total of 1,687 articles were retained for full-text assessment, of which 1,498 were excluded for not meeting the inclusion criteria or lacking relevant outcome measures. Ultimately, 189 articles underwent a comprehensive full-text review. After critical appraisal using established quality criteria, only five studies were deemed to meet all inclusion and methodological standards and were included in the final synthesis.

The article selection process is summarized in the PRISMA flow diagram (Figure 1), which illustrates the systematic steps undertaken—including identification, screening, eligibility assessment, and final inclusion—to ensure transparency and reproducibility of the review process.

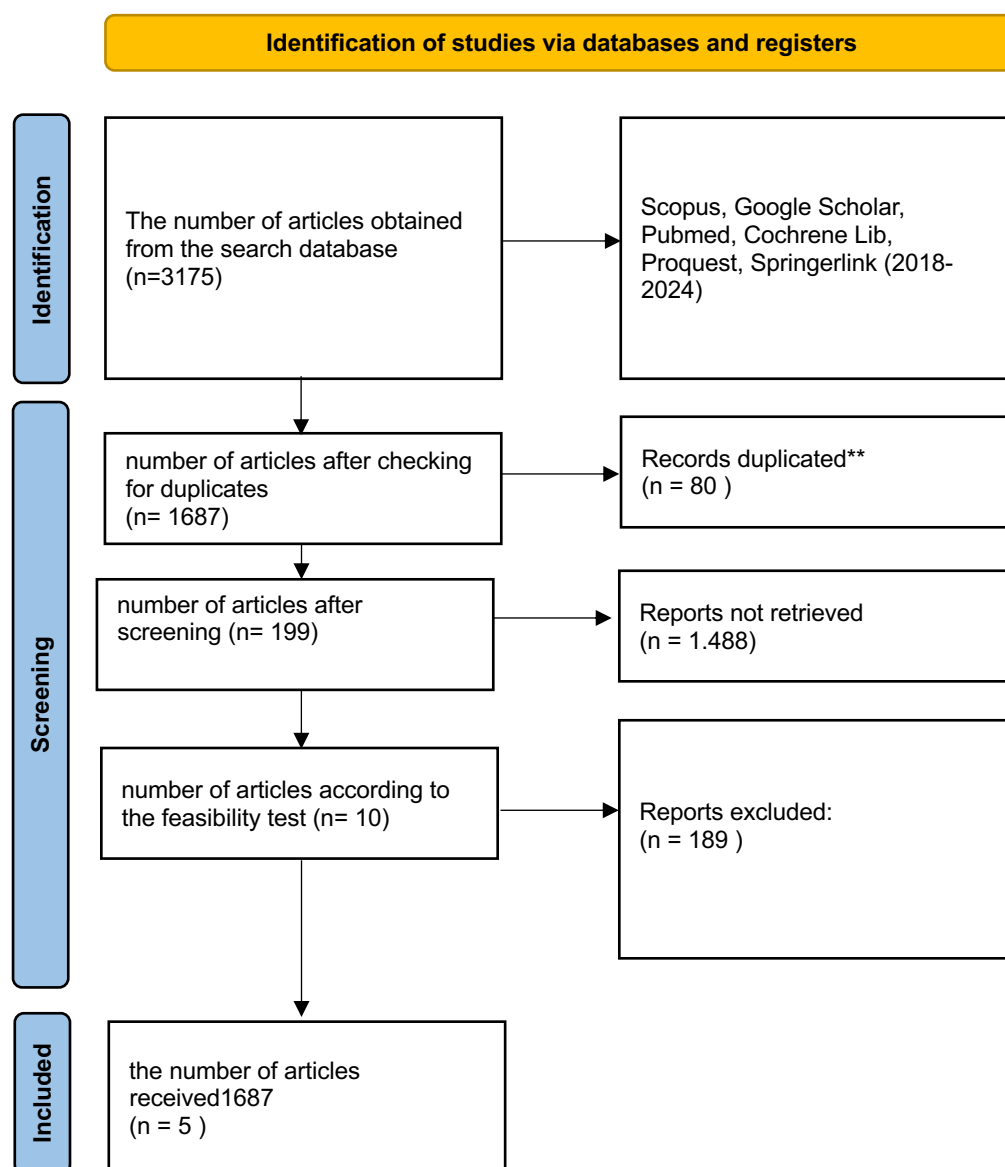


Figure 1. PRISMA Flow Diagram

(Note: The diagram should be clearly labeled and formatted to match the narrative description provided.)

The five studies included in this review were subjected to data extraction and thematic synthesis. Table 1 presents a detailed summary of each study, including the title, authors, year of publication, study design, sample characteristics, instruments used, and key findings. To facilitate interpretation and synthesis, the selected studies were categorized into three main thematic areas: (1) Parental and Family Influence on Quality of Life, (2) Psychological Stress in Parents, and (3) Family Factors Affecting Motor Skills in Children with Disabilities. This thematic classification enables a structured understanding of emerging patterns and interrelations across studies.

Table 1. Summary of Included Studies

No	Title	Author(s)	Year	Study Design & Methodology	Sample & Sampling	Instruments / Outcome Measures	Key Findings
1	Quality of Life among Parents of Children with Cerebral Palsy	Nurhidayah I, Nugraha M, Nuraeni A	2022	Quantitative, cross-sectional	36 parents from two special schools in Bandung, convenience sampling	Indonesian version of the Family Quality of Life Questionnaire	Parental involvement and support networks significantly influenced perceived quality of life
2	Quality of Life and Predicting Factors for Tunisian Children with Cerebral Palsy	Marwa G, Mtawaa S	2022	Cross-sectional, child self-report	68 children (aged 4–12) and their parents from a hospital outpatient clinic	Visual Analog Scale (VAS), Gross Motor Function Classification System (GMFCS), neurofunctional assessments	Motor function severity and psychological health were strong predictors of lower quality of life
3	Parental Stress in Caring for Children with Disabilities	Chong YF, Mohd Al M	2023	Quantitative survey	150 parents in Johor Bahru, simple random sampling	Parenting Stress Index (PSI-4)	High stress levels were observed among parents, with financial burdens and lack of support contributing significantly
4	Influence of Parental Education Level and Income on the Quality of Life of Children with Cerebral Palsy	Bintari R	2020	Analytical observational, cross-sectional	Children aged 2–18 years at RSUD Dr. Moewardi, purposive sampling	PedsQL 3.0 for children with disabilities	Higher parental education and income were significantly correlated with improved child quality of life ($p < 0.05$)
5	Relationship Between Family Role and Gross Motor Skills in Children with Intellectual Disabilities	Purnamasari D, Nuraifah, Hardianto Y	2021	Descriptive analytical, cross-sectional	38 children with intellectual disabilities at SLB Reskiani, Makassar	Family Questionnaire, Role Gross Motor Development Test (TGMD-2)	Stronger family involvement was associated with better gross motor development

Synthesis of Key Themes

Parental and Family Influence on Quality of Life

Findings from studies [1], [2], and [4] consistently demonstrate that parental educational attainment, household income, and the presence of supportive family environments significantly influence the quality of life of children with disabilities. These factors emerged as reliable predictors of positive outcomes, reinforcing the crucial role of socioeconomic and psychosocial support systems in shaping children's well-being.

Psychological Stress in Parents

Study [3] provides valuable insights into the psychological burden faced by parents of children with disabilities. Elevated stress levels were closely linked to economic challenges and caregiving responsibilities. These findings align with evidence from studies [1] and [4], which underscore the mitigating effect of income stability and access to emotional and social support on parental stress and overall family functioning.

Gross Motor Skills and Family Roles

Study [5] explores the association between family roles and physical development, particularly gross motor skills, in children with intellectual disabilities. The results suggest that active family participation is not only beneficial to emotional well-being but also critical in supporting physical developmental milestones.

Statistical Methods and Observations

Most of the reviewed studies employed descriptive and inferential statistical analyses. Study [4], for example, utilized Spearman's correlation and multiple linear regression to confirm statistically significant associations between parental factors and child quality of life. Study [3] applied descriptive statistics, including mean values, percentages, and standard deviations, to illustrate patterns of parental stress. Despite this, many studies did not report detailed statistical outputs such as effect sizes, confidence intervals, or exact p-values, which limits the potential for meta-analysis and detailed comparison. Future systematic reviews should prioritize the extraction of complete statistical results to enable more robust synthesis and interpretation.

Methodological and Sample Considerations

The included studies varied in terms of sample size and sampling strategies, ranging from 36 to 150 participants. Sampling methods included convenience, purposive, and random sampling. While some studies provided justification for their sample sizes, others did not address statistical power considerations, raising concerns about the generalizability of findings. The outcome measurement tools also varied widely, from internationally validated scales (e.g., PSI-4, GMFCS, TGMD-2) to locally adapted instruments. Greater consistency in the use of standardized instruments and clearer reporting of methodological procedures are recommended for future research to facilitate comparability and reproducibility.

Discussion

This study offers new insights into the significance of interactions among parental internal factors in enhancing the quality of life (QoL) of children with disabilities.¹⁰ The findings reinforce the concept that family-based interventions may yield broader positive outcomes than child-centered approaches alone. For instance, parental emotional intelligence not only facilitates effective parenting but also fosters a stable and supportive environment for the child.¹¹ This is consistent with the findings of Smith et al. and Garcia et al., who emphasized that emotional regulation in parents and strong family cohesion significantly influence child behavior and adaptive skills, highlighting the systemic impact of emotional well-being.¹²

Moreover, the findings underscore the importance of economic empowerment within the family, as higher household income improves access to healthcare and therapeutic services.¹³ Unlike prior studies that predominantly focused on child-specific medical conditions—such as chronic pain, motor dysfunction, or developmental delays—as primary predictors of QoL,¹⁴ the present research shifts attention to the parental domain. This suggests that interventions targeting socioeconomic and emotional dimensions may produce more comprehensive and enduring family outcomes.

These results suggest that strategies integrating social, emotional, and economic factors can be more effective in promoting family well-being.¹⁵ This highlights a shift from a strictly medical-centric model to a more holistic paradigm in supporting families of children with disabilities. Although many interventions focus primarily on the child, the parental role—as economic providers, emotional supporters, and educational facilitators—remains underutilized. This discussion emphasizes that despite progress in existing research, gaps persist in the implementation of holistic intervention models, especially regarding parental emotional well-being.¹⁶ For example, few programs currently incorporate mental health support for caregivers as a core component of child-focused services. Further studies should explore the development of integrated policy frameworks that address the emotional, social, and economic needs of families raising children with disabilities.¹⁷

Nevertheless, to fully understand the scope of these findings, several limitations must be acknowledged. Most of the reviewed studies employed cross-sectional designs, which, while effective in identifying associations, are limited in establishing causality.⁸ This restricts the interpretation of long-term effects and the directionality between parental characteristics and child outcomes. Additionally, the literature search was limited to articles in English and Indonesian, introducing potential language bias and the exclusion of relevant evidence from non-English sources. This linguistic limitation may result in the underrepresentation of region-specific or culturally nuanced practices published in other languages. Furthermore, the six-year publication window may have restricted access to earlier yet still relevant literature that could offer valuable historical insights. Despite these limitations, the present review provides meaningful findings on the relationship between parental socioeconomic status, mental health, and educational attainment with the QoL of children with disabilities.¹⁸

Future research should consider additional factors that may influence children's QoL, such as community-based social support, access to rehabilitation services, and cultural influences on parenting practices.¹⁹ Community structures—including family support groups, inclusive educational policies, and neighborhood networks—can play a pivotal role in reducing parental stress and improving child outcomes. These elements vary significantly across regions and socioeconomic groups, shaping the overall well-being and opportunities available to children with disabilities. A thorough understanding of the broader ecosystem in which families operate is essential for designing context-sensitive interventions. Moreover, collaborative programs involving community health workers and rehabilitation professionals should be culturally aligned and resource-sensitive.

Longitudinal research designs are particularly important for future studies to establish causal relationships between parental factors and child outcomes. Unlike cross-sectional studies, longitudinal methods can track developmental trajectories over time, offering insights into how persistent efforts or long-term challenges affect children's QoL. For example, tracking changes in parental employment or educational levels could reveal how these factors influence healthcare access and therapeutic progress over several years. Such data are vital for identifying critical periods for intervention and for evaluating the long-term impact of family-based programs. Additionally, qualitative research can offer rich, in-depth insights into parents' subjective experiences, which may not be captured through quantitative measures.²⁰ These narratives provide a deeper understanding of emotional resilience, cultural coping strategies, and structural challenges, all of which are essential for developing empathetic and responsive policies.

The findings of this review highlight the necessity of a multidisciplinary approach in designing interventions for families of children with disabilities. Comprehensive strategies that include medical, psychological, educational, and social dimensions are essential for addressing the multifaceted challenges these families encounter.²¹ From a physiotherapy standpoint, the evidence underscores the importance of involving parents throughout the rehabilitation process—not only as facilitators of home-based exercises but also as emotional advocates and decision-makers. Family-centered physiotherapy programs that integrate training sessions, collaborative planning between therapists and

parents, and psychosocial assessments should be prioritized to address both the physical and emotional needs of the family.

Support programs that focus on enhancing parental education, economic empowerment, and mental health resilience should be developed and integrated into special healthcare and educational services. These may include not only financial assistance and mental health counseling but also parenting workshops, peer support groups, and vocational training initiatives. For example, local governments and non-governmental organizations (NGOs) could implement mobile rehabilitation clinics or subsidized parenting education programs in underserved communities. Such initiatives would enhance parents' capacity to provide a stable and nurturing environment, which directly benefits their children's development.

Establishing long-term, tailored support systems requires coordinated efforts among healthcare providers, educators, and policymakers. Priorities should include expanding service accessibility, removing structural barriers, and promoting community-based rehabilitation initiatives. Policy interventions could involve insurance subsidies for disability-related services, public funding for family training programs, and educational incentives for inclusive school practices. These integrative efforts are vital to achieving sustainable and equitable improvements in the QoL of children with disabilities and their families. By centering the family unit in intervention planning, we can foster meaningful, long-lasting changes that enhance not only the well-being of the child but also that of the entire household and community.

Conclusion

Parental factors—including education level, emotional resilience, and financial capacity—play a critical role in shaping the quality of life of children with disabilities. These elements influence caregiving quality and the child's overall development. Therefore, improving child outcomes requires a holistic approach that extends beyond medical care to address family support needs.

Integrated support systems that strengthen parental capabilities—through accessible education, mental health services, and economic opportunities—can significantly improve caregiving effectiveness. Community-based programs that foster social support may further reinforce parental well-being.

Cross-sector collaboration among healthcare providers, educators, and policymakers is essential to develop inclusive, family-centered interventions. Future research should explore how sustained parental involvement influences long-term child outcomes across diverse cultural settings.

Acknowledgments

The author sincerely thanks the institutions and individuals who provided unwavering support throughout this research. Special appreciation is extended to the academic institution where the study was conducted, for granting administrative approval, access to relevant databases and literature, as well as ethical oversight that ensured the research was conducted with integrity and professionalism. The university's research and development unit played a crucial role in facilitating the initial design and proposal phases.

Gratitude is also due to the data providers—particularly health institutions, community-based rehabilitation centers, and educational facilities—that generously granted access to anonymized datasets. Their cooperation and transparency were indispensable to this study. The availability of accurate, relevant, and reliable data greatly enhanced the depth and validity of the analysis.

Finally, the author is grateful to all respondents and participants, especially the families and caregivers of children with disabilities, whose openness in sharing their lived experiences profoundly enriched the insights and recommendations derived from this research.

Conflict of Interest Statement

The authors declare that there are no conflicts of interest related to this study.

Funding Sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethics Statement

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Ethical approval was not required as the study involved only non-invasive procedures (blood pressure measurement and questionnaire surveys) and posed minimal risk to participants. Informed consent was obtained from all participants prior to their inclusion in the study, and confidentiality was strictly maintained.

References

1. Alexander KE, Clutterbuck GL, Johnston LM. Effectiveness of school-based physiotherapy intervention for children. *Disabil Rehabil.* 2024. doi:10.1080/09638288.2024.2388260
2. Arshad N, Imran M, Munir Z, Akram S, Hameed AA. Spastic cerebral palsy; effects of Bobath motor developmental techniques in spastic cerebral palsy; a case series. *Prof Med J.* 2018;25(10):1546-51.
3. McIntyre S, Goldsmith S, Webb A, et al. Global prevalence of cerebral palsy: a systematic analysis. *Dev Med Child Neurol.* 2022;64(12):1494-506. doi:10.1111/dmcn.15346
4. Aruna PV, SuphalaKotian D. Role of socio-economic status on psychological well-being among parents of intellectually disabled children. *Int J Appl Res.* 2023;9(8):10-6. doi:10.22271/allresearch.2023.v9.i8a.11147

5. Ravenscroft J, Wazny K, Davis JM. Factors associated with successful transition among children with disabilities in eight European countries. *PLoS One*. 2017;12(6):e0179904. doi:10.1371/journal.pone.0179904
6. Alvandi F, Amini M, Ghafarzadeh Namazi N. Factors affecting the independence level of 4–12-year-old children with cerebral palsy in activities of daily living. *Iran J Child Neurol*. 2023;17(4):93-104. doi:10.22037/ijcn.v17i2.37401
7. Iram A, Ghaffar T, Solangi ZA, et al. Association between socioeconomic status and quality of life among cerebral palsy children in government children hospitals and special training centers. *J Musculoskelet Surg Res*. 2024;8(2):142-6. doi:10.25259/JMSR_250_2023
8. Fong CY, Ali MM. Parental stress in caring for children with disability. *Int J Acad Res Bus Soc Sci*. 2023;13(5):1033-46. doi:10.6007/ijarbss/v13-i5/16822
9. Arefin K, Lucky M, Bhuiyan M, Karim M, Ali M. Factors influencing developmental outcome following developmental therapy in children with cerebral palsy. *BMC J*. [date unknown].
10. Rowlin V. Socio-economic status scale validation study. [unpublished manuscript]. 2020.
11. Ebeed RM, Omar ETSI, Youssef MES, Hamad INM. Quality of life of mothers having children with cerebral palsy. *Alex Sci Nurs J*. 2024;26(1):15-27. doi:10.21608/asalexu.2024.354336
12. Hu J, Zhou T, Huang Z. Parental emotion socialization, emotion regulation and depressive symptoms in Chinese adolescence: the role of family cohesion. *J Early Adolesc*. 2024;44(3):281-305. doi:10.1177/02724316231176955
13. Farajzadeh A, Dehghanizadeh M, Maroufizadeh S, Amini M, Shamili A. Predictors of mental health among parents of children with cerebral palsy during the COVID-19 pandemic in Iran: a web-based cross-sectional study. *Res Dev Disabil*. 2021;112:103890. doi:10.1016/j.ridd.2021.103890
14. Skoutelis VC, Kanellopoulos AD, Vrettos S, et al. Improving health-related quality of life in middle-age children with cerebral palsy following selective percutaneous myofascial lengthening and functional physiotherapy. *Rev Esp Cir Ortop Traumatol*. 2024;68(1):57-63. doi:10.1016/j.recot.2023.08.018
15. Bintari R. Pengaruh tingkat pendidikan dan pendapatan orang tua terhadap kualitas hidup anak dengan palsy serebral di RSUD dr. Moewardi. [Thesis]. 2020.
16. Rahayu YDP, Ahyani LN. Kecerdasan emosi dan dukungan keluarga dengan penerimaan diri orang tua yang memiliki anak berkebutuhan khusus (ABK). *J Psikol Perseptual*. 2017;2(1):29-47. doi:10.24176/perseptual.v2i1.2220
17. Shaik AR. Relationship between physical, mental fitness and associated factors: a cross-sectional study on parents of children suffering from cerebral palsy. *Eur Rev Med Pharmacol Sci*. 2023;27(1):74-80. doi:10.26355/eurrev_202301_30854
18. Islam MR, Ali E, Howlader R. Factors influencing the utilization of physiotherapy services among the children with cerebral palsy at Protibondhi Seba-O-Sahajjo Kendro in Bangladesh. *Int J Neurol Phys Ther*. 2021;7(1):1-8. doi:10.11648/j.ijnpt.20210701.11
19. Ren J, Li X, Chen S, Chen S, Nie Y. The influence of factors such as parenting stress and social support on the state anxiety in parents of special needs children during the COVID-19 epidemic. *Front Psychol*. 2020;11:565393. doi:10.3389/fpsyg.2020.565393
20. Bedell GM, Khetani MA, Cousins MA, Coster WJ, Law MC. Parent perspectives to inform development of measures of children's participation and environment. *Arch Phys Med Rehabil*. 2011;92(5):765-73. doi:10.1016/j.apmr.2010.12.029
21. Ostojic K, Karem I, Paget SP, et al. Social determinants of health for children with cerebral palsy and their families. *Dev Med Child Neurol*. 2024;66(1):32-40. doi:10.1111/dmcn.15640