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THE IMPACT OF PARENTAL MIGRATION ON CHILDCARE PRACTICES AND NUTRITIONAL STATUS OF LEFT-BEHIND CHILDREN: A SCOPING REVIEW

Dampak Migrasi Orang Tua terhadap Praktik Pengasuhan dan Status Gizi Anak yang Ditinggalkan: Scoping Review

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ABSTRAK

Orang tua yang bermigrasi baik secara internal dan internasional berdampak signifikan terhadap perkembangan dan pertumbuhan anak yang ditinggalkan (children left behind), terutama pada perbedaan pola pengasuhan akibat ketidakhadiran orang tua baik secara fisik dan emotional. Tujuan utama dari scoping review ini adalah untuk memetakan literature tentang dampak migrasi orangtua terhadap praktek pengasuhan dan status gisi anak. Tinjauan ini disusun secara sistematis dengan menggunakan metode Preferred Reporting Items for Scoping Review (PRISMA-ScR) dan berdasarkan pada empat basis data pencarian artikel yakni PubMed, Scopus, ScienceDirect dan EBSCOhost. Kriteria inklusi meliputi artikel berbahasa inggris yang di terbitkan pada tahun 2015 hingga tahun 2024, populasi penelitian yaitu anak usia dibawah lima tahun yang ditinggalkan orang tua dan artikel merupakan artikel original yang dapat di akses penuh. Seluruh proses indentifikasi, skrining dan kelayakan artikel menggunakan Mendeley. Hasil tinjauan menunjukkan bahwa orangtua yang bermigrasi terkhususnya ibu terbukti memiliki dampak negatif terhadap kualitas pengasuhan dan status gizi anak. Hal ini disebabkan kurangnya durasi menyusui anak, pola pemberian makan yang tidak memenuhi standar gizi minimal, serta terbatasnya akses dan pemanfaatan layanan Kesehatan. Minimnya keterlibatan ibu dalam pengasuhan anak juga turut memperbesar resiko anak mengalami stunting, wasting, dan underweight dibandingkan dengan anak yang ayahnya bermigrasi. Dapat disimpulkan bahwa migrasi orangtua merupakan salah satu faktor yang turut berkontribusi pada rendahnya kualitas pola asuh dan status gisi anak, sehingga perlu adanya intervensi dan kebijakan yang mendukung pengasuh alternatif dan pemenuhan gizi anak.

Kata kunci: *anak yang ditinggalkan, gizi, migrasi, orang tua, pengasuhan*

ABSTRACT

Parental migration, both internally and internationally, has a significant impact on the development and growth of children left behind, particularly through changes in parenting patterns due to the absence of parents' physical and psychological presence. The main objective of this scoping review is to map the existing literature on the impact of parental migration on parenting methods and child nutritional status of left-behind children. This review was conducted systematically using the Preferred Reporting Items for Scoping Review (PRISMA-ScR) framework, and utilised four main article databases such as PubMed, Scopus, ScienceDirect, dan EBSCOhost. The inclusion criteria included the latest English articles published between 2015 to 2024, studies of toddlers (children under five years old) with migrated parents, and original research articles with full-text access. The articles' identification process, screening, and eligibility assessment were conducted using Mendeley. The result shows that parents who migrate, especially mothers, have a negative impact on both the quality of parenting and the nutritional

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status of children. Contributing factors include shorter breastfeeding duration, lack of adherence to nutritional standards in children's meals, and limited access to and use of health services. Moreover, the minimal maternal involvement in childcare increases the risk of stunting, wasting, and underweight in children compared to children whose fathers migrate. In summary, parental migration is one of the factors that contributes to both poorer parenting quality and the children's nutritional status. Therefore, targeted interventions and policies are needed to support the alternative caregiver and ensure the consistent fulfilment of children's nutritional needs.

Keywords: caregiver, left-behind children, migration, nutritional, parenting

INTRODUCTION

International migration is a global phenomenon that has steadily increased in recent years. According to data from the International Organization for Migration (IOM), in 2022, international migration reached 281 billion people, or 3.6% of the world's population, with 164 million of them migrant workers, mostly from developing countries seeking to improve their families' economic conditions[1]. One of the affected groups are children abandoned by their parents, known as left-behind children (LBC). While migration contributes positively to household economies through remittances, the physical and emotional absence of parents often leads to changes in parenting patterns, limited psychosocial support, and potentially disrupted child growth and development[2].

Based on data from the UNICEF Office, it shows that children who are left without one or both parents are vulnerable to experiencing health problems[3]. The migration of mothers as primary caregivers also impacts the health status of children left behind compared to children from other migrant families who still have their mothers at home. According to a study by Purwatiningsih, the primary reason parents migrate is to improve their children's access to education, while children's health is rarely a primary consideration in migration decisions[2]. However, remittances do not have a positive effect on the health risks and malnutrition of children left behind[4]. However, scientific findings are still varied, some studies highlight the economic impact of remittances, while other studies emphasize the educational, cognitive, physical and mental health aspects of adolescents and child nutrition[5], [6]. However, until now there have been limited studies that comprehensively map the impact of parental migration on parenting practices and the nutritional status of children left behind, particularly in the toddler age group.

This gap highlights the need for a comprehensive study to map the scientific evidence related to parental migration and its impact on children left behind. Therefore, this study focuses on answering two main questions: "How does parental migration affect parenting practices (for left-behind children) and how does parental migration impact the nutritional status of children left behind?"

METHODS

The design of this study is Preferred Reporting Items for Literature Review and Scoping Review (PRISMA ScR). Search with search keywords: "parental migration" OR "parent migration" AND "practices" OR "methods" AND "impact" OR "effect" AND nutritional AND status. The inclusive criteria of this scoping review are 1). Original article, 2). Article in English, 3). Time of publication spans ten years (2015-2024), 4). Article can be accessed free full text, 5). The population of the article is children aged <5 years who are left behind by migrating parents and the exclusion criteria in the article are studies that discuss the impact of migration on the health of adolescents and toddlers who experience congenital growth disorders. The search for articles through four databases namely Scopus, SciantDirect, EBSCOHOST and Pubmed obtained 867 articles after going through the screening process and eligibility selected 9 articles for further analysis.

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The flow of the article analysis process starting from identification, duplication, determining inclusion criteria, screening titles, abstracts and determining the articles to be analyzed, is presented in Figure 1 below.

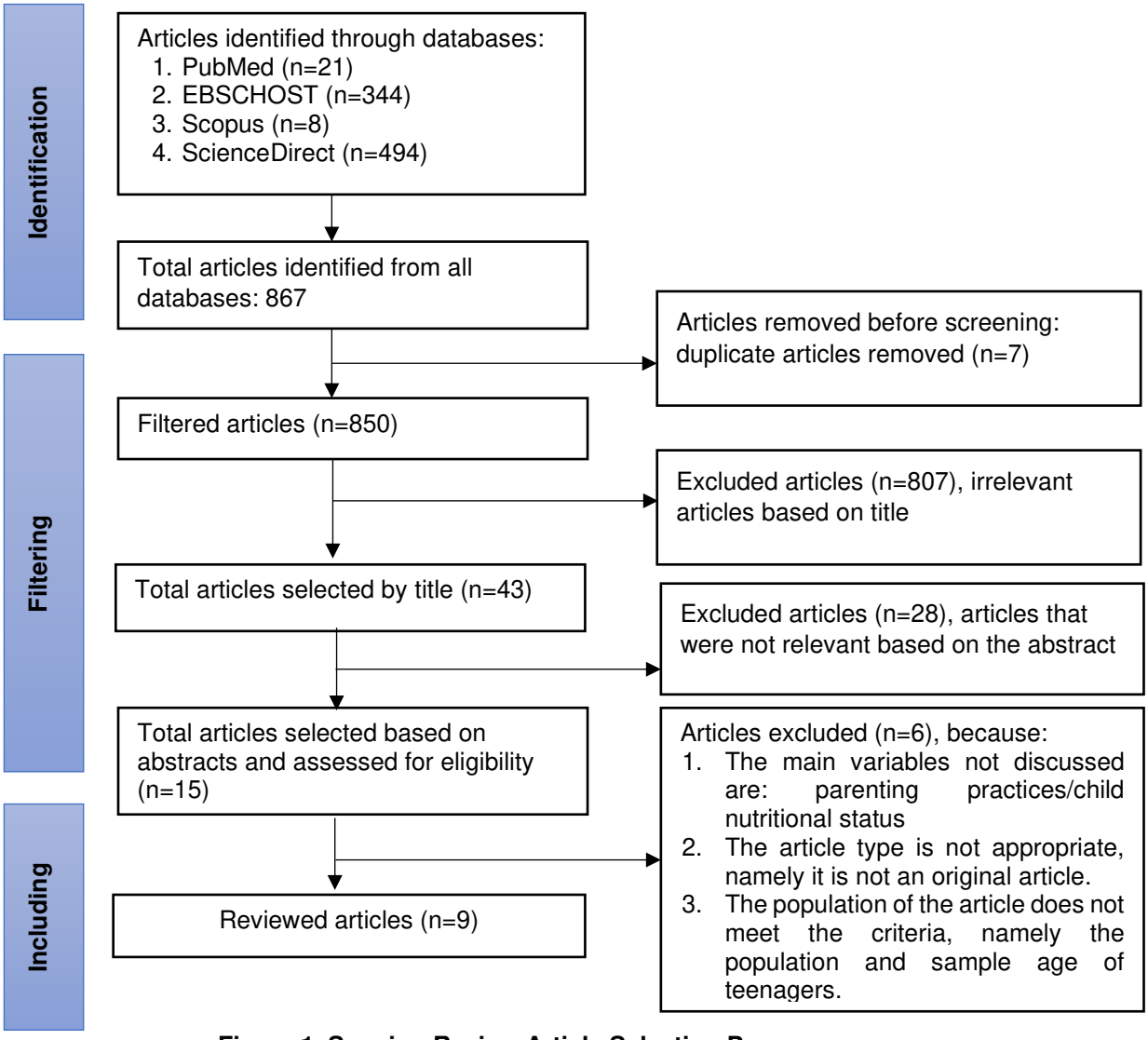

Figure 1. Scoping Review Article Selection Process

RESULTS

1. Characteristics of the article

The following table summarizes the characteristics of the nine articles selected for further scoping review. These articles focus on the impact of parental migration on parenting practices and the nutritional status of left-behind children.The summary presented includes information about the researchers, year of publication, title, study location, research objectives, methods, samples used, and key findings from each study.

Based on the results of the scoping review of the 9 articles in Table 1, the researcher formulated the main variables that were considered most relevant to the focus of the study, a summary of these variables is presented systematically in Table 2 and Table 3, as follows:

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Table 1. Characteristics of the Analyzed Articles

No	Researcher, Year, Title	Objective	Research location	Methods and Samples	Results
1.	Zhang, et al (2015). *Does the timing of parental migration matter for child growth? A life course study on left-behind children in rural China.[7]*	Examining the impact of parental migration on child growth based on migration timing	China	Quantitative with a cohort approach. Instruments: anthropometric height and weight measuring instruments, questionnaires. Sample: 2,555 children aged <5 years and their caregivers. Sampling technique: Multistage random-clustered sampling	Boys who were abandoned early experienced stunted growth in height and weight compared to children who were not abandoned. This indicates they are at greater risk of chronic nutritional problems in early childhood, a critical phase of growth. Conversely, abandoned girls aged 0–5 years showed no significant differences in height or weight growth.
2.	Davis, et al (2016). *Migration, Remittances and Nutrition Outcomes of Left-Behind Children: A National-Level Quantitative Assessment of Guatemala.* [4]	Analyzing the impact of paternal migration and remittances on the nutritional status of children left behind.	Guatemala	Quantitative with a cross-sectional approach. The ENCOVI survey instrument, measuring children's nutritional status using the Height-for-Age Z-score (HAZ) and Strata software. A sample of 3,973 children aged <3 years from migrant households and childcare providers. The sampling technique was Stratified probabilistic sampling.	Children whose fathers migrated without remittances had a higher risk of stunting, with a HAZ value of -2.678. Children from families receiving remittances without paternal migration showed better nutritional status, with a HAZ value of -1.569. Paternal migration reduced children's HAZ by 0.427 (22.1%), while remittances tended to have a positive but insignificant impact.
3.	Jayatissa, et al (2016). *What Effect Does International Migration Have on the Nutritional Status and Child Care Practices of Children Left Behind?.[8]*	Assessing the impact of international migration on the nutritional status and care practices of children left behind.	Sri Lanka	Quantitative with a cross-sectional approach. The questionnaires used were a 24-hour recall and a food frequency questionnaire, as well as anthropometric measurement tools, UNISCALE and a stadiometer. The sample was 321 children aged 6-59 months and their caregivers. The sampling technique was multistage stratified cluster sampling.	The prevalence of stunting, wasting, and underweight in children aged 6–59 months from migrant households was 11.5%, 18.1%, and 24.3%, respectively, lower than that of non-migrant households. Children from families with migrant fathers tended to have lower rates of stunting, wasting, and underweight, while children from migrant mothers were more susceptible to stunting (21.7%), wasting (17.4%), and underweight (34.8%). These conditions were caused by fathers' limitations in feeding practices and child hygiene.
4.	Ban, et al (2017). *Child feeding and stunting prevalence in left-behind children: a descriptive analysis of data from a central and western Chinese population.*[9]	Analyzing stunting incidence and feeding practices of left-behind children	China	Descriptive analysis of UNICEF survey data. Questionnaire instruments and anthropometric measurement tools (height and weight). Sample of 6,136 children aged 0-3 years and their caregivers. Multistage sampling technique.	The prevalence of stunting was 16.4% in children without migrant parents, 15.1% in those with migrant fathers, and 16.6% in those with migrant mothers. Although parental migration itself was not directly associated with stunting, parenting patterns showed a significant effect. Children cared for by fathers had a higher risk of stunting (aOR = 1.32; 95% CI: 1.04–1.67) compared to those cared for by mothers. Meanwhile, children raised by grandmothers

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No	Researcher, Year, Title	Objective	Research location	Methods and Samples	Results
					were more likely to receive inadequate feeding practices, including reduced breastfeeding and increased reliance on formula milk.
5.	Islam, et al (2018). *Does parental migration have any impact on nutritional disorders among left-behind*children in Bangladesh.[10]	Analyzing the impact of parental migration on the nutritional status of children left behind	Bangladesh	Quantitative with a cross-sectional approach. The instruments were questionnaires and height and weight measuring instruments. The sample consisted of 23,402 children aged <5 years, parents, and households. The sampling technique used was two-stage stratified cluster sampling.	The prevalence of stunting was 42.2%, underweight 32.4%, and wasting 9.9%. After analysis taking sociodemographic factors into account, parental migration showed no significant association with these three nutritional indicators. A child's nutritional status was more influenced by the mother's education level and the family's economic situation.
6.	Shi, et al (2020). The association between parental migration and early childhood nutrition of left-behind children in rural China.*[11]*	Assessing the impact of parental migration on the nutritional status of children left behind at an early age	China	Quantitative with a cross-sectional approach. Instruments used were a 24-hour recall questionnaire, an electronic application, and anthropometric measuring instruments (weight and height). Samples included 4,546 children aged 6 to 35 months. Clustered random sampling was used as the sampling technique.	The prevalence of stunting, underweight, and wasting in children aged 6–35 months in China declined significantly between 2013 and 2016, from 16.4% to 12.1%, 8.5% to 4.0%, and 3.5% to 1.5%, respectively. Children with migrant fathers tended to have a lower risk of stunting and underweight than children with no migrant parents, while children with both migrant parents showed the largest declines in underweight and wasting.
7.	Kunwar, et al (2020). *Parental international migration is not associated with improved health care seeking for common childhood illnesses and nutritional status of young children left-behind in Nepal.[12]*	Analyzing the impact of international migration on healthcare seeking and nutritional status of left-behind children (LBC)	Nepal	Quantitative with a cross-sectional approach. The MICS questionnaire instrument for children aged <5 years, anthropometric measurement tools (height and weight). Sample of 5310 children aged <5 years and child caregivers. Stratified cluster sampling technique.	The nutritional status of LBC children shows that 35.5% are stunted, 28.3% are underweight, and 11.8% are wasted. The absence of mothers results in a lack of attention and support when children are sick. Meanwhile, remittances are primarily used to pay debts and for consumer needs, so they are not optimally allocated to meet children's nutritional and health needs.
8.	Zhang, et al (2022). *Internal migration and child health: An investigation of health disparities between migrant children and left-*	Analyzing the differences in health status between migrant and non-migrant children	China	Quantitative with a cross-sectional approach. CEPS questionnaire instrument, self-reported health data. Sample of 2,780 left-behind migrant children. Sampling technique stratified and multistage sampling.	Children who migrate with their parents show better nutritional status. Migrating with parents increases their height-for-age z-score (HAZ) by +0.155 SD and their BMI-for-age z-score (BAZ) by +0.186 SD, indicating a lower risk of stunting, underweight, and wasting compared to

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No	Researcher, Year, Title	Objective	Research location	Methods and Samples	Results
	behind children in China.[13]				children left behind. This difference is greater for children in rural areas than in urban areas.
9.	Lin, et al (2023). Quality of childcare and delayed child development in left behind children in China.[14]	Examining the relationship between parenting quality and the development of left behind children (LBC) and non-LBC children.	China	Quantitative with a cross-sectional approach. The instrument used was a research questionnaire. The sample of left-behind children (LBC) was 2,515 children, non-left-behind children: 2,461 children, a total sample of 4,976 children aged <3 years. The sampling technique was multilevel clustered random sampling.	There was no significant difference in the nutritional status of children with LBC and non-LBC. The impact of parental migration causes developmental disorders in children, especially those raised by grandparents.

2. The impact of parental migration on parenting practices

Table 2. Childcare Practices

No	Variables	Results
1.	Transition of primary caregiver role	Parental migration causes children to be separated from their father, mother, or both, resulting in a shift in primary caregivers, depending on which parent migrates. According to the reviewed article, primary caregivers are divided into three categories: a. Father,when the mother migrates the primary caregiving role is transferred to the father [4], [8], [9], [12]. b. Mother,If the father migrates, the mother still plays the role of the main caregiver. [9]. c. Grandma/grandpa,when both parents migrate the primary caregiving responsibility is transferred to the grandparents [8], [9], [10], [11], [13], [14].
2.	Changes in the quality of childcare practices	The quality of care practices for children left behind by their parents has changed, particularly in terms of feeding, hygiene, and health care. Findings from the reviewed articles highlight several key issues: a. Children do not get exclusive breastfeeding[4]. b. Children do not continue breastfeeding until the age of two years [4], [9], [11]. c. Feeding does not meet nutritional standards based on the child's age, type, frequency, variety and quantity.[8], [9], [11]. d. Children do not receive adequate hygiene care and health care especially when they are sick.[8], [11], [12].

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Table 2 showed the main variables and subvariables compiled based on the analysis of nine articles. Migration of one or both parents impacts the caregiving practices of the children left behind, namely the shift in the role of the primary caregiver. These roles are divided into three: father, mother, and grandmother or grandfather. Furthermore, parental migration also influences the quality of caregiving practices. namely children who are left behind do not receive exclusive breastfeeding, follow-on breastfeeding or complementary feeding according to nutritional standards and hygiene practices, health care and management of family remittances.

3. The impact of parental migration on children's nutritional status

Table 3. Nutritional Status of Children

No	Variables	Results
1.	*Stunting*	a. Children who are left without their fathers experience stunting[4], [7], [9], [12] b. Children who live with their mothers experience stunting[8] c. Children who live with both parents experience stunting[8], [9], [10], [13], [14].
2.	*Underweight*	Children who are underweight because one or both parents have left them[7], [8], [10], [12].
3.	*Wasting*	Children who experience wasting because one or both parents have left them[8], [10], [11], [12].

Table 3 shows three major nutritional problems that arise as a result of the migration of one or both parents on the nutritional status of the children left behind. First, stunting, a condition in which a child experiences chronic nutritional problems, is more common in children left alone by one or both parents than in children left alone by their mothers. Second, underweight, also frequently found in children left alone by one or both parents. Third, wasting, or acute malnutrition, is more common in children who lose the direct care of both parents.

DISCUSSION

1. Characteristics of the article

The results of the systematic search selected 9 of the 867 articles published in the period 2015-2024 from several regions, namely China, Sri Lanka, Nepal, Bangladesh and Guatemala, in Figure 1.

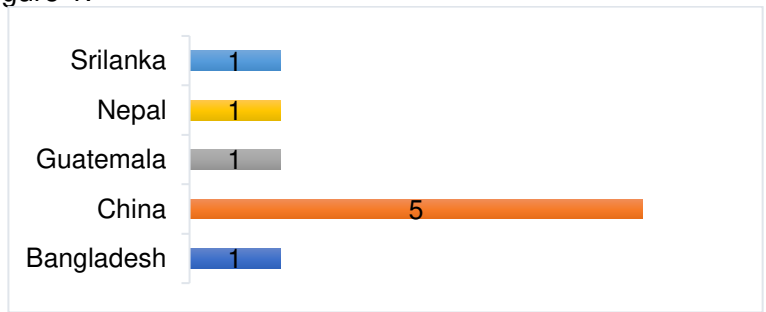

Figure 2. Characteristics of articles based on research location

Based on Figure 2, the characteristics of articles based on research location show that the majority of research articles are from China (5 articles). Meanwhile, other countries, namely Sri Lanka, Nepal, Guatemala, and Bangladesh, each have one article. This finding indicates that studies on the impact of parental migration on parenting practices and child nutritional status are still dominated by research in China.

Based on Figure 3, the characteristics of articles based on the type of migration, namely internal migration, amounted to 5 articles carried out by Shi 2020.[11], Zhang 2020[11], 2017 Tire[9], Zhang 2015[7], Lin 2024[14]and international migration amounting to 4 articles conducted by Davis (2016)[4], Jayatissa (2016)[8], Kunwar (2020)[12], Islam (2019)[10].

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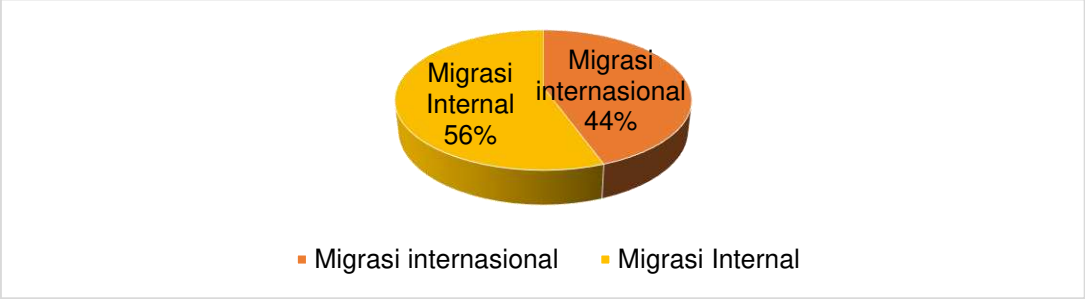

Figure 3. Characteristics of Articles Based on Migration Type

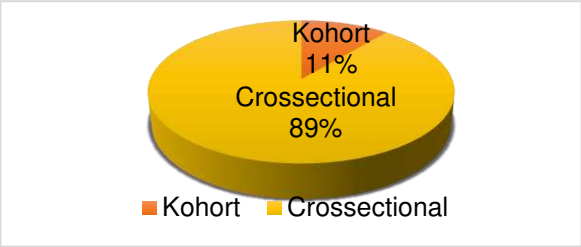

Figure 4. Characteristics of Articles Based on Research Design

Based on Figure 4, the majority of reviewed articles used a cross-sectional research design (8 articles) and one study used a cohort design. This indicates that research related to the impact of parental migration on parenting practices and child nutritional status is predominantly conducted using a cross-sectional approach, while the use of longitudinal designs such as cohort studies is still limited.

These limitations restrict the ability of the study to clearly establish cause-and-effect relationships. Moreover, there is still limited research examining the emotional experiences and challenges faced by caregivers when one or both parents migrate. Despite this, the topic remains highly relevant and underexplored, particularly regarding how parental migration influences changes in caregiving patterns and the nutritional status of left-behind children—an issue faced globally, especially in developing countries.

The findings carry important implications for policymakers focused on protecting migrant children and families. The study shows that remittances alone do not ensure child well-being unless accompanied by adequate caregiving and proper nutritional practices. Therefore, migrant families need support through parenting training that includes appropriate feeding practices, basic hygiene and child health care, and timely referrals to health services to promote optimal child growth and development.

2. The impact of parental migration on parenting practices

The absence of a father, mother, or both when leaving their children behind during migration leads to changes in parenting practices. Optimal parenting patterns ideally require the direct involvement of both parents, namely the father and mother, to ensure that the child's physical and emotional needs are adequately met[15]. Based on the analysis of articles on fathers' migration to work abroad, the role of primary caregiver is shifted to the mother. When fathers migrate, mothers still play the primary role in caregiving. A study conducted in Sri Lanka by Jayatissa (2016) showed that maternal care remains optimal because children continue to receive breast milk appropriate to their age, nutritious food in terms of variety, frequency, and texture of the food they receive[8.]However, the results of this study differ from those of Davis (2016), who found that children whose fathers migrate do not receive optimal care from their mothers. This is due to the lack of remittances from the father to meet the family's economic needs, forcing the mother to work outside the home. This situation results in shorter breastfeeding duration,

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reduced exclusive breastfeeding, and limited time for mothers to provide supervision and care for their children[4]. In line with research conducted by Ban (2017), children whose fathers migrate have a negative impact on the care they receive, such as the quality of the complementary food they consume being lower[9]. In addition, a study conducted by Kunwar (2020) found that seeking health services was low at only 52.1% in children left behind because the money sent by fathers (remittances) was used to pay off migration debts and other consumptive costs unrelated to fulfilling children's nutrition and health[12].

Research conducted by Ainin (2023) shows that the role of mothers is very important, especially in childcare practices, which include providing nutritional intake, maintaining children's cleanliness, sanitation of the child's environment, and utilizing health services related to children's health needs[16]. Maternal migration leads to a shift in parenting roles toward fathers. A study conducted by Ban (2017) in China showed that children raised by fathers tended to experience a decline in the quality of care. This was evident in shorter breastfeeding duration, inappropriate breastfeeding for the child's age, dietary diversity, frequency, and adequacy of complementary feeding compared to children raised by mothers[9]. In line with research by Purwatiningsih (2016), it was found that children's lives become more difficult if their mother and/or both parents leave them[2].

Migration by both parents, both fathers and mothers, results in the primary care of children being transferred to grandparents. A study by Jayatissa (2016) showed that the parenting patterns practiced by grandparents tend to be suboptimal. This is due to the increased household workload they must shoulder, which limits their attention and support for their children's developmental needs[8]. A study by Lin (2023) found that children raised by grandmothers received lower levels of care in terms of developmental stimulation, attention, hygiene care, and medical treatment when the children were sick. The barriers were the grandmothers' limited educational and physical abilities in providing care for their grandchildren's growth and development[14]. Findings from Shi's (2020) research show that grandmothers caring for abandoned children face obstacles in providing a variety of foods, both in terms of quantity and texture, that are appropriate to the child's nutritional needs[11]. In addition, research conducted by Ban (2017) showed that children cared for by grandmothers were given more formula milk and fortified complementary foods[9].

3. The impact of parental migration on children's nutritional status

Parental migration—whether internal or international—is intended to improve a family’s economic situation, yet evidence from the scoping review shows that it can negatively affect children’s nutritional status. Left-behind children are more likely to experience stunting, underweight, and wasting. A study by Jayatissa (2016) in Sri Lanka reported that stunting prevalence was highest among children left by their mothers (21.7%), followed by those left by both parents (12.5%), and those left by their fathers (9.7%). These findings indicate that the absence of mothers has the greatest impact on child growth compared to paternal absence.[8]. A study conducted by Kunwar (2020) in Nepal showed that the prevalence of stunting reached 35.5% in children left without their fathers. Although fathers still send money to the family, these funds are mostly used to pay off debts, purchase consumer goods, or save[12]. Meanwhile, a study conducted in Bangladesh by Islam (2019) also found that parental migration, especially fathers, had an impact on children's nutritional status with a stunting incidence of 42.2%[10]. Four studies conducted in China by Zhang (2015), Ban (2017), Shi (2020), and Yue Zhang (2022) showed varying impacts on nutritional status across categories of children left behind. Zhang's (2015) study found that parental migration affected children's height growth, particularly in boys left behind under the age of five.[7]A study conducted by Ban (2017) showed that the incidence of stunting in children raised by fathers was 32% higher than in children raised by grandmothers. This was due to differences in care practices provided by grandmothers, namely that toddlers were given formula milk and fortified food, which could reduce the

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risk of stunting[9]. Another study conducted by Yue Zhang (2022) showed that the Z-score of children from migrant families was higher than that of non-migrant children, meaning that children left behind by migrant parents were more vulnerable to stunting than children who grew up with both parents[13]. In contrast to the study conducted by Shi (2020) which showed that the prevalence of stunting was low at 12.5% in children raised by grandmothers from previous studies, this shows that parental migration does not always have a negative impact on children's nutritional status[11].

Underweight is a nutritional condition characterized by a weight-for-age (W/A) index below –2 standard deviations (SD) [17]. A study conducted in Sri Lanka by Jayatissa (2016) found that parental migration had a negative impact on the nutritional status of the children left behind. The results showed that 34.8% of the children were underweight[8]. One factor contributing to low birth weight in children is parenting practices that provide food, both in terms of quantity and quality, that do not meet children's nutritional needs. Furthermore, economic constraints and low levels of education among caregivers also hinder the provision of food that meets nutritional standards for children. This is in line with research by Ningsih (2023), which shows that parenting styles have a significant impact on toddler development, particularly through inappropriate feeding practices that can lead to nutritional problems in toddlers[18]. A study conducted by Islam (2018) in Bangladesh showed that the prevalence of underweight children aged <5 years who were left by their parents was 32.4%, and migration of parents, especially fathers, provided little protection against child malnutrition[10]. Furthermore, a study conducted by Shi (2020) in China showed a lower prevalence of underweight compared to studies in Sri Lanka and Bangladesh, which was 4%. Parental migration leads to an increase in family economic status through remittances from fathers, which results in increased consumption of solid foods in children. Furthermore, children are also given formula milk by grandmothers, thereby reducing the risk of nutritional problems in children. This contrasts with the results of a study conducted by Kunwar (2020), which found that the prevalence of underweight nutritional status in children left behind by fathers reached 28.3%. This condition is associated with the low quality of care provided by caregivers. The study also explained that only 52.1% of caregivers took their children to health services when they were sick, meaning nearly half of the respondents did not access health facilities when their children were sick. This low utilization of health services contributes to the increased incidence of diarrhea and impaired nutrient absorption, which ultimately leads to weight loss in children.[12]

*Wasting*is acute malnutrition that can be measured based on the weight index for height or length (BB/TB or BB/PB) which is below minus two standard deviations (-2 SD).[19]Good parenting practices include providing food that is appropriate, safe, nutritionally balanced and adapted to the child's age and needs, and maintaining personal hygiene and environmental sanitation are important steps that can support improving the child's nutritional status.[20]Ban's study (2017) shows that children who are cared for by other than their mothers, especially grandmothers or siblings, have a higher risk of wasting. This is related to the less than optimal regulation of children's daily food intake, irregularity in feeding schedules, and low rapid response to symptoms of illness that appear in children.[9]A study conducted by Kunwar (2020) in Nepal showed a wasting prevalence of 11.8%. This study found that parental absence due to migration impacts the quality of childcare. Although household income increases through remittances from migrating parents, this does not always have a positive impact on children's nutritional status. This study found that migrant families use remittances from fathers or mothers to pay debts or purchase consumer goods, rather than to meet children's nutritional and health needs[12]. This study also found that children's health-seeking efforts were relatively low, which correlated with a high incidence of diarrhea. Recurrent diarrhea can disrupt the digestive process and nutrient absorption needed for a child's growth. This

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disruption occurs due to a reduced intestinal surface area for nutrient absorption and the loss of digestive enzymes due to damage to the intestinal villi[21], [22]. This condition can increase the risk of wasting. This research aligns with the findings of Aulia (2024) who found a significant relationship between diarrhea and wasting, with an OR of 5.444. This means that toddlers who frequently experience recurrent diarrhea have a 5.4 times greater chance of experiencing wasting nutritional status[23].

The scoping review showed that parental migration—both internal and international—significantly affects parenting practices and the nutritional status of left-behind children. The absence of parents, particularly mothers, reduces the quality of care, as reflected in lower breastfeeding rates, limited dietary diversity, and reduced access to health services, all of which increase the risks of stunting, underweight, and wasting. Although remittances are often viewed as a compensatory benefit, the reviewed evidence indicates that these funds are not consistently allocated to children's nutrition and health needs, as they are frequently used for debt repayment or general household consumption. As a result, increased household income from migration does not automatically improve caregiving quality.

These findings highlight the need to strengthen the capacity of substitute caregivers to provide adequate nutrition, appropriate feeding practices, and basic child health care. Overall, this scoping review underscores that parental migration is not solely an economic matter but also a child-health concern that requires cross-sectoral policy and programmatic interventions to better support migrant families.Parental migration impacts caregiving practices and the nutritional status of left-behind children, indicating that parental absence through migration impacts a decline in the quality of caregiving, which has implications for children's nutritional vulnerability. Children left behind and cared for by others, especially fathers, grandmothers, and close relatives, experience a decline in the quality of care, namely poor breastfeeding practices, inadequate nutrition-based feeding, limited hygiene care, and low attempts to seek health services. In addition, increasing family income through remittances has not been consistently proven to provide protection against the risk of malnutrition, especially if the funds are not directly allocated to children's nutritional and health needs. This study can be used as a basis for future research that focuses more on examining specific nutritional factors, such as breastfeeding patterns and complementary foods in relation to parental migration and the nutritional status of left-behind children.

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