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A Meta-Analysis of Health Welfare Scheme Utilization and Barriers among Migrant Children and Their Families

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Abstract
Migrant children are among the world's most vulnerable populations and often face significant inequalities in access to health welfare schemes. This meta-analysis aims to systematically analyse existing evidence on the extent of health welfare scheme utilization and to identify major barriers affecting access among migrant children and their families. A comprehensive review of relevant studies published between January 2020 and May 2026 was conducted using electronic databases. Studies reporting quantitative or mixed-method findings on health scheme utilization among internal and cross-border migrant families were included. Findings indicate consistently lower utilization rates of maternal and child health services, immunization programs, and insurance-based schemes among migrant populations compared to non-migrant groups. Key barriers identified include lack of documentation, language barriers, poor awareness, mobility, discrimination, financial constraints, and administrative complexities. The study highlights the urgent need for inclusive policy frameworks, portable health entitlements, community-based awareness interventions, and culturally responsive service delivery models.

Keywords: Migrant children, health welfare schemes, healthcare utilization, barriers to access, social determinants of health, meta-analysis, health inequity.

1. Introduction

Migration, both internal and cross-border, has increased significantly over the past decades due to economic, social, and environmental factors. According to the World Health Organization, migrant populations often experience disproportionate health risks and reduced access to essential healthcare services. Among them, children constitute a particularly vulnerable subgroup due to developmental, nutritional, and immunization needs. In India, several health welfare schemes such as Ayushman Bharat, Rashtriya Bal Swasthya Karyakram, and Integrated Child Development Services aim to improve child health outcomes. However, migrant families frequently remain excluded due to systemic and structural barriers.

Existing literature suggests that migrant children experience higher levels of malnutrition, incomplete immunization, anaemia, and untreated illnesses compared to settled populations. Irregular living

conditions, occupational instability of parents, lack of identity documentation, and social marginalization further reduce their ability to access welfare schemes. While individual studies have explored access barriers, there is limited synthesized evidence quantifying the extent of utilization and systematically identifying common obstacles across contexts. A meta-analytic approach provides a comprehensive understanding of patterns across geographical and socio-economic settings.

2. Methods and materials

This paper uses a meta-analysis approach using secondary data sources. Electronic databases including PubMed, Scopus, Web of Science, and Google Scholar were searched for studies published between January 2020 and May 2026.

3. Results

Child Health Welfare Schemes in India

The Child Health Programme in India, implemented under the National Health Mission (NHM), focuses on improving child survival through integrated interventions that address the major determinants of infant and under-five mortality. The programme is based on the concept of the Continuum of Care, ensuring the delivery of essential services at home, through community outreach, and at healthcare facilities. The Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) strategy aims to improve the health and nutritional status of mothers, new-borns, children, and adolescents. The National Health Policy of India- 2017; has set targets to reduce the Infant Mortality Rate (IMR) to 28 per 1,000 live births, the Neonatal Mortality Rate (NMR) to 16 per 1,000 live births by 2025, and the Under-Five Mortality Rate (U5MR) to 23 per 1,000 live births by 2025.

However, data from the National Family Health Survey (NFHS) and the Sample Registration System (SRS) indicate that these rates remain above the targeted levels. In alignment with Sustainable Development Goal (SDG) 3.2, India aims to reduce neonatal mortality to at least 12 per 1,000 live births and under-five mortality to at least 25 per 1,000 live births by 2030. To address neonatal mortality, facility-based newborn care services such as Special Newborn Care Units (SNCUs), Newborn Stabilization Units (NBSUs), and Newborn Care Corners (NBCCs) have been established. Additionally, the Janani Shishu Suraksha Karyakram (JSSK) provides free treatment, medicines, diagnostics, diet, blood transfusion services, and transportation for pregnant women and sick newborns, thereby promoting institutional deliveries and reducing out-of-pocket healthcare expenditure (Kheora, 2021).

Several national health programmes have been introduced to improve the health and nutritional status of newborns, children, and adolescents in India. These include:

- Promotion of Zinc and Oral Rehydration Salts (ORS)
- Navjaat Shishu Suraksha Karyakram (NSSK)
- Integrated Child Development Services (ICDS)
- Universal Immunization Programme (UIP)
- Janani Shishu Suraksha Karyakram (JSSK)
- Rashtriya Bal Swasthya Karyakram (RBSK)
- Rashtriya Kishor Swasthya Karyakram (RKSK)
- Mission Indradhanush
- Janani Suraksha Yojana (JSY)
- National Deworming Day programme

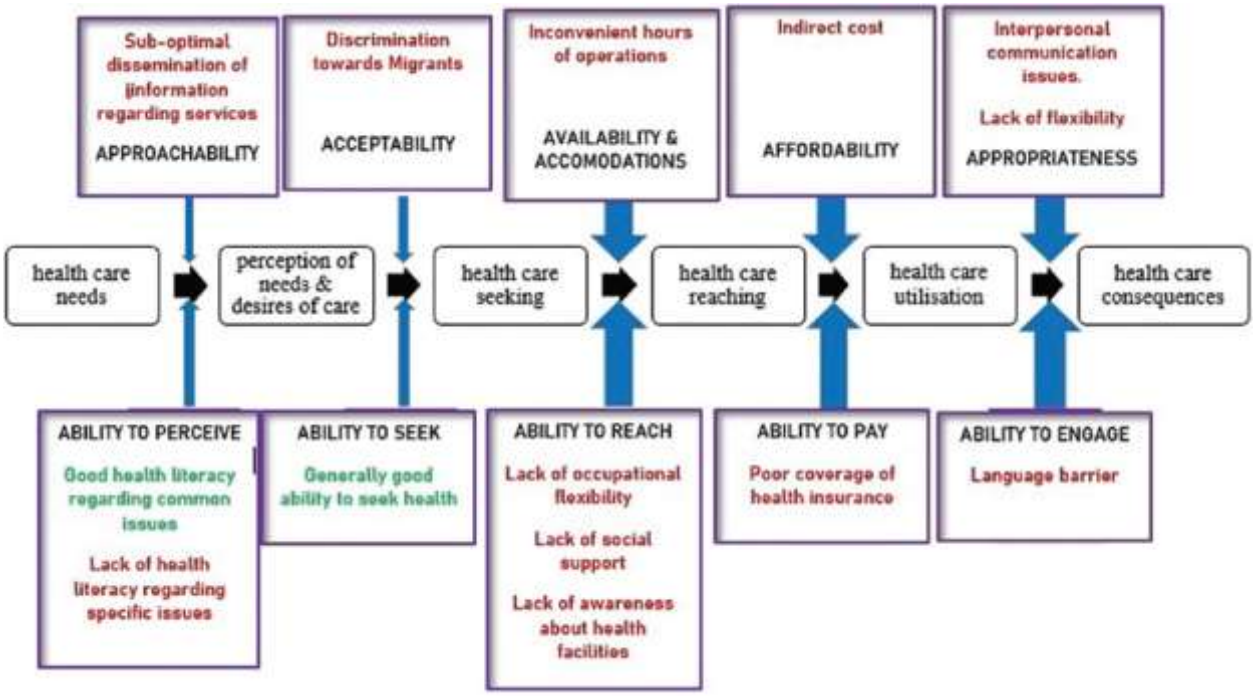
These initiatives aim to promote and safeguard the health of newborns, infants, toddlers, children, and adolescents while also supporting the health and nutrition of pregnant and lactating women. Improving maternal nutrition contributes significantly to reducing the risk of malnutrition among children, thereby enhancing their immunity and overall health status. Consequently, these programmes play a vital role in improving child health outcomes and contributing to the development of a healthier population (Iyshwarya, 2024).

Utilization of Child Health Welfare Schemes among Migrant Children

Analysis of child health scheme utilization among migrant children and their families in India indicates that, although national programmes such as the Integrated Child Development Services (ICDS), National Health Mission (NHM), and POSHAN Abhiyaan have achieved moderate overall coverage, their utilization remains uneven and consistently lower among migrant populations due to frequent mobility, lack of documentation, socio-economic disadvantages, and limited awareness. Evidence from large national datasets, including NFHS-4 and NFHS-5, shows that ICDS service utilization among children under six years ranged from approximately 54% to 71%, with a notable increase from about 58% in 2015–16 to 71% in 2019–21. However, utilization varies considerably across settings, with rural coverage generally higher than urban coverage. Studies have also reported that only about half of eligible mothers and children receive continuous benefits during pregnancy, lactation, and early childhood. Similarly, maternal and child health services delivered through the National Health Mission demonstrate variable implementation and service reach, particularly among vulnerable populations such as migrant families. Although migrant-specific data remain limited, available evidence consistently indicates lower access to and continuity of child health services among migrant households compared to settled populations. Overall, the literature suggests that despite moderate national utilization rates of major child health schemes, effective utilization among migrant children remains suboptimal, highlighting the need for targeted, portable, and inclusive service delivery mechanisms (UNICEF, 2021).

Migrant families encounter multiple barriers in accessing child healthcare services, including language difficulties, lack of awareness, mobility-related disruptions, and limited familiarity with local health systems. To improve access, primary healthcare services should be made more migrant-friendly through flexible service timings, culturally sensitive approaches, and the availability of multilingual support personnel. Furthermore, preventive and promotive healthcare interventions targeting common childhood conditions such as under-nutrition, diarrhea, and acute respiratory infections (ARI) should be strengthened among migrant populations (Ambika,2026).

Evidence from several studies further demonstrates disparities in healthcare utilization among migrant children. Liu Ying-tao et al. (2020), in a study involving 3,152 migrant children across four cities in China, reported that only 45.3% possessed health management cards, while 47.2% had not undergone any health examination during the preceding 18 months. In contrast, Zhengyue Jing et al. (2022), in a national sample of 2,620 children, found that 66.4% had utilized free physical examination services. Immunization coverage among migrant children remains a major concern. Agarwal et al. (2021) documented that 98.4% of 400 interstate migrant children lacked immunization cards, and only 14.8% were fully immunized.



(Source: https://journals.lww.com/ijph/fulltext/2026)

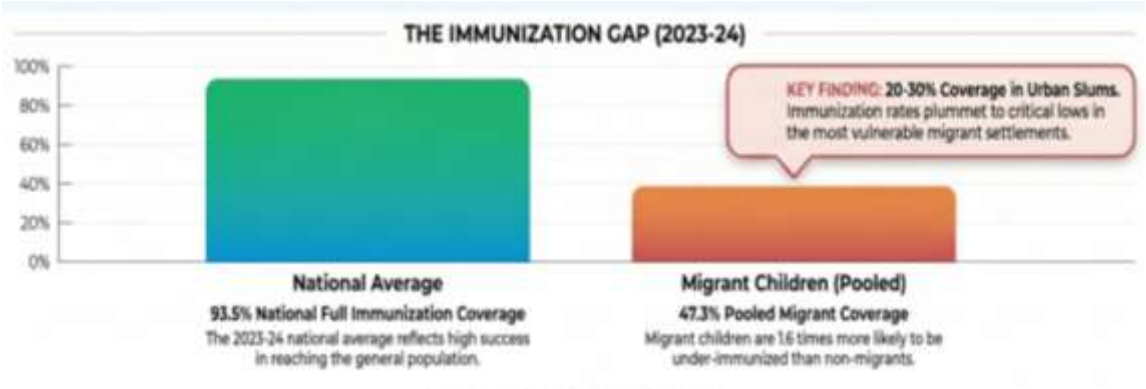
Figure 1

Frame Work on Healthcare Utilization System

The Conditional Matrix framework was used to identify and explain the factors influencing access to child healthcare services among migrant labourers. In the figure 1, green represents enabling factors, while red indicates barriers to healthcare access. The thickness of the blue lines represents the relative magnitude and significance of the factors affecting healthcare utilization.

Immunization Utilization Trends

Recent evidence reveals substantial disparities in immunization coverage between migrant and non-migrant populations in India. Although the national Full Immunization Coverage (FIC) reached 93.5% during 2023–24, the pooled average coverage among migrant children remains considerably lower, at approximately 47.3%, with some urban slum settlements reporting coverage levels as low as 20–30% **(Figure-2).**



(Source: Mishra et al., 2020)

Figure-2

Immunization Coverage Comparison

Studies indicate that migrant children are 1.6 times more likely to be under-immunized than their non-migrant counterparts. However, immunization coverage among migrant children is influenced by socio-economic status, parental education, household wealth, and access to healthcare services. Evidence suggests that migration alone does not improve immunization outcomes among children from poor and non-literate households, highlighting the need for targeted public health interventions and inclusive service delivery mechanisms to address existing inequities (Mishra et al., 2020).

Socio-demographic characteristics associated with utilization of ICDS service

The socio-demographic characteristics associated with the utilization of Integrated Child Development Services (ICDS) are presented in Table 1. Findings from the study by Renjini et al. (2026) indicate that factors such as age of the child, parental education, occupation, socio-economic status, place of residence, and migration-related characteristics significantly influence the utilization of ICDS services among beneficiaries.

Table-1

Socio-demographic characteristics associated with utilization of ICDS service (N=165)

Characteristics	Categories	Availed at least one service from Anganwadi		UPR (95% CI)	APR (95% CI)	p-value
		Yes n (%)	No n(%)			
Sex of child	Female	47(54.7)	39(45.3)	1.52(0.82-2.82)	-	-
	Male	35(44.3)	44 (55.7)	1	-	-
Age of Mother	> 25 years	48(53.3)	42(46.7)	1.37(0.74-2.54)	1.92(0.88-4.16)	0.10
	<=25 years	34(45.3)	41(54.7)	1	1	-
Age of Father	> 25 years	71(50.4)	70(49.6)	1.19(0.50-2.85)	-	-
	<=25 years	11(45.8)	13(54.2)	1	-	-
Mother's education	5th grade and above	59(52.7)	53(47.3)	1.45(0.75-2.83)	1.19(0.54-2.56)	0.66
	Up to 4th grade	23(43.4)	30(56.6)	1	1	-
Father's education	5th grade and above	52(57.8)	38(42.2)	2.05(1.10-3.82)	1.29(0.64-2.63)	0.47
	Up to 4th grade	30(40)	45(60)	1	1	-
Occupation status of mother	Not Working	46(52.9)	41(47.1)	1.30(0.70- 2.43)	-	-
	Working	36 (46.2)	42(53.8)	1	-	-
State migrated from	Tamil Nadu	28(90.3)	3(9.7)	13.88 (4.00-50.00)	12.9 (3.4-48.4)	<0.001
	Other states	54(49.7)	80(50.3)	1	1	-
Duration of migration	>2 years	44(57.9)	32(42.1)	1.84 (0.99-3.429)	1.36(0.66-2.85)	0.39
	≤2 years	38(42.7)	51(57.3)	1	1	-
Monthly per capita income	>5000	39(54.9)	32(45.1)	1.445(0.77-2.68)	1.29(0.60-2.77)	0.51
	<=5000	43(45.7)	51(54.3)	1	1	-
Mothers' tobacco use	No	76(52.1)	70(47.9)	2.38(0.85-8.33)	1.41(0.48-4.09)	0.52
	Yes	6(31.6)	13(68.4)	1	1	-
Father's tobacco use	No	50(58.8)	35(41.2)	2.17(1.16-4.0)	-	-
	Yes	32(40.0)	48(60.0)	1	-	-
Father's alcohol use	No	63(53.4)	55(45.6)	1.69(0.85- 3.44)	-	-
	Yes	19(40.4)	28(59.6)	1	-	-

UPR=Unadjusted prevalence ratio, APR= Adjusted prevalence ratio, CI=confidence interval

(Source: Renjini B et al, 2026)

The findings presented in Table 1 indicate that the utilization of ICDS services among migrant children was influenced by several socio-demographic factors. Children from families that migrated from Tamil Nadu were significantly more likely to avail at least one Anganwadi service compared to those from other States (APR = 12.9; 95% CI: 3.4–48.4; $p < 0.001$). Although higher utilization was observed among children of older mothers, better-educated parents, non-working mothers, families with a longer duration of migration, and households with higher per capita income, these associations were not statis-

tically significant. The results suggest that migration-related characteristics may play a more important role in determining ICDS service utilization than individual parental socio-demographic factors, emphasizing the need for targeted strategies to improve service uptake among diverse migrant populations (Renjini et al., 2026).

Health Insurance Coverage among Migrant Families

Health insurance plays a critical role in ensuring financial protection and improving access to healthcare services among migrant populations. However, evidence from India indicates that migrant families continue to experience low levels of health insurance coverage due to factors such as lack of awareness, documentation barriers, frequent mobility, language difficulties, and limited access to information regarding available welfare schemes. Consequently, many migrant households rely on out-of-pocket expenditure for healthcare, increasing their risk of financial hardship and delaying timely healthcare utilization. Previous studies have highlighted that inadequate insurance coverage contributes to reduced access to preventive and curative health services, particularly among vulnerable groups such as women and children (Agarwal et al., 2021; ILO, 2023). Strengthening awareness programmes, simplifying enrolment procedures, and ensuring portability of benefits across states are essential to improve healthcare access and financial security among migrant families.

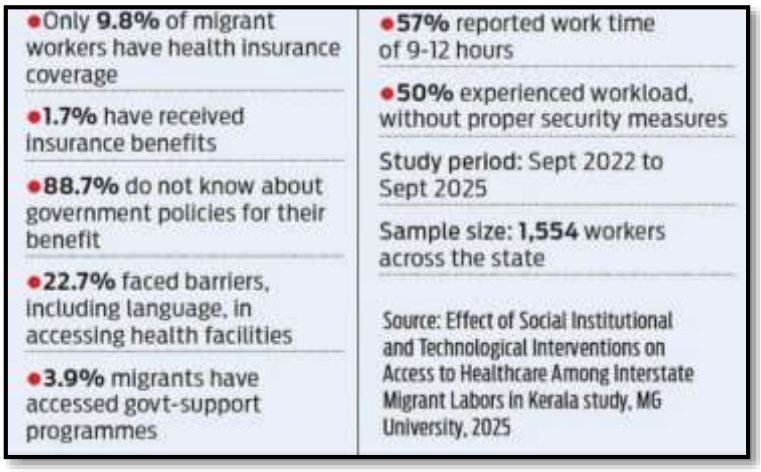


Figure-3

Insurance Coverage and Healthcare Access among Interstate Migrant Workers in Kerala

Figure 3 highlights the substantial gaps in health insurance coverage and healthcare access among interstate migrant workers in Kerala. The findings indicate that only 9.8% of migrant workers possessed health insurance coverage, while merely 1.7% had received insurance benefits, demonstrating limited utilization of available insurance schemes. A large majority (88.7%) were unaware of government welfare policies, and only 3.9% had accessed government-supported programmes. Furthermore, 22.7% reported barriers, including language-related challenges, in accessing healthcare facilities. Occupational vulnerabilities were also evident, with 57% of workers reporting daily working hours of 9–12 hours and 50% experiencing heavy workloads without adequate safety measures. These findings suggest that low awareness, poor social protection coverage, and unfavourable working conditions collectively restrict healthcare access among migrant families. The results emphasize the need for targeted outreach

initiatives, improved dissemination of welfare information, and enhanced health insurance enrolment strategies to ensure equitable healthcare access and financial protection for migrant populations.

Barriers to Utilization

Despite the availability of child health and welfare programmes, several structural, social, and administrative barriers continue to limit their effective utilization among migrant families. Evidence from studies conducted in Kerala and other parts of India indicates that **language barriers** remain one of the most significant challenges, affecting communication between migrant families and healthcare providers, Anganwadi workers, and community health workers (Ambika et al., 2025; Jacob John et al., 2025). Limited proficiency in the local language often reduces awareness of available services and hinders access to healthcare, nutrition, and social welfare programmes.

Inconvenient service timings also contribute to poor utilization. Most migrant parents are engaged in daily wage labour and leave for work early in the morning, making it difficult to access Anganwadi and immunization services during regular working hours. Frequent migration and changes in residence further disrupt continuity of care and make it challenging for service providers to track beneficiaries and ensure completion of immunization schedules. The absence of proper documentation, including immunization cards and identity records, further restricts access to essential services (Kerala Institute of Labour and Employment, 2020).

Cultural and social factors also influence service utilization. Studies have reported poor acceptance of nutritional supplements due to differences in food preferences and local dietary practices. Fear of discrimination, social exclusion, and lack of confidence in public systems discourage some migrant families from accessing available services. Ambika et al. (2026) noted that concerns regarding social integration and acceptance in Anganwadi centres affected participation among migrant children. In addition, **parental illiteracy and inadequate health awareness** contribute to low utilization of preventive healthcare services such as growth monitoring, anaemia screening, and routine health check-ups.

Poor outreach by frontline health workers further compounds these challenges. Jacob John et al. (2025) reported that a substantial proportion of migrant families had never been visited by community health workers, largely due to communication difficulties and logistical constraints. Consequently, migrant households often remain **unaware of their rights, entitlements, and available welfare schemes**. Collectively, these findings suggest that language barriers, mobility, inadequate outreach, documentation issues, social exclusion, and limited awareness are major determinants of the underutilization of child health and welfare services among migrant populations. Addressing these barriers through culturally sensitive, migrant-friendly and portable service delivery models is essential to improve healthcare access and utilization among migrant children and their families.

4. Conclusion

This meta-analysis highlights the significant health challenges faced by migrant children in India in accessing essential welfare and healthcare services. The findings show that barriers such as lack of documentation, language differences, discrimination, and frequent migration reduce the utilization of health and nutrition programs. As a result, migrant children are more vulnerable to poor nutritional status and incomplete immunization. The review emphasizes the need for inclusive policies, portable welfare benefits, and culturally sensitive healthcare services to ensure equitable access for all children.

Addressing these barriers is essential for improving the health and well-being of migrant children and reducing existing health inequalities in India.

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