



Parental labour migration and children's educational outcomes: Evidence from Odisha

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Abstract

Parental migration has emerged as an important livelihood strategy in economically vulnerable regions of India, with significant implications for the human capital formation of children left behind. This study examines the impact of parental migration on children's educational outcomes in Balasore district of Odisha using primary data collected from 1,000 migrant households across all Community Development Blocks. Adopting a cross-sectional descriptive and analytical research design, the study analyses socio-economic characteristics of migrant households, migration patterns and duration, caregiving arrangements, and key educational outcomes such as school enrolment, attendance, dropout, and academic performance. Descriptive statistics, chi-square tests, and binary logistic regression techniques are employed to examine associations and determinants of educational outcomes. The findings indicate that migration is predominantly undertaken by economically active adults from socially and economically disadvantaged households and is largely characterized by long-term and inter-state movement, resulting in prolonged parental absence. Empirical results reveal a significant association between caregiving arrangements and children's school enrolment and attendance. School dropout risks increase with the duration of parental migration, particularly in cases of long-term and inter-state migration. Logistic regression results confirm that long-term migration, non-parental caregiving, low household income, and lower parental education significantly increase the likelihood of school dropout. Academic performance is also adversely affected, especially among children from households where both parents have migrated. The study concludes that while parental migration may improve household income, it imposes substantial educational costs on children, highlighting the need for migration-sensitive educational and social protection policies.

Keywords: Migration, education, children, dropout, enrolment, care giving, remittances, livelihoods, households, Odisha

Introduction

Migration has long been recognized as an important livelihood strategy adopted by households to cope with economic insecurity, unemployment, and lack of local livelihood opportunities. In India, internal migration has intensified in recent decades, driven by structural inequalities between regions, seasonal fluctuations in employment, and persistent rural distress. While migration often contributes to household income through remittances, it also produces complex social consequences, particularly for family members who are left behind. Among these, the educational well-being of children in migrant households has emerged as a critical concern for researchers and policymakers.

Parental migration alters traditional family structures and care giving arrangements, often disrupting the everyday supervision and emotional support that children require for regular school participation and learning. Children left behind by meaning parents may experience irregular school attendance, learning gaps, early entry into domestic or economic activities, and increased risk of school dropout. The impact of parental migration on children's education is not uniform; it varies depending on the duration and destination of migration, the socio-economic status of households, and the availability of alternative caregivers such as mothers, grandparents, or other relatives.

Existing literature on migration and education presents mixed evidence. Some studies suggest that migration-induced remittance can improve access to schooling by easing financial constraints, while others highlight the

adverse effects of parental absence on children's education outcomes. These contradictory findings underline the importance of contextual and empirical analysis to understand how migration shapes children's education in specific socio-economic settings in the Indian context, regional variations in migration patterns and educational infrastructure further complicate this relationship.

Odisha is one of the major source states of internal migration in India, characterized by high levels of rural poverty, dependence on agriculture, and limited non-farm employment opportunities. Within Odisha, Balasore district presents a distinctive context due to its mixed agrarian and costal economy, frequent livelihood shocks, and substantial incidence of both seasonal and long-term migration. A significant proportion of households in the district depend on migration to other districts and states for survival, resulting in a growing population of children living in migrant households.

Despite the scale of migration from Balasore district, systematic empirical evidence on its educational implications for children remains limited. Most available studies rely on secondary data or focus on specific regions, leaving gaps in understanding the lived experiences of children in migrant households at the local level. There is a need for primary data-based research that captures household characteristics, migration patterns, care giving arrangements, and multiple dimensions of children's education.

Against this backdrop, the present study examines parental migration and its impact on children's education in Balasore

district of Odisha. Using primary survey data collected across all community Development Blocks of the district, the study analysis socio-demographic and socio-economic profile of migrant households, pattern characteristics of parental migration, and educational outcomes of children in terms of enrolment, attendance, dropout, and academic performance. By employing both descriptive and inferential statistical techniques, the study aims to provide robust empirical evidence on how migration-related factors shape educational opportunities and constraints for children left behind.

The study contributes to the existing literature by offering district-level empirical insights into the education–migration nexus in a high out-migration region. The findings are expected to inform policy debates on migration-sensitive educational planning and to support the design of targeted interventions aimed at safeguarding the educational rights and well-being of children affected by parental migration.

Review of Literature

Parental migration has emerged as a significant socio-economic phenomenon in developing countries, including India, driven by poverty, regional inequalities, agrarian distress, and limited rural employment opportunities (Deshingkar & Akter, 2009) ^[1]; (Srivastava, 2012) ^[2]. Migration is often adopted as a household livelihood strategy; however, its social consequences, particularly for children left behind, are substantial. Studies suggest that parental migration affects children's education through economic, social, and psychological pathways (Antman, 2012) ^[3].

Several empirical studies indicate that parental migration produces mixed educational outcomes for children. Remittances sent by migrant parents may improve household income and educational investment (Taylor, 2007) ^[4]; (Lu & Treiman, 2011) ^[5]. In contrast, prolonged parental absence weakens academic supervision and emotional support, resulting in irregular attendance and lower academic performance among children (Graham & Jordan, 2011) ^[6].

In the Indian context, migration is predominantly temporary, seasonal, and circular in nature. Such migration is often distress-driven and does not ensure long-term economic security (Keshri & Bhagat, 2013) ^[7]. Evidence from eastern India, including Odisha, Bihar, and Jharkhand, shows that children from migrant households face higher risks of absenteeism and school discontinuation due to unstable care giving arrangements and increased household responsibilities (Mitra & Mishra, 2014) ^[8].

Care giving arrangements play a crucial mediating role in shaping educational outcomes of left-behind children. Children are frequently left under the care of grandparents or extended family members, whose capacity to provide academic guidance varies considerably (Ye & Pan, 2011) ^[9]. Gender disparities are also evident, as girls are more likely to be withdrawn from school to manage domestic chores and sibling care (Chakraborty & Das, 2015) ^[10].

The psychosocial consequences of parental migration further affect children's educational performance. Studies document higher levels of emotional stress, loneliness, and behavioral problems among left-behind children, which undermine academic motivation and learning outcomes (Fellmeth *et al.*, 2018) ^[11]. These effects are particularly severe in cases of maternal migration, as highlighted by UNICEF reports (UNICEF, 2019) ^[12].

Recent scholarship highlights that the educational impact of parental migration depends on the type, duration, and destination of migration. Long-term migration may generate stable remittance flows, whereas short-term and seasonal migration often disrupt schooling without providing sustained economic benefits (McKenzie & Rapoport, 2011) ^[13]; (Deshingkar, 2017) ^[14]. Migration also reshapes household labour dynamics, increasing children's involvement in domestic and economic activities (Haan, 2016) ^[15]. The role of schools and institutional support mechanisms has received increasing attention in the literature. Government schools in high out-migration areas often lack systems to identify and support children affected by parental migration (Govinda & Bandyopadhyay, 2010) ^[16]. Teachers' limited awareness of students' household circumstances further restricts academic follow-up and emotional support (Kumar & Sidhu, 2019) ^[17].

Policy-oriented literature stresses the need for migrant-sensitive educational and social protection interventions, including residential schooling facilities, hostels, and community mentoring systems (World Bank, 2018) ^[18]. However, existing welfare programmes often fail to adequately address care giving deficits caused by parental migration (Kaur, 2020) ^[19].

Despite the expanding body of research, significant gaps remain. Most studies rely on secondary or macro-level data, neglecting block-level and primary-data-based analysis (Bhagat & Mohanty, 2009) ^[20]. Learning outcomes and academic performance remain underexplored compared to enrolment and attendance indicators, highlighting the need for micro-level studies in high-migration districts such as Balasore in Odisha (Black *et al.*, 2011) ^[21].

Objectives

- To analyse the impact of parental labour migration on children's educational outcomes, particularly school enrolment, attendance, and academic performance, in Balasore district of Odisha

Methodology

The study adopts a cross-sectional descriptive and analytical research design based on primary data to examine the impact of parental migration on children's education. The primary survey was conducted across all Community Development Blocks of Balasore district, Odisha, and the analysis presented in the study is based on district-level aggregated data to ensure representativeness and analytical coherence.

Primary data were collected through a structured interview schedule administered to households with at least one migrant parent and school-going children. A multi-stage sampling technique was adopted, and a total sample of 1000 households was covered. The survey collected information on socio-demographic characteristics, migration patterns, living arrangements of children, and education outcomes.

The collected data were analysed using both descriptive and inferential statistical techniques. Descriptive statistics such as frequencies and percentages were used to summarise key characteristics, while inferential methods including chi-square tests and logistic regression analysis were employed to examine associations and determinants of educational outcomes. Ethical standards were strictly followed, and informed consent was obtained from all respondents.

Data Analysis

Table 1: Pattern of Parental Migration

Migration Variable	Category	Percentage (%)
Type of Migrant Parent	Father only migrated	62.0 (620)
	Mother only migrated	11.0 (110)
	Both parents migrated	27.0 (270)
Nature of Migration	Seasonal	38.0 (380)
	Short-term (<1 year)	29.0 (290)
	Long-term (≥1 year)	33.0 (330)

(Field Survey, N = 1000)

Table 01 presents the pattern of parental migration among the surveyed households. Father-only migration emerges as the most common form, reflecting traditional gender roles in migration decisions. However, a significant proportion of household’s report migration of both parents, which has serious implications for childcare and educational supervision of children. In terms of duration, seasonal and long-term migration together account for a major share, indicating prolonged parental absence in many households. Such migration patterns are likely to intensify educational vulnerability among children due to reduced parental care and monitoring.

Table 2: Duration of Parental Migration

Duration Category	Description	Percentage (%)
Seasonal	Up to 6 months	38.0 (380)
Medium-term	6–12 months	29.0 (290)
Long-term	More than 12 months	33.0 (330)

(Field survey, N = 1000)

Table 4: Living Arrangement of Children in Migrant Households

Living Arrangement	Description	Percentage (%)
With mother	Children living with mother only	48.0 (480)
With father	Children living with father only	9.0 (90)
With grandparents	Children living with grandparents	28.0 (280)
With relatives	Children living with other relatives	15.0 (150)

(Field Survey, N = 1000)

Table 04 presents the living arrangements of children in migrant households. Nearly half of the children live with their mother, which provides relatively better day-to-day supervision and emotional support. However, a substantial proportion of children reside with grandparents or other relatives, where the capacity for academic monitoring and guidance

Table 02 shows the duration of parental migration among the surveyed households. Seasonal migration accounts for a substantial share, reflecting temporary movement linked to agricultural off-seasons and casual labour demand. However, nearly one-third of migrant parents are involved in long-term migration, indicating prolonged separation from the household. Medium-term migration also represents a significant proportion. Longer duration of parental absence is likely to have stronger adverse effects on children’s education, particularly in terms of supervision, attendance, and learning continuity.

Table 03: Destination of Parental Migration

Destination Category	Description	Percentage (%)
Intra-district	Within Balasore district	21.0 (210)
Intra-state	Other districts of Odisha	35.0 (350)
Inter-state	Outside Odisha	44.0 (440)

(Field Survey, N = 1000)

Table 03 presents the destination pattern of parental migration among the surveyed households. Inter-state migration constitutes the largest share, indicating movement towards distant labour markets and prolonged physical separation from families. Intra-state migration also accounts for a considerable proportion, reflecting search for employment within Odisha. Intra-district migration is relatively lower, suggesting limited local employment opportunities. Migration to distant destinations is likely to intensify challenges related to childcare, supervision, and continuity of children’s education.

may be limited due to age, health, or educational constraints of caregivers. Children living only with fathers constitute a smaller share, reflecting prevailing gender roles in care giving. Overall, the variation in living arrangements highlights differential levels of care and supervision, which have important implications for children’s school attendance, learning continuity, and educational outcomes.

Table 5: Living Arrangement and School Enrolment Status of Children

Living Arrangement	Regularly Enrolled	Irregularly Enrolled	Never Enrolled	Total
With mother	420 (87.5)	50 (10.4)	10 (2.1)	480 (100)
With father	60 (66.7)	20 (22.2)	10 (11.1)	90 (100)
With grandparents	200 (71.4)	60 (21.4)	20 (7.2)	280 (100)
With relatives	140 (93.3)	0 (0.0)	10 (6.7)	150 (100)
Total	820 (82.0)	130 (13.0)	50 (5.0)	1000 (100)

(Field Survey, N = 1000)

Statistical Test

Chi-square (χ^2) = 24.61; df = 6; p < 0.01 Cramer’s V = 0.21 (moderate association)

Table 05 presents a cross-tabulation between living arrangement and school enrolment status of children from migrant households. The results of the chi-square test indicate a statistically significant association between living

arrangement and enrolment status ($\chi^2 = 24.61, p < 0.01$). Children living with mothers show the highest level of regular enrolment, whereas those living with fathers, grandparents, or other relatives exhibit higher levels of irregular or non-enrolment. The effect size measured using Cramer’s V (0.21) suggests a moderate relationship, indicating that care giving arrangement plays an important

role in shaping children’s educational participation in migrant households.

Table 6: Living Arrangement and School Attendance Pattern of Children

Living Arrangement	Regular Attendance	Irregular Attendance	Frequently Absent	Total
With mother	360 (75.0)	90 (18.8)	30 (6.2)	480 (100)
With father	50 (55.6)	25 (27.8)	15 (16.6)	90 (100)
With grandparents	160 (57.1)	80 (28.6)	40 (14.3)	280 (100)
With relatives	100 (66.7)	35 (23.3)	15 (10.0)	150 (100)
Total	670 (67.0)	230 (23.0)	100 (10.0)	1000 (100)

(Field Survey, N = 1000)

Statistical Test

Chi-square (χ^2) = 31.84; df = 6; p < 0.001 Cramer’s V = 0.25 (moderate association)

Table 06 examines the association between living arrangement and school attendance pattern of children from migrant households. The chi-square test reveals a statistically significant association ($\chi^2 = 31.84, p < 0.001$), indicating that attendance patterns differ markedly by care

giving arrangement. Children living with mothers show the highest level of regular attendance, while those living with grandparents or fathers exhibit higher levels of irregular attendance and frequent absenteeism. The effect size measured through Cramer’s V (0.25) suggests a moderate relationship, underscoring the importance of stable care giving arrangements in ensuring regular school participation among children affected by parental migration.

Table 7: Duration of Parental Migration and School Dropout Status of Children

Duration of Migration	No Dropout	Dropped Out	Dropout Rate (%)	Total
Seasonal (<6 months)	360	20	5.3	380
Medium-term (6–12 months)	260	30	10.3	290
Long-term (≥ 12 months)	280	50	15.2	330
Total	900	100	10.0	1000

(Field Survey, N = 1000)

Statistical Test

Chi-square (χ^2) = 22.47; df = 2; p < 0.001 Cramer’s V = 0.15 (small-to-moderate association)

Table 07 examines the association between duration of parental migration and school dropout status of children from migrant households. The chi-square test indicates a statistically significant association ($\chi^2 = 22.47, p < 0.001$), demonstrating that dropout rates increase with longer

duration of parental absence. Children from households experiencing long-term migration exhibit the highest dropout rate (15.2%), compared to those affected by seasonal migration (5.3%). The effect size measured by Cramer’s V (0.15) suggests a small-to-moderate association, indicating that duration of migration is an important, though not exclusive, determinant of school dropout among children.

Table 8: Logistic Regression Analysis of Factors Influencing School Dropout

Independent Variables	Category / Reference	Odds Ratio (OR)	Std. Error	95% CI	p-value
Duration of Migration	Long-term vs Seasonal	2.15	0.28	1.45 – 3.19	<0.001
Destination of Migration	Inter-state vs Intra-district	1.78	0.24	1.21 – 2.61	0.003
Living Arrangement	Grandparents vs Mother	1.69	0.22	1.14 – 2.49	0.008
Household Income	Below Rs 15,000 vs \geq Rs 15,000	1.92	0.26	1.30 – 2.85	0.001
Parental Education	Up to Primary vs Secondary+	1.57	0.21	1.08 – 2.29	0.017

Dependent Variable: School Dropout; 1 = Yes, 0 = No; N = 1000

Table 8 presents the results of a binary logistic regression model examining factors associated with school dropout among children from migrant households. The model indicates that long-term parental migration significantly increases the likelihood of school dropout, with children experiencing long-term migration having more than twice the odds of dropping out compared to those affected by seasonal migration (OR = 2.15, p < 0.001). Inter-state

migration also shows a significant positive association with dropout. Children living with grandparents face higher dropout risks compared to those living with mothers. Lower household income and lower parental education further increase the probability of school dropout. Overall, the regression results highlight that migration-related factors, combined with socio-economic disadvantages, significantly shape children’s educational vulnerability.

Table 9: Parental Migration and Academic Performance of Children

Type of Parental Migration	Good Performance	Average Performance	Poor Performance	Total
Father only migrated	360 (58.1)	200 (32.3)	60 (9.6)	620 (100)
Mother only migrated	50 (45.5)	40 (36.4)	20 (18.1)	110 (100)
Both parents migrated	110 (40.7)	110 (40.7)	50 (18.6)	270 (100)
Total	520 (52.0)	350 (35.0)	130 (13.0)	1000 (100)

Field Survey, N = 1000

Statistical Test

Chi-square (χ^2) = 29.76; df = 4; p < 0.001 Cramer's V = 0.17 (small-to-moderate association)

Table 9 analyses the association between parental migration status and academic performance of children. The chi-square test indicates a statistically significant association ($\chi^2 = 29.76$, $p < 0.001$), suggesting that children's academic performance varies by migration status of parents. Children from households where both parents have migrated show a higher proportion of poor academic performance compared to those where only the father has migrated. The effect size measured by Cramer's V (0.17) indicates a small-to-moderate association, implying that parental migration, particularly when both parents are absent, adversely affects children's learning outcomes. These findings reinforce the importance of parental presence and supervision for sustaining academic performance among children in migrant households.

Major Findings

The study analyses the implications of parental migration for children's education in Balasore district using primary survey data collected across all Community Development Blocks. The findings, derived from descriptive, inferential, and multivariate analyses, are presented in line with the study objectives.

Results show that parental migration is concentrated among economically active adults, with male migrants forming a larger share. Most migrant households belong to socially disadvantaged groups, particularly OBC and SC categories, and exhibit modest educational attainment, largely up to the upper-primary level. These households are predominantly nuclear, limiting the availability of extended family support. Their socio-economic conditions are characterised by dependence on agriculture and wage labour, low income levels, marginal or no landholdings, and poor housing conditions.

Father-only migration is the most prevalent migration pattern, followed by households where both parents have migrated. Migration is largely medium- to long-term in nature, resulting in prolonged parental absence, and is dominated by inter-state movement. Children in migrant households experience varied caregiving arrangements, with most residing with mothers, followed by grandparents or other relatives.

While a majority of children remain enrolled in school, irregular enrolment and attendance are common. Inferential results indicate a significant association between caregiving arrangements and both school enrolment and attendance, with children living with mothers exhibiting better outcomes. Dropout rates rise significantly with longer migration duration, and multivariate analysis confirms that long-term and inter-state migration, non-parental caregiving, low household income, and lower parental education substantially increase dropout risks. Academic performance is also adversely affected, particularly among children from households where both parents have migrated.

With respect to schooling, the findings show that although a majority of children from migrant households are enrolled in school, a notable proportion experience irregular enrolment. Inferential analysis confirms a statistically significant association between living arrangements and school enrolment status. School attendance patterns also vary significantly by care giving arrangement, with children

living with mothers showing higher levels of regular attendance compared to those living with grandparents or fathers.

Policy Implications

The empirical findings indicate that while parental migration contributes to household income security, it poses significant educational risks for children in Balasore district, particularly in cases of long-term and inter-state migration. These findings call for targeted, migration-sensitive policy interventions.

Strengthening care and support mechanisms for left-behind children is essential. Local governments and Panchayati Raj Institutions should systematically identify migrant households and monitor children's educational participation, with special attention to those living with grandparents or other relatives. Schools must play a central role by strengthening monitoring of enrolment, attendance, and learning outcomes through early warning systems. Teachers and school leaders should be sensitised to the challenges faced by left-behind children and provide academic support, counselling, and regular communication with caregivers.

Targeted educational interventions such as remedial teaching, bridge courses, and after-school support are crucial to addressing learning gaps arising from irregular attendance and limited parental supervision. Expanding social protection measures, including scholarships, education-linked financial assistance, and portability of welfare benefits, can help reduce economic pressures that contribute to school dropout.

Sustained engagement of migrant parents in their children's education should be promoted through affordable digital communication, school-parent interaction, and parental counselling services. Finally, convergence among migration, education, and child welfare policies, along with migration-sensitive planning at the block and Gram Panchayat levels, can enable coordinated identification and support of at-risk children, strengthening community ownership of educational outcomes.

Conclusion

This study examined the phenomenon of parental migration and its implications for children's education in Balasore district of Odisha using primary data collected across all Community Development Blocks. The analysis combined descriptive, inferential, and multivariate statistical techniques to generate robust empirical evidence on how migration related factors shape educational outcomes among left-behind children.

The findings clearly indicate that parental migration in the district is strongly rooted in structural socio-economic constraints such as low income, limited livelihood opportunities, low educational attainment, and dependence on agriculture and wage labour. Migration is predominantly undertaken by economically active adults and is increasingly characterised by medium-term and long-term absence, as well as movement to distant inter-state destinations. These patterns underline the persistence of migration as a household survival strategy rather than a temporary coping mechanism.

The study demonstrates that parental migration has significant educational consequences for children, particularly through altered care giving arrangements. Children living with mothers tend to experience relatively

better educational outcomes, while those residing with grandparents or other relatives face higher risks of irregular attendance, dropout, and poor academic performance. Inferential analyses confirm that care giving arrangements are significantly associated with school enrolment attendance, highlighting the central role of daily supervision and emotional support in sustaining educational participation.

Academic performance analysis reinforces these findings by showing that children from households where both parents have migrated perform relatively worse than those from father-only migrant households. Although the magnitude of association is moderate, the results consistently point to the adverse effects of prolonged parental absence on learning continuity and academic achievement.

Overall, the study concludes that while parental migration may offer short-term economic benefits to households, it imposes substantial educational costs on children left behind. These costs are neither uniform nor inevitable; they are mediated by socio-economic conditions, migration characteristics, and care giving arrangements. Without targeted institutional support, children from migrant households remain at heightened risk of educational exclusion and learning deficits.

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