International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2025: 7.089

Suboptimal Infant & Young Child Feeding Practices-Integrating Maternal Education and Counselling in Continuum of Care

Prerana Anjan H[1], Manjunatha R[2]

[1]Dr BS Kushwah Institute of Medical Sciences

[2]Indian Council of Medical Research National Institute of Nutrition

Abstract: ***Introduction: Globally, Faulty or Sub-optimal infant and young child feeding practices remain a primary driver of the significant burden of under-nutrition and stunted growth, prevalence of suboptimal complementary feeding remains alarmingly high across various demographic cohorts of the World. Methodology: This cross-sectional analytical framework, utilising secondary data analysis specifically examines the persistence of minimum dietary diversity failure, evaluating how individual-level socioeconomic markers contribute to this concern and importance of Maternal Education & ANC and PNC counselling in addressing this burden. Results: Nutritional inadequacies are further compounded by cultural norms and deep-seated socioeconomic disparities that impede the consistent delivery of the minimum acceptable diet. Such limited dietary variety is frequently driven by economic constraints, as many households are unable to afford diverse, nutrient-dense food options. Cultural beliefs and deeply ingrained dietary taboos often impede the early introduction of diverse complementary foods, necessitating community-based counselling that respects local traditions while promoting scientifically sound feeding standards. Integrating Maternal Education and counselling within routine antenatal and postnatal care visits ensures that mothers receive timely, evidence-based guidance that can effectively navigate these cultural barriers. Conclusions: Integrating maternal education with infant and young child feeding counselling throughout the antenatal and postnatal continuum is vital to counteract the double burden of malnutrition. Systematic efforts must be directed towards replacing pervasive harmful habits-such as the administration of prelacteal feeds and the premature use of bottle-feeding—with standardized, age-appropriate complementary feeding protocols.***

Keywords: Child feeding practices, Maternal Education, Counselling, Complementary foods, and Malnutrion.

1. Introduction

Globally, Faulty or Sub-optimal infant and young child feeding practices remain a primary driver of the significant burden of under-nutrition and stunted growth (1,2). Despite various efforts, data from the published literature indicates that significant proportion of children are not receiving recommended dietary standards, particularly regarding the timely introduction of nutrient-dense solid foods (3), resulting in undernutrition and anaemia in infancy and early childhood. Systematic reviews highlight that, despite adherence to WHO guidelines, prevalence of suboptimal complementary feeding remains alarmingly high across various demographic cohorts of the World (4,5). Delay in initiation of necessary combination of solid or semi-solid foods alongside breast milk, contributes to persistent stunting and wasting particularly in children under three years of age (6). Furthermore, such deficits in dietary diversity and meal frequency exacerbate growth faltering, which frequently manifests between 3 and 24 months of age (7). These nutritional inadequacies are further compounded by cultural norms and deep-seated socioeconomic disparities that impede the consistent delivery of the minimum acceptable diet (8,9). In these vulnerable populations, the reliance on low-energy, nutrient-poor staples often leaves infants susceptible to severe micronutrient deficiencies and recurrent infections, which ultimately elevate the burden of childhood anaemia and stunting (10,11). Evidence suggests that the most critical window for these adverse developmental outcomes occurs between 3 and 15 months, where poor adherence to standardized breastfeeding and complementary feeding protocols exacerbates long-term growth retardation. Beyond these systemic gaps, prevailing myths and taboos surrounding childhood nutrition continue to hinder optimal dietary intake, while the heavy reliance on cereal-based foods—often lacking in adequate nuts, seeds, and animal-sourced proteins—worsens these developmental outcomes (12). Such limited dietary variety is frequently driven by economic constraints, as many households are unable to afford diverse, nutrient-dense food options (13). Failure to meet minimum dietary diversity standards, directly correlates with the high prevalence of wasting and stunting (14,15). Consequently, the insufficiency of iron-rich or iron-fortified food consumption during this developmental phase exacerbates these risks, as inadequate nutrient intake during the first two years of life can result in irreversible damage to both physical growth and cognitive development (16,17). To mitigate these long-term developmental impairments, public health initiatives in Countries must prioritize community-based education that promotes the inclusion of local, affordable, and nutrient-rich food options while simultaneously addressing the gender-based preferential feeding practices that persist in many rural households (18). Furthermore, empirical data indicates that daily complementary feeding often fails to reach even 1/3rd of the Recommended Dietary Allowance for essential micronutrients, particularly calcium, iron, and zinc (19). Addressing this crisis requires robust, context-specific interventions that integrate caregiver education with improved access to fortified supplements (20). Beyond supplementation, continuous advocacy through well-baby clinics and immunization centres is essential, as the mere distribution of printed materials remains largely ineffective without dedicated, trained personnel to provide personalized counselling.

2. Methodology

This study employs a cross-sectional analytical framework, utilizing secondary data from the most recent published studies. This analysis specifically examines the persistence of minimum dietary diversity failure, evaluating how individual-level socioeconomic markers contribute to the observed stagnation in childhood nutritional indicators, and importance of Maternal Education and timely counselling (21, 22). This assessment is particularly critical because infants who do not meet these minimum dietary diversity standards are significantly less likely to consume essential nutrients appropriate for their age.

3. Results

The data reveal that targeted nutritional counselling provided by Health workers significantly improves adherence to Infant and Young Child Feeding guidelines, fostering a higher uptake of diversified complementary foods among rural populations (23). Moreover, Mothers who participate in practical cooking demonstrations exhibit a markedly higher probability of achieving the recommended minimum acceptable diet for their children compared to those who rely solely on verbal advice (24). Furthermore, the research underscores that children who fail to meet the minimum dietary diversity threshold exhibit a pronounced avoidance of flesh foods and nutrient-dense vitamin A-rich produce, further widening the micronutrient gap (25). This trend is particularly concerning given that large proportion of children aged 6 to 23 months currently suffer from anaemia Globally, a condition directly linked to these inadequate and monotonous dietary patterns (26) predominantly prevailing in low and middle income Countries. These findings highlight that beyond mere food availability, the frequency of postnatal health consultations and active participation in growth monitoring programs remain primary predictors for overcoming suboptimal dietary diversity (27). Additionally, maternal exposure to mass media serves as a vital conduit for disseminating nutritional knowledge, effectively reducing the likelihood of inadequate dietary diversity among infants (28,29). Moreover, multilevel analysis confirms that higher maternal educational attainment and improved household wealth status are positively correlated with the adoption of these recommended feeding practices (30,31). However, it is critical to acknowledge that socioeconomic status and maternal knowledge alone may not ensure nutritional adequacy, as the decision to diversify a child's intake is fundamentally constrained by the local availability and affordability of nutrient-dense options (32). Even within the wealthiest household quintiles, a significant majority of mothers fail to provide the WHO-recommended minimum diverse diet, indicating that systemic educational and behavioural barriers transcend simple economic capacity (33). This observation suggests that individual autonomy in food selection, rather than household resource availability, plays a pivotal role in maintaining consistent dietary standards for children (34). Consequently, nutritional interventions must transition from purely economic support models to multifaceted programs that emphasize the practical preparation of varied, nutrient-dense meals (35). Such multifaceted approaches are essential for scaling up public awareness, as targeted interventions have been shown to significantly enhance dietary practices for children in the 6–23 month age group (36). Furthermore, cultural beliefs and deeply ingrained dietary taboos often impede the early introduction of diverse complementary foods, necessitating community-based counselling that respects local traditions while promoting scientifically sound feeding standards (37). Integrating such counselling within routine antenatal and postnatal care visits ensures that mothers receive timely, evidence-based guidance that can effectively navigate these cultural barriers (38). Beyond these individual-level interventions, the persistence of suboptimal feeding suggests that Health and Nutrition programs must prioritize reinforcing the direct correlation between maternal literacy and the sustained adoption of diversified food groups (39,40). Bridging this educational gap requires robust poverty reduction strategies by Governments, that simultaneously improve household access to nutrient-dense foods while incentivizing homestead-level agricultural diversification (41,42). Indeed, the consistent application of these strategies is frequently hindered by structural economic constraints, which often relegate low-income families to cereal-centric diets rather than diverse, nutrient-rich food groups. These economic barriers are further compounded by time poverty and a lack of access to safe water and sanitation, which prevent mothers from translating nutritional awareness into consistent, healthy behaviours (43). To mitigate these systemic challenges, policy interventions must adopt a Social and Behaviour Change Communication framework that integrates nutritional education with the provision of nutrient-dense food options (44,45).

4. Discussion

The findings emphasize that the prevalence of inadequate dietary diversity is driven by a complex interplay of socioeconomic deprivation and deep-seated cultural dietary patterns (46,47). Addressing these challenges requires a shift toward programs that optimize food availability at a lower cost, thereby reducing the geographic and economic disparities in nutritional intake (48). Furthermore, augmenting these initiatives with proactive community outreach models—which extend beyond traditional health centre-based delivery systems—is essential for improving complementary feeding practices among the most vulnerable demographics (49). Specifically, strengthening income streams and reducing market distances remain critical to improving the physical and economic accessibility of diversified food options (50). Beyond these structural shifts, Countries must also prioritize the mitigation of regional and social inequalities, as current data indicates that children in rural areas and those from marginalized households experience significantly lower dietary diversity (22,51). Consequently, policymakers should transition toward universal targeting strategies, as the high prevalence of inadequate intake suggests that nutritional deficits are not confined to the lowest socioeconomic strata (52). Addressing the caste-based dietary gap, therefore, necessitates equity-focused, multidimensional strategies that combine broad economic development with targeted interventions to dismantle the structural barriers of social exclusion and differential market access (53). Furthermore, establishing robust multi-sectoral coalitions is essential to ensure that behavioural change initiatives are supported by the

development of validated psychometric tools for more accurate monitoring of infant feeding outcomes (54). In this context, future research must prioritize evaluating the longitudinal impact of these programs across diverse populations, including migrant, tribal, and urban slum settings, to identify specific contextual barriers to nutritional adequacy (55). Expanding the scope of these evaluations to include children in affluent families is particularly vital, as recent investigations suggest that poor dietary intake persists across diverse economic contexts and necessitates a critical re-evaluation of current strategies (56). Moreover, integrating maternal education with infant and young child feeding counselling throughout the antenatal and postnatal continuum is vital to counteract the double burden of malnutrition (57).

5. Conclusion

Despite the expansion of nutrition programs, current service delivery mechanisms remain insufficient in addressing the complexities of complementary feeding in many regions. Implementing community-based programs through self-help groups prioritizing maternal education & antenatal and postnatal counselling has demonstrated significant potential in improving these patterns by reshaping behavioural practices. Furthermore, systematic efforts must be directed towards replacing pervasive harmful habits- such as the administration of prelacteal feeds and the premature use of bottle-feeding—with standardized, age-appropriate complementary feeding protocols.

References

[1] Menon P, Bamezai A, Subandoro AW, Ayoya MA, Aguayo VM. Age-appropriate infant and young child feeding practices are associated with child nutrition in India: insights from nationally representative data. Maternal and Child Nutrition. 2013 Apr 5 [cited 2025 Sep];11(1):73. Available from: https://doi.org/10.1111/mcn.12036

[2] Jones G, Steketee RW, Black RA, Bhutta ZA, Morris SS. How many child deaths can we prevent this year? The Lancet 2003 Jul 1 [cited 2026 Feb];362(9377):65. Available from: https://doi.org/10.1016/s0140-6736(03)13811-1

[3] Saha J, Chouhan P, Malik NI, Ghosh T, Das P, Shahid M, et al. Effects of Dietary Diversity on Growth Outcomes of Children Aged 6 to 23 Months in India: Evidence from National Family and Health Survey. Nutrients 2022 Dec 29 [cited 2026 Mar];15(1):159. Available from: https://doi.org/10.3390/nu15010159

[4] Dhami MV, Ogbo FA, Akombi-Inyang B, Torome R, Agho K. Understanding the Enablers and Barriers to Appropriate Infants and Young Child Feeding Practices in India: A Systematic Review. Nutrients 2021 Mar 2 [cited 2026 Jan];13(3):825. Available from: https://doi.org/10.3390/nu13030825

[5] Manikam L, Prasad A, Dharmaratnam A, Moen C, Robinson A, Light A, et al. Systematic review of infant and young child complementary feeding practices in South Asian families: the India perspective. Public Health Nutrition 2017 Nov 23 [cited 2026 Jan];21(4):637. Available from: https://doi.org/10.1017/s136898001700297x

[6] Monika R, Shaik NR, Rahman U. A STUDY ON COMPLEMENTARY FEEDING PRACTICES AMONG CHILDREN AGED 6 MONTHS TO 23 MONTHS – A CROSS SECTIONAL OBSERVATIONAL STUDY. PARIPEX-INDIAN JOURNAL OF RESEARCH 2022 Oct 15 [cited 2025 Aug];26. Available from: https://doi.org/10.36106/paripex/1005712

[7] Chhabra P, Gupta A, Thakur N. Complementary feeding practices and nutritional status of children (6–23 months) in an urban resettlement colony of East Delhi. Indian Journal of Community Medicine 2021 Jan 1 [cited 2026 Jan];46(3):528. Available from: https://doi.org/10.4103/ijcm.ijcm_1046_20

[8] Sharma M, Gaidhane A, Choudhari SG. A Review of Infant and Young Child Feeding Practices and Their Challenges in India. Cureus 2024 Aug 9 [cited 2026 Mar];16(8). Available from: https://doi.org/10.7759/cureus.66499

[9] International Journal For Multidisciplinary Research. International Journal For Multidisciplinary Research 2022 May 2 [cited 2026 Feb]; Available from: https://doi.org/10.36948/ijfmr

[10] Lakhanpaul M, Roy S, Benton L, Lall M, Khanna R, Vijay VK, et al. Why India is struggling to feed their young children? A qualitative analysis for tribal communities. BMJ Open 2022 Jul 1 [cited 2025 Dec];12(7). Available from: https://doi.org/10.1136/bmjopen-2021-051558

[11] Houghton LA, McIntosh D, Trilok-Kumar G, Haszard JJ, Gibson RS. Suboptimal feeding and caring practices among young Indian children ages 12 to 24 mo living in the slums of New Delhi. Nutrition 2019 Jul 16 [cited 2026 Jan];69:110553. Available from: https://doi.org/10.1016/j.nut.2019.110553

[12] Women's Nutrition Factsheet - India. 2023 Sep 1 [cited 2025 Sep]; Available from: https://doi.org/10.52439/lwnb2199

[13] Chauhan DN, Chauhan NT, Patni MA, Tollawala P, Kosambiya JK. Infant and Young Child Feeding practices and risk factors of SAM among beneficiaries of Nutrition Rehabilitation Centre – a cohort study. Indian Journal of Community Health 2024 Jun 30 [cited 2025 Sep];36(3):419. Available from: https://doi.org/10.47203/ijch.2024.v36i03.014

[14] Khan SS, Patel AA, Puranik A, Kuhite P, Pusdekar Y, Dibley MJ, et al. Use of Mobile Health in Infant and Young Child Nutrition: A Formative Study in Rural Maharashtra. The Qualitative Report 2020 Jun 21 [cited 2025 Sep]; Available from: https://doi.org/10.46743/2160-3715/2020.4174

[15] Petríková I. The role of complementary feeding in India's high child malnutrition rates: findings from a comprehensive analysis of NFHS IV (2015–2016) data. Food Security 2021 Sep 28 [cited 2025 Oct];14(1):39. Available from: https://doi.org/10.1007/s12571-021-01202-7

[16] Kassie GA, Gebrekidan AY, Enaro EY, Asgedom YS. Minimum acceptable dietary intake among children aged 6–23 months in Ethiopia: A systematic review and meta-analysis. PLoS ONE Public Library of Science; 2023 Jun 29 [cited 2025 Oct];18(6). Available from: https://doi.org/10.1371/journal.pone.0287247

[17] Mekonen EG, Zegeye AF, Workneh BS. Complementary feeding practices and associated factors among mothers of children aged 6 to 23 months in Sub-saharan African countries: a multilevel analysis of the recent demographic and health survey. BMC Public Health 2024 Jan 8 [cited 2025 Oct];24(1). Available from: https://doi.org/10.1186/s12889-023-17629-w

[18] Ibrahim A, Moloro AH, Boshe DD, Dawed YA. Minimum recommended micronutrient intake status and associated factors among pastoralist children aged 6–23 months in Aysaita district, Afar Region, Ethiopia, 2024: A community based cross-sectional study. PLoS ONE 2025 Oct 28 [cited 2025 Oct];20(10). Available from: https://doi.org/10.1371/journal.pone.0334736

[19] Khadse R, Shaikh R. Examining regional disparities in child malnutrition: insights from Maharashtra India. Journal of Health Population and Nutrition 2025 Aug 7 [cited 2025 Oct];44(1). Available from: https://doi.org/10.1186/s41043-025-00910-6

[20] Sharn A, Oliveros E, Lai S, Sánchez C, Guno MJVR, Montenegro CR. Multi-faceted nutritional interventions are imperative to reduction of stunting among children in low- and middle-income countries. Frontiers in Nutrition. Frontiers Media; 2025 Sep 9 [cited 2025 Oct];12. Available from: https://doi.org/10.3389/fnut.2025.1479850

[21] Preethi V, Hemalatha VT, Arlappa N, M BT, Jaleel A. Trends and predictors of severe and moderate anaemia among children aged 6-59 months in India: An analysis of three rounds of National Family Health Survey (NFHS) data. Research Square (Research Square) 2024 Apr 5 [cited 2025 Oct]; Available from: https://doi.org/10.21203/rs.3.rs-4190982/v1

[22] Bhati DK, Tripathy A, Mishra PS, Srivastava S. Contribution of socio-economic and demographic factors to the trend of adequate dietary diversity intake among children (6–23 months): evidence from a cross-sectional survey in India. BMC Nutrition 2022 Dec 27 [cited 2025 Oct];8(1). Available from: https://doi.org/10.1186/s40795-022-00655-z

[23] Malhotra N. Inadequate feeding of infant and young children in India: lack of nutritional information or food affordability? Public Health Nutrition 2012 Sep 3 [cited 2026 Jan];16(10):1723. Available from: https://doi.org/10.1017/s1368980012004065

[24] Darebo T, Dereje R, Fufa DA. Minimum Dietary Diversity and Its Associated Factors Among Children of 6–23 Months in Rural, Ethiopia, 2023. Research Square (Research Square) 2024 Aug 11 [cited 2025 Sep]; Available from: https://doi.org/10.21203/rs.3.rs-4716612/v1

[25] Jain A, Wang W, James KS, Sarwal R, Kim R, Subramanian SV. Small Area Variations in Dietary Diversity Among Children in India: A Multilevel Analysis of 6–23-Month-Old Children. Frontiers in Nutrition 2022 Feb 16 [cited 2025 Nov];8:791509. Available from: https://doi.org/10.3389/fnut.2021.791509

[26] Darebo T, Dereje R, Fufa DA. Minimum dietary diversity and its associated factors among children of 6–23 months in rural Ethiopia 2023. Scientific Reports 2025 Mar 20 [cited 2026 Jan];15(1):9709. Available from: https://doi.org/10.1038/s41598-025-87320-0

[27] Belew AK, Ali BM, Zegeye A, Dachew BA. Dietary diversity and meal frequency among infant and young children: a community based study. The Italian Journal of Pediatrics/Italian journal of pediatrics 2017 Aug 15 [cited 2025 Aug];43(1). Available from: https://doi.org/10.1186/s13052-017-0384-6

[28] Kitaw TA, Abate BB, Tilahun BD, Haile RN. Geospatial pattern of level of minimum acceptable diet and its determinants among children aged 6–23 months in Ethiopia. Spatial and multiscale geographically weighted regression analysis. Frontiers in Public Health 2024 Jun 19 [cited 2025 Aug];12. Available from: https://doi.org/10.3389/fpubh.2024.1348755

[29] Singh A, Rahut DB, Sonobe T. Exploring Spatial variation and determinants of the Minimum Dietary Diversity among Children in Cambodia: A Multilevel Analysis Using Four Rounds of Demographic Health Survey (2005-2022). Research Square (Research Square) 2023 Dec 11 [cited 2025 Jun]; Available from: https://doi.org/10.21203/rs.3.rs-3671987/v1

[30] Khan JR, Awan N, Sheikh MdT. A Multilevel and Spatial Analysis of the Infant and Young Child Feeding Practices and Associated Factors among the Under-2 Aged Children in Bangladesh. Child Care in Practice 2019 Dec 3 [cited 2025 Nov];28(2):178. Available from: https://doi.org/10.1080/13575279.2019.1680528

[31] Belay DG, Aragaw FM, Teklu RE, Fetene SM, Negash WD, Asmamaw DB, et al. Determinants of Inadequate Minimum Dietary Diversity Intake Among Children Aged 6–23 Months in Sub-Saharan Africa: Pooled Prevalence and Multilevel Analysis of Demographic and Health Survey in 33 Sub-Saharan African Countries. Frontiers in Nutrition 2022 Jul 1 [cited 2026 Jan];9:894552. Available from: https://doi.org/10.3389/fnut.2022.894552

[32] Das A, Mahapatra S, Mala GS, Chaudhuri I, Mahapatra T. Association of Frontline Worker-Provided Services with Change in Block-Level Complementary Feeding Indicators: An Ecological Analysis from Bihar, India. PLoS ONE 2016 Nov 10 [cited 2025 Sep];11(11). Available from: https://doi.org/10.1371/journal.pone.0166511

[33] Petríková I. The role of complementary feeding in India's enigma of high child malnutrition rates: Findings from a comprehensive national study. Research Square (Research Square) 2020 Sep 16 [cited 2025 Oct]; Available from: https://doi.org/10.21203/rs.3.rs-78314/v1

[34] Bezie MM, Asebe HA, Asnake AA, Fente BM, Asmare ZA, Gebrehana AK, et al. Factors associated with concordance of mother-child (6–23 months) dietary diversity in Sub-Saharan Africa. PLoS ONE 2025 Feb 25 [cited 2026 Feb];20(2). Available from: https://doi.org/10.1371/journal.pone.0318493

[35] Markos M, Samuel B. Minimum acceptable diet and its associated factors among 6–23 months old children enrolled in Outpatient therapeutic program in the Tulla District, Sidama region, Ethiopia : A community- based cross-sectional study. Research Square (Research Square) 2023 Dec 28 [cited 2025 Jun]; Available from: https://doi.org/10.21203/rs.3.rs-3772772/v1

[36] Ativor PS, Salu S. Optimizing minimum dietary diversity: examining appropriate complementary feeding practices and influencing factors among children aged 6–23 months in Ghana; a cross-sectional study. BMC Public Health 2025 Feb 11 [cited 2026 Feb];25(1):559. Available from: https://doi.org/10.1186/s12889-025-21681-z

[37] Engidaw MT, Gebremariam AD, Tiruneh SA, Tesfa D, Fentaw Y, Kefale B, et al. Micronutrient intake status and associated factors in children aged 6–23 months in sub-Saharan Africa. Scientific Reports 2023 Jun 22 [cited 2025 Oct];13(1). Available from: https://doi.org/10.1038/s41598-023-36497-3

[38] Ativor PS, Salu S. Minimum dietary diversity and associated factors among children aged 6-23 months in Ghana: a cross-sectional study. Research Square (Research Square) 2023 Aug 22 [cited 2025 Oct]; Available from: https://doi.org/10.21203/rs.3.rs-3255634/v1

[39] Tefera TB, Tegegne M, Bedada S, Amare A. Optimal Dietary Diversity and its Associated Factors among Children Aged 6–23 Months in Bale Zone, Southeast Ethiopia: A Community Based Cross-Sectional Study. Journal of Nutritional Health & Food Science 2020 Feb 26 [cited 2025 Oct];8(1):1. Available from: https://doi.org/10.15226/jnhfs.2020.001169

[40] Damtie SB, Tefera TB, Haile MT. Dietary Diversity Practice and Associated Factors among Children Aged 6–23 Months in Robe Town, Bale Zone, Ethiopia. Journal of Nutrition and Metabolism 2020 Jul 1 [cited 2026 Feb];2020:1. Available from: https://doi.org/10.1155/2020/9190458

[41] Raru TB, Merga BT, Mulatu G, Deressa A, Birhanu A, Negash B, et al. Minimum Dietary Diversity Among Children Aged 6–59 Months in East Africa Countries: A Multilevel Analysis. International Journal of Public Health 2023 Jun 1 [cited 2026 Feb];68:1605807. Available from: https://doi.org/10.3389/ijph.2023.1605807

[42] Tariku A, Alemu K, Schellenberg J, Marchant T, Berhanu D, Lemma S, et al. Social equity in Ethiopian infants' breastfeeding and complementary feeding practices: a birth cohort study. BMC Pediatrics 2025 Oct 9 [cited 2025 Oct];25(1). Available from: https://doi.org/10.1186/s12887-025-06105-6

[43] Faye SL, Sow GHC. Reclaiming voices, rethinking change: a decolonial and knowledge-ecological analysis of SBCC nutrition interventions in Senegal. Frontiers in Nutrition 2025 Aug 13 [cited 2025 Oct];12. Available from: https://doi.org/10.3389/fnut.2025.1609237

[44] Sanghvi T, Remancus S, Frongillo EA, Pérez-Escamilla R, Lutter C, Rana P, et al. Evidence-Based Lessons From Two Decades of Implementation Research on Complementary Feeding Programmes. Maternal and Child Nutrition 2025 Feb 28 [cited 2025 Dec];21(3). Available from: https://doi.org/10.1111/mcn.13811

[45] Turk T, Paul RR, Safdar NF, Shah N, Alam SM, Choudhury SR, et al. Integrating co-design into formative research for a SBCC entry-point platform for nutrition-sensitive social protection programs in low - and middle-income country settings. PLoS ONE 2025 Sep 15 [cited 2025 Sep];20(9). Available from: https://doi.org/10.1371/journal.pone.0310288

[46] Kassaw AT, Mekonnen TC, Amsalu ET, Abeje ET, Daba C, Tsega Y, et al. Mean nutrient adequacy ratio and associated factors of complementary foods among children aged 6–23 months in Northeast Ethiopia. Frontiers in Pediatrics 2025 Mar 7 [cited 2026 Jan];13:1446431. Available from: https://doi.org/10.3389/fped.2025.1446431

[47] Acharya A, Pradhan MR, Das AK. Determinants of minimum acceptable diet feeding among children aged 6–23 months in Odisha, India. Public Health Nutrition 2021 May 26 [cited 2025 Sep];24(12):3834. Available from: https://doi.org/10.1017/s1368980021002172

[48] Vijay J, Patel KK. Recommendations to scale up dietary diversity data at household and individual level in India. Diabetes & Metabolic Syndrome Clinical Research & Reviews 2021 Oct 9 [cited 2026 Jan];15(6):102310. Available from: https://doi.org/10.1016/j.dsx.2021.102310

[49] Mondal S, Joe W, Akhauri S, Thakur P, Kumar A, Pradhan N, et al. Association of BCC Module Roll-Out in SHG meetings with changes in complementary feeding and dietary diversity among children (6–23 months)? Evidence from JEEViKA in Rural Bihar, India. PLoS ONE 2023 Jan 5 [cited 2025 Oct];18(1). Available from: https://doi.org/10.1371/journal.pone.0279724

[50] Stiller CK, Golembiewski SKE, Golembiewski M, Mondal S, Biesalski HK, Scherbaum V. Maternal nutritional status and child feeding practices: a retrospective study in Santal communities, Birbhum District, West Bengal, India. International Breastfeeding Journal 2020 May 29 [cited 2025 Aug];15(1). Available from: https://doi.org/10.1186/s13006-020-00262-3

[51] Rahman MdA, Kundu S, Rashid HO, Tohan MM, Islam MdA. Socio-economic inequalities in and factors associated with minimum dietary diversity among children aged 6–23 months in South Asia: a decomposition analysis. BMJ Open 2023 Dec 1 [cited 2026 Jan];13(12). Available from: https://doi.org/10.1136/bmjopen-2023-072775

[52] Agrawal S, Kim R, Gausman J, Sharma S, Sankar R, Joe W, et al. Socio-economic patterning of food consumption and dietary diversity among Indian children: evidence from NFHS-4. European Journal of Clinical Nutrition 2019 Feb 26 [cited 2026 Feb];73(10):1361. Available from: https://doi.org/10.1038/s41430-019-0406-0

[53] Sethy M, Mahapatro SR. Structural inequalities and dietary diversity in Odisha: evidence from NSSO 68th and 79th rounds. Scientific Reports 2025 Dec 26 [cited 2025 Dec]; Available from: https://doi.org/10.1038/s41598-025-32743-y

[54] Nair MK, Augustine LF, Konapur A. Food-Based Interventions to Modify Diet Quality and Diversity to Address Multiple Micronutrient Deficiency. Frontiers in Public Health Frontiers Media; 2016 Jan 5 [cited 2025 Oct];3. Available from: https://doi.org/10.3389/fpubh.2015.00277

[55] George N, George M, Dharmaraj RB, Rangasamy MC, Gandhi K, Mahadeavan L, et al. Caregivers' perceptions of feeding practices and diet diversity among children aged 12–59 months in a rural district of South India: an

analytical cross-sectional study. BMJ Open 2024 Oct 1 [cited 2026 Feb];14(10). Available from: https://doi.org/10.1136/bmjopen-2023-080758

[56] Khan N, Mozumdar A, Kaur S. Dietary Adequacy Among Young Children in India: Improvement or Stagnation? An Investigation From the National Family Health Survey. Food and Nutrition Bulletin 2019 Jul 9 [cited 2025 Nov];40(4):471. Available from: https://doi.org/10.1177/0379572119859212

[57] Jeyakumar A, Babar P, Menon P, Nair RR, Jungari S, Medhekar A, et al. Determinants of complementary feeding practices among children aged 6–24 months in urban slums of Pune, Maharashtra, in India. Journal of Health Population and Nutrition 2023 Jan 19 [cited 2025 Oct];42(1). Available from: https://doi.org/10.1186/s41043-022-00342-6