

## Abstract

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# Impact of community- focussed interventions, policies and programmes on growth and anaemia in children under five in low- and middle-income countries: a systematic review of systematic reviews

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Child undernutrition is a major global health concern, with children in low- and middle-income countries (LMIC) at the highest risk<sup>(1,2)</sup>. Several LMICs have implemented various interventions, policies, or programmes on a local, regional, or national level to address this issue. Systematic reviews have synthesised the effectiveness of those initiatives, with some focusing on a single specific outcome, such as child growth, while others examine multiple factors and outcomes in multiple settings<sup>(3)</sup>. However, very little is known about the effectiveness of community-focussed interventions, policies, or programmes, on child growth and anaemia together (key indicators of child undernutrition) in LMICs. This systematic review of systematic reviews explored available evidence on the impact of community-focused interventions, policies and programmes on child growth and/or anaemia in LMIC.

Six electronic databases (MEDLINE, Embase, CINAHL, Scopus, Cochrane, and Web of Science) were searched from 2000 to 2024 April using the standard search strategy based on the PICO (population, intervention, comparison, outcome) method. The study protocol was registered in Prospero (ID CRD42024523666) before commencing the study. Included articles were reviewed by four authors. The methodological quality of identified reviews was assessed using the AMSTAR-2 tool.

In total, 63 systematic reviews of variable quality (critically low-high) assessing the impact of the interventions, policies, and programmes on child growth and/or anaemia in under-5 children were identified. Of the 20 studies reporting on both child growth and anaemia, community-focussed interventions with positive effects were micronutrient supplementation, lipid-based nutrient supplements, and cash transfer programme (n=3). Among 60 studies reporting on stunting, wasting, underweight, and growth outcome, a combination of nutrition-specific (n = 1) and nutrition-sensitive interventions (n =5) such as biofortification, home food production, training in home gardening, fisheries, and plantation (n =2), cash transfers, lipid-based nutrient supplementation, nutrition education, and improving defecation practices proved highly effective. The food transfer intervention (n=1) when combined with cash, had a positive effect on stunting. Interventions that contributed to reduction of anaemia (n=13) were cooking in an iron pot, fortification of food with iron, and multi-micronutrient supplementation. Programmes such as *Mexico Oportunidades* and *Progres*a effectively improved stunting and/or anaemia status. Furthermore, multisectoral policies focusing on scaling up community-based nutrition programmes were effective in improving child growth.

This study identified several community-focussed interventions that effectively improved child growth and/or reduced anaemia. Among these, two interventions and one programme had the greatest positive impact on both outcomes. These findings can guide the design of interventions, policies, and programmes to address multiple forms of child undernutrition in low- and middle-income countries.

## References

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