## Nurture Early for Optimal Nutrition: A Community-Based Randomized Controlled Trial to Improve Infant Feeding and Care Practices Using Participatory Learning and Actions Approach

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Abstract: Background: The first 1000 days of life are a critical window and can result in adverse health consequences due to inadequate nutrition. South-Asian (SA) communities face significant health disparities, particularly in maternal and child health. Community-based interventions, often employing Participatory-Learning and Action (PLA) approaches, have effectively addressed health inequalities in lower-income nations. The aim of this study was to assess the feasibility of implementing a PLA intervention to improve infant feeding and care practices in SA communities living in London. Methods: Comprehensive analyses were conducted to assess the feasibility/fidelity of this pilot randomized controlled trial. Summary statistics were computed to compare key metrics, including participant consent rates, attendance, retention, intervention support, and perceived effectiveness, against predefined progression rules guiding toward a definitive trial. Secondary outcomes were analyzed, drawing insights from multiple sources, such as The Children's-Eating-Behaviour Questionnaire (CEBQ), Parental-Feeding-Style Questionnaires (PFSQ), Food-diary, and the Equality-Impact-Assessment (EIA) tool. A video analysis of children's mealtime behavior trends was conducted. Feedback interviews were collected from study participants. Results: Processoutcome measures met predefined progression rules for a definitive trial, which deemed the intervention as feasible and acceptable. The secondary outcomes analysis revealed no significant changes in children's BMI z-scores. This could be attributed to the abbreviated follow-up period of 6 months, reduced from 12 months, due to COVID-19-related delays. CEBQ analysis showed increased food responsiveness, along with decreased emotional over/undereating. A similar trend was observed in PFSQ. The EIA tool found no potential discrimination areas, and video analysis revealed a decrease in force-feeding practices. Participant feedback revealed improved awareness and knowledge sharing. Conclusion: This study demonstrates that a co-adapted PLA intervention is feasible and well-received in optimizing infant-care practices among South-Asian community members in a high-income country. These findings highlight the potential of community-based interventions to enhance health outcomes, promoting health equity.

**Keywords:** child health, childhood obesity, community-based, infant nutrition

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