# ABSTRACT

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Poor infant and young child feeding practices as well as inadequate attention and Caregiving, are among the underlying causes of the high prevalence of childhood malnutrition in India (almost 50%). Research is inadequate in this region with regard to perceptions and practices related to various Caregiving behaviours including breastfeeding (BF), complementary feeding (CF), food safety, active feeding and hygiene care as well resources available for Caregiving (mother's own nutritional and health status, family support, family income and other socio-economic resources). Further, little is known regarding the potential of women's groups especially savings groups (*bachat mandals*) as change agents for improving house hold level child feeding and Care practices. Hence the present research- in the form of two interlinked studies-focused on children below 3 years of age and had following broad objectives:

- Study I: To investigate various dimensions of Infant and Young Child Feeding (IYCF) and Care practices and resources available for Care in households in rural Vadodara.
- Study II: To improve IYCF and Care practices in rural households through capacity building of local community groups i.e. *Bachat Mandals* (BM) which are run by a local Non Governmental Organization (NGO).

**Methodology:** In **Study I**, among all available 106 children (3-36 months) from 5 randomly selected villages the following data were collected using standard procedures and protocols: perceptions and practices of mothers on IYCF and Care; socio-economic resources for Care; grandmothers' support and their own perceptions (in families where grandmother was available; n=31); height, weight, morbidity profile of the child; height, weight and BMI of mothers; hygiene of mother, child and environment; food and nutrient intake on random sub sample of 53 children; direct observations of episodes of breastfeeding (n=40) and complementary feeding (n=13) during field visits. In **Study II**, a nutrition education communication (NEC) intervention was carried out in 2 purposively selected villages from the five above: in NEC-BMM village, nine BM members were given capacity building training on IYCF and Care, communication skills and simple structured documentation of home visits.

Trained BM members carried out weekly home visits over 3 months to 32 neighbouring women with children 6-36 months and these were compared with home visits carried out through direct contact by investigator with 30 women in the second village (NEC-DIR). One randomly selected village served as the control (n=30). ***Process evaluation:*** Strengths–weakness of BM members in carrying out home visits were assessed through: on site observation in the field, review of structured checklist filled by BM members, feedback meeting with BM members and responses from mothers visited. ***Impact evaluation:*** Appropriate tools were used to measure mother's recall of NEC messages, change in IYCF and Care practices pre to post intervention, unstructured observations in field of complementary feeding episodes, change in-morbidity profile, food and nutrient intake and anthropometric measurements of children.

**Results:**

**Study I:** Above 50% of the mothers were not following the recommended IYCF and Care practices; that is – giving prelacteals, discarding colostrum, delaying initiation of BF, lack of exclusive BF till 6 months (due to water feeding), delaying initiation of CF, lack of active feeding (including unsafe feeding), inappropriate feeding practices during child's and mother's illness. More than 50% children experienced morbidity (fever, cold / cough and diarrhoea) in the last 15 days and most were taken to the doctor. ***Resources available to the mother for Care-giving were inadequate:*** Uneducated and malnourished mothers (BMI< 18.5 in 58%), low per capita family income and poor environmental sanitation. Decisions related to family meals-food allocations were taken by mothers (or grandmothers if present). On comparing practices in families where grandmothers were present (GMP; n=31) with families where grandmothers were absent (GMA; n=39), results indicated that grandmother's presence appears to favour some deleterious practices: feeding prelacteals, delaying the initiation of complementary foods and decreasing breastfeeding during mother's illness. Favourable practices present in significantly more GMP families were: active feeding and use of anganwadi services. Also grandmother's help enabled mother to practice more care-giving behaviours. ***Nutrient intake among children:*** It was <60% RDA for calories and <30% RDA for iron calcium, vitamin A, vitamin C.

***Nutritional status of the children:*** Prevalence of underweight (WAZ<-2 SD) was 61%, stunting (HAZ <-2 SD) was 54% and wasting (WHZ <-2 SD) was 22%.

**Study II**: The average number of home visits carried out were similar in NEC-BMM and NEC-DIR (8 vs. 7 out of 12 visits). Most BM members had filled the checklist correctly atleast for 7 of 12 visits. Some lacunae found in quality of communication during home visits in NEC-BMM were addressed through a reinforcement training. Post NEC after 3 months, a majority of the mothers in NEC-BMM and NEC-DIR villages remembered most of the messages (≥6 out of 8). ***Improvement in a majority of the IYCF and Care beliefs-practices of mothers was reported*:** Increased frequency of CF, active feeding, higher intake of fruits-vegetables, awareness about causes of malnutrition and improved hygiene in NEC-BMM and NEC-DIR. Little improvement was seen in control village. ***Child morbidity (last 15 days)*** declined from pre to post more in the intervention group (60% vs. 40%) as compared to control (60% vs. 57%); but prevalence of mild diarrhoea increased significantly among the children in intervention group. ***Mean food and nutrient intake of children*** increased significantly post intervention in both intervention villages. ***Change in nutritional status of children*:** Though significantly better increments (mean) in weight (0.9 vs. 0.5 kg) and heights (5.8 vs. 3.1 cm) were seen in the intervention villages vs. control, prevalence of underweight and wasting did not improve post intervention. However, prevalence of severe stunting decreased from pre to post intervention in the intervention villages whereas an increase was seen in control village. **Conclusions:** There is a need for improving infant and young child feeding and Care practices, in rural Vadodara and other regions of India. Role of family members (particularly grandmothers) in childcare and the benefits of including them in interventions to improve child survival, health and nutrition status need to be further researched. Despite the limitations in functioning of BM members results indicated that mobilizing such local community groups for ensuring change in IYCF practices in households is a strategy that holds the potential for success.