

First Teacher Groups– a Community–Based Early Learning Initiative, Improves Parenting Practices and Child Development in Northern Tanzania

Overview

The early childhood years lay the foundation for children’s development and the acquisition of important skills necessary for successful school transition and academic performance. Addressing adversities in childhood is critical for improving adult educational, labor market, and health behavior outcomes and thus help reduce long–term social inequalities. Despite the evidence on the benefits of promoting early childhood development, families in Tanzania have limited access to community programs that reach very young children and their parents with stimulation and early learning support. In response to this challenge, Project Concern International (PCI),¹ with funding from the United States Department of Agriculture, designed and implemented a community–based parent–focused early learning intervention called First Teacher Groups (FTGs) within an integrated school feeding program in the Mara region between 2016–2021.



First Teacher Group meeting in action

Key Findings

The primary objective of the FTG evaluation was to measure effectiveness of the FTG program on development of children 42–60 months of age and on caregiver parenting practices related to the promotion of early learning. Key findings from the evaluation include:

- FTGs significantly improved caregiver engagement with children and significantly increased number of learning materials in the home. The overall Family Care Indicators score increased from 3.2 at baseline to 7.2 at endline for intervention sites
- The FTG intervention did not reduce parents’ use of harsh child disciplinary practices. Differences across time between intervention and comparison sites were not statistically significant.
- The FTG intervention accelerated child development. The overall IDELA score significantly increased among intervention sites from 26.2% at baseline to 42.7% at endline.

¹ In 2020, PCI announced a merger with Global Communities, and the two organizations are now officially merged as of September 1, 2021. The combined entity is known as Global Communities.

Intervention Structure & Delivery Model

Using a group-based model that brings parents and young children (3–5 years of age) together over a 10-month period, the FTG initiative was designed to strengthen capacity of caregivers to provide early learning opportunities at home in preparation for the transition to formal pre-primary school. During weekly group sessions of 8–12 caregivers and their children, community volunteers recruited by PCI use a structured curriculum (lesson plans and flip charts) to deliver key early learning messages and coach caregivers on how to sing, play, and draw together as a strategy for promoting responsive play and communication at home to accelerate children's development. A significant component of the weekly sessions is learning station time, in which parents and children are given time to play together in a semi-structured setting using age-appropriate, evidence-based locally sourced play items that can be replicated at home and that support cognitive, language, socio-emotional, and motor development. Weekly home visits are conducted by the volunteers to follow up on content covered and caregiver commitments made during the group sessions, and to assess children's attainment of age-appropriate developmental milestones. Although the different lesson topics targeted different age groups, each lesson had age-appropriate messages and activities for all relevant age groups, whether younger or older children. The volunteers were therefore expected to tailor caregiver messaging and activities to the different age groups of children participating in the FTG groups based on lesson plan and flip chart guidance.

Volunteer training and supervision: Community volunteers were initially trained for three days by Education Promoters (EPs) – PCI staff and supervisors of the program – and district and District/Regional Community Development Officers (R/DCDOs) on the FTG methodology, curriculum contents, and the process of running FTG meetings. This was followed up monthly facilitator meetings focused on 4 lessons at a time. These monthly meetings were facilitated by EPs who were also responsible for the day-to-day supervision of the program. Each EP supervised a cluster of 10 volunteers. EPs worked closely with the volunteer facilitators, village governments and the community to increase buy-in and strengthen capacity of facilitators. EPs were responsible to collect data on caregiver attendance and review the volunteer facilitator report and provide feedback on areas of improvement. The R/DCDOs participated in quarterly supervision of the program to create awareness on the importance of early childhood development and the FTG intervention and to mobilizing local leaders at village and ward levels to support the intervention in their respective areas. Representatives from the Ministry of Health and Community Development visited the FTG intervention for back stopping the intervention technically and operationally.



A caregiver showing her child how to count using locally made number rods



Learning materials used with FTG curriculum

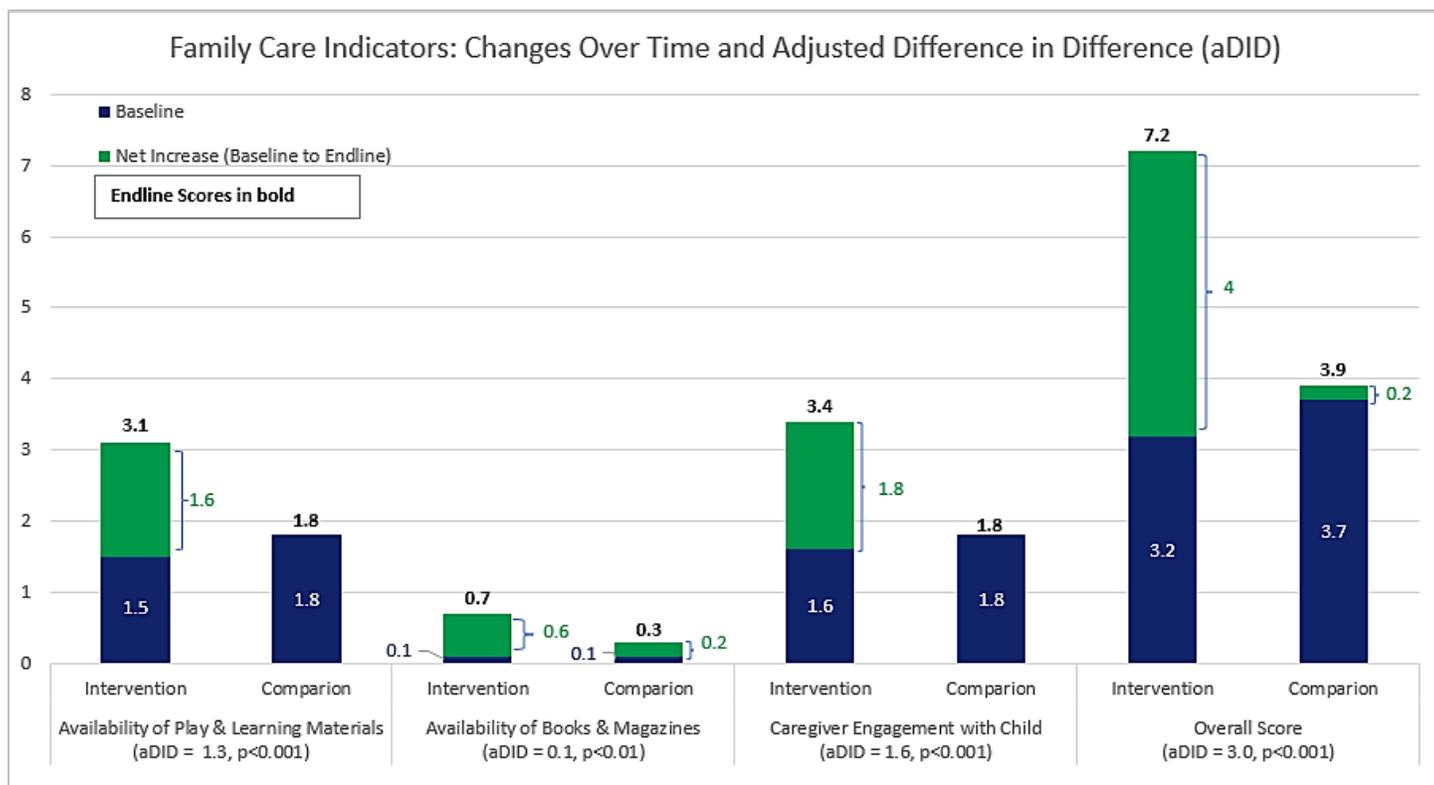
Evaluation Objectives and Methodology

The primary objective of the FTG evaluation was to measure effectiveness of the FTG program on child development (cognitive, language, socioemotional, and motor) of children 42–60 months of age and on caregiver parenting practices related to the promotion of early learning. A quasi-experimental evaluation design with a difference-in-difference (DID) analysis approach was used to estimate a causal effect of the FTG intervention on child development and parenting practices using observational (child development) and self-reported (parenting practices) data taken at both baseline and endline (12 months after the start of the program). We compared the average change over time for each outcome variable in the intervention group with the comparison group and calculated the difference in change between the two groups. We then adjusted our DID scores for explanatory variables including age and sex of caregiver and child, caregiver education, caregiver marital status, household social economic status, and district. At baseline, data were collected from 302 caregivers and their 302 children from both intervention sites (IS) and comparison sites (CS) in 33 villages of Bunda, Musoma, and Butiama Districts. At endline, the sample size was reduced to 142 caregivers and 142 children due to relocation, death, and travel during survey days -- all 142 of these caregivers and children had participated in the baseline evaluation. The intervention villages were selected from the area where the project was implemented. The comparison villages were selected from areas within Bunda, Musoma and Butiama districts were neither FTG nor any other early learning interventions were being implemented.

Tools and measures: Poor stimulation in the home is one of the main factors affecting the development of children living in low-resource settings. UNICEF’s standardized and validated Family Care Indicators (FCI) tool was used to measure home stimulation, specifically the availability of five different types of play materials in the home, availability of books and/or magazines in the home, and children’s exposure to stimulation activities by a caregiver over the past 3 days. A 9-item disciplinary practices form, adapted from another ECD study in northern Tanzania, was used to measure caregiver use of harsh discipline against their child. The International Development and Early Learning Assessment (IDELA) tool was used to directly measure children’s socio-emotional, emergent numeracy, emergent literacy, and gross motor development. The IDELA tool have been used in more than 78 countries and has been validated for use in low-resource settings.

Results

Sociodemographic characteristics: At baseline, a total of 302 children participated in the evaluation from the three districts – 140 (46.4%) were from the intervention group and 162 (53.6%) from the comparison group. Of the 302 children, 149 (49.3%) were girls and 153 (50.7%) boys. Almost all children interviewed were more than 4.5 years of age (97.7%) and few were 3.5–4.5 years of age (2.3%). Out of 302 caregivers assessed, 244 (80.8%) were women and 58 (19.2%) men. On age distribution of the caregivers, 173 (57.3%) were 35 years and above, 100 (33.1%) were between 25–34 years of age and 29 (9.6%) were between 15–24 years of age. A total of 271 (89.7%) of the caregivers had attended at least primary school and 31 (10.3%) had no formal education. A total of 249 (82.5%) of the caregivers were married, 26 (8.6%) were single, 16 (5.3%) were widowed, 8 (2.7%) were separated, and 3 (1.0%) were divorced. A total of 200 (66.2%) of the caregivers had 1–2 children below the age of 5 in their households, 88 (29.2%) had 3–4 children below the age of 5, and the remaining 14 (4.6%) had 5 or more children below the age of 5. There was no statistical difference on any key demographic.



Key Finding 1: First Teacher Groups significantly improved caregiver engagement with children and significantly increased number of learning materials in the home. The FTG intervention positively influenced the enabling home environment for early learning. The overall FCI score on the availability of play materials, books and magazines, and caregiver engagement with children increased from 3.2 at baseline to 7.2 at endline for the intervention sites (with a maximum score of 14 of the FCI scale). The average score among comparison sites increased slightly from 3.7 at baseline to 3.9 at endline. Based on the adjusted DID score (aDID), parents who participated in the FTG intervention had significantly greater number of early learning materials in the home and engaged in a greater variety of learning activities with their children over the past 3 days compared to parents in the comparison sites (3-point difference, 95% CI 2.2–3.9, $p < 0.001$).

Result 1.1: The FTG intervention increased the variety of play materials at home over the past 30 days: We assessed the variety of developmental toys in the home out of a total of five different types of play materials, specifically toys that make music, materials for drawing and writing, materials that encourage movement, materials that encourage role playing, and toys or materials that teach shapes and colors. The average sub-score for the variety of play materials in the home increased from 1.6 to 3.1 among participants in the intervention sites while the score among participants in comparison sites remained the same at 1.8. Children in the intervention sites compared to the comparison sites had a significantly greater variety of play items in the home by a score of 1.3 item (95% CI 0.9–1.8, $p < 0.001$) after adjusting for explanatory variables.

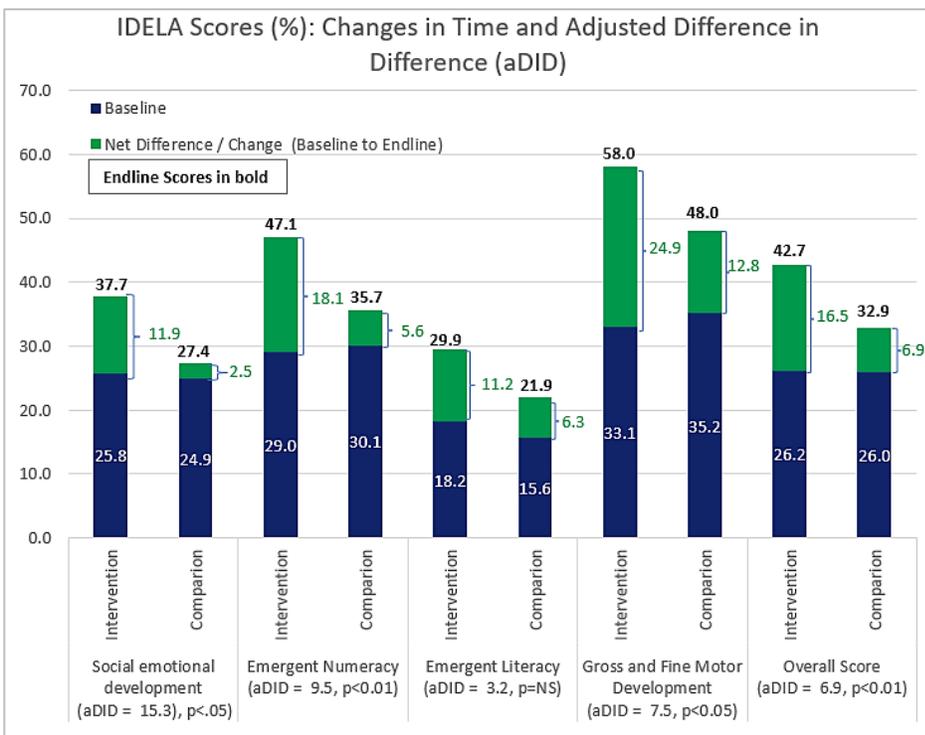
Result 1.2: The FTG intervention increased the availability of children’s books and magazines in the household. The number of children’s books and magazines in the household increased from 0.13 to 0.71 in the intervention sites and from 0.11 to 0.28 in the comparison sites. Households in the intervention sites had significantly more children’s books and magazines in the home compared to comparison sites (aDID 0.1 [95% CI 0.04–0.2] $p < 0.01$).

Result 1.3: The FTG intervention improved caregiver–child engagement in early learning activities over a three-day period. Seven domains of caregiver engagement were assessed: reading books, poems or looking at picture books; telling stories; singing songs including lullabies; playing with toys; spending time with one’s child naming, counting, and/or drawing; spending time with one’s child using hand and leg fingers (e.g., peek-a-book, hide & seek, clap hands etc.); and spending time with one’s child chatting or talking. The average score on

diversity of play activities done by caregiver with their child over the past three days increased from 1.6 to 3.4 among the intervention sites while the average score remained stagnant at 1.8 at baseline and endline among the comparison sites. After adjusting for explanatory variables, caregivers in the intervention sites participated in 1.3 more early learning activities with their children compared to comparison site participants (95% CI 0.9–1.8, $p < 0.001$).

Key Finding 2: The FTG intervention did not reduce parents’ use of harsh child disciplinary practices. Use of nine different harsh disciplinary practices was self-reported by parents, namely shook the child; shouted, yelled or screamed at the child; spanked, hit or slapped the child on the bottom with bare hands; hit the child on the bottom or elsewhere on the body with a hard object; called the child dumb, lazy or other related names; hit or slapped the child on the face, head, or ears; hit or slapped the child on the hand, arm or leg; beat the child up over and over as hard as possible; and believing a child needs to be punished in order to become a good child. The average number of harsh disciplinary practices used by parents in the intervention sites decreased from 5.0 at baseline to 4.8 at endline while the average score increased among the comparison site from 4.8 at baseline to 4.9 at endline. Differences across time between intervention and comparison sites were not statistically significant.

Key Finding 3: The FTG intervention accelerated child development. Child development outcomes were measured using the IDELA tool. Each domain score (emergent numeracy, emergent literacy, motor, and social-emotional) was calculated by the average percent correct for the tasks in each domain. The overall IDELA score significantly increased among intervention sites from 26.2% at baseline to 42.7% at endline compared to 26% at baseline to 32.9% at endline among the comparison sites. Based on aDID results, the average score among intervention site participants was 6.9% (95% CI 2.0%–11.8%) higher than the average scores among comparison site participants, which was statistically significant ($p < 0.01$).



Result 3.1: The FTG intervention improved socio-emotional development (self-awareness, peer relations, empathy, emotional awareness, and conflict resolution): The socio-emotional development score among children in the intervention sites increased from 25.8% at baseline to 37.7% at endline compared to 24.9% at baseline to 27.4% at endline among the comparison sites. Based on the aDID score, children reached by FTG intervention were 7.2% points (95% CI 0.52–13.9%, $p < 0.05$) more likely to exhibit socio-emotional skills compared to children in the comparison sites.

Result 3.2: The program improved emergent numeracy skills: Average emergent numeracy scores among children in the intervention group improved significantly at endline compared to the baseline with an aDID score of 9.5% [95% CI 3.4–15.5, $p < 0.01$]. That is, children reached by FTG intervention were 9.5% (95% CI 3.4–15.5) more likely to exhibit the required emergent numeracy skills than children in the comparison sites ($p < 0.01$). The intervention did not have any significant effect on problem solving. The intervention was effective at improving simple operations, measurement and comparison, shape identification as the children in the

intervention site had a 16.5% (95% CI 4.0–29.0, $p < 0.05$), 12.6% (95% CI 3.1–22.0, $p < 0.01$) and 11% (95% CI 1.7–20.3, $p < 0.05$), respectively, higher chance of exhibiting these skills compared to children in comparison sites.

Result 3.3: The program was trending toward improved emergent literacy skills, but results were not statistically significant. There was a greater improvement in emergent literacy skills among the intervention sites (an increase from 18.2% at baseline to 29.9% at endline) compared to comparison sites (an increase from 15.6% at baseline to 21.9% at endline) resulting in an aDID score of 3.2% (95% CI -1.4 to 7.9), which was not statistically significant. The intervention did not have any effect on letter identification, expressive vocabulary, first letter sound, print awareness, and oral comprehension skills. The intervention was effective at improving emergent writing skills: children observed among the intervention sites had a 5.1% (95% CI 0.2–10.1, $p < 0.05$) higher chance of exhibiting emergent writing skills compared to children in the comparison sites.

Result 3.4: The program had a positive impact on gross and fine motor development. Gross and fine motor development scores among children in the intervention sites increased from 33.1% at baseline to 58% at endline. Scores among children in the comparison sites increased from 35.2% at baseline to 48% at endline. Based on the aDID score, children who participated in the FTG intervention had a relative increase of 7.8% points (95% CI 0.6–15.1, $p < 0.05$) in meeting age-appropriate gross and fine motor developmental milestones compared to children in the comparison sites.

Conclusion

The FTG intervention improved children’s socio-emotional development, emergent numeracy, and gross and fine motor development, and with a trend toward better emergent literacy skills. A community group-based parenting model that engages parents with their children and is delivered by community volunteers is an effective approach for accelerating child development in low resource settings. More attention is needed on strengthening children’s literacy skills, addressing parents’ disciplinary practices, and engaging other caregivers such as fathers in community parenting programs.



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