Philippines: A Community-based Approach to Reducing Malnutrition Among Young Children
By Palak Gupta, PhD Candidate, Delhi University; Research Fellow, ARNEC

Abstract
Despite government efforts to reduce malnutrition, the Philippines is home to 3.57 million malnourished children under the age of five. Positive Deviance/Hearth (PD/Hearth) is a community based approach which enrols malnourished children under two years old, along with their mothers, in a 12-day nutrition programme with the goal of rehabilitating and preventing malnutrition. Save the Children has successfully implemented this approach and linked it to other local initiatives addressing food security and malnutrition. As a result, other communities have adopted the PD/Hearth approach. First, a PDI (Positive Deviance Inquiry) was conducted to identify positive practices followed in the community. Then mothers of malnourished children were identified and invited to participate in the PD/Hearth sessions. Mothers were taught to prepare healthy snacks from locally available ingredients and children consumed the nutritious snack to improve their health. The PD/Hearth approach was successful in rehabilitating malnourished children and involving communities to improve the nutrition and health of young children. The impact of the PD/Hearth sessions extended beyond the 12-day nutrition programme to include the promotion of backyard and community gardens; integrating PD/Hearth with livelihood programmes and self-help groups; and partnering with women cooperatives, local government units and other NGOs to raise funds for making this approach self-sustainable. It was determined to be cost effective, affordable, readily acceptable, and sustainable.

Background
The Philippines is a developing nation with high prevalence of hunger and malnutrition among young children. Almost two-thirds of Filipinos are undernourished (UN ESCAP, 2002) and 40% of the population is poor (NSO, 2000). Early Childhood Care and Development (ECCD) programmes and services in the Philippines are not new. Health, nutrition, early education and psychosocial care, parenting education and other social services for young children and their families have been supported by the government. What is new is the national ECCD policy framework formulated in 2000. The Early Childhood Care and Development Act (Republic Act 8980) emphasises the importance of comprehensive integrated early childhood development services for children from birth till the age of six. It combines centre- and home-based delivery mechanisms for the provision of early childhood care and development services in health, nutrition, education, and social protection.

Yet Filipino children today still face poor health and nutrition. Apart from the State, non-government organisations (NGOs) and community-based organisations (CBOs) play an important role in improving the

Key Noteworthy Practices
Positive Deviance/Hearth is a strategic community-based approach to reduce malnutrition among children birth to 3 years. Some of its noteworthy practices are:
- It is cost effective, affordable, readily acceptable, and sustainable practice among mothers.
- It can be easily replicated with little adaptation to other communities.
- Mothers participating in PD/Hearth learn positive practices from other local community mothers and health workers to improve child health and development.
- It addresses malnutrition holistically by strengthening family practices in child care, hygiene, feeding practices, health-seeking behavior and food security.
- It linked the PD/Hearth programme with other community projects that had common goals of promoting food security and nutrition. These linkages were facilitated by additional trainings and projects that complemented the PD/Hearth programme but took place outside of the 12-day PD/Hearth sessions.
quality of ECCD programmes in the Philippines. One such organisation, Save the Children/USA began a programme in 1982. The aim was to deliver humanitarian relief after the nation’s frequent typhoons and other disasters. At present, apart from delivering relief and emergency response during natural disasters and human-induced emergencies, Save the Children address the following issues: education, malnutrition and life-threatening illnesses among infants and children, child abuse, and exploitation and other forms of violence against children.

Programme Description
PD/Hearth is an intensive community-based approach that enrolls malnourished children from the ages of six months to two years and their caregivers with the aim of improving the health and nutritional status of the young children. The goals are: (1) to rehabilitate malnourished children; (2) to sustain the rehabilitation of malnourished children; and (3) to prevent future malnutrition in the community. Save the Children, in partnership with Local Government Units (LGU) working at the municipal and barangay (village) levels, implemented the approach from April 2009 to March 2012 with funding from Kraft Foods under the “Making Food Go Further” Project. The project goal was to improve household food security and nutrition among targeted families and address malnutrition among young children.

In this approach mothers of malnourished children are counseled on the good practices that should be followed to prevent malnutrition and are made aware of the harmful practices commonly followed in the community. They are taught to prepare healthy snacks from the local ingredients. Evaluations of PD/Hearth have demonstrated that the programme has had positive effects on increasing the parent’s knowledge of child development, parenting practices, child health and over all well-being.

PD/Hearth is based on the premise that in every community, there are certain individuals called “Positive Deviants” (PDs) whose particular behaviours enable them to find better ways to prevent malnutrition in comparison to other people living in the same resource constrained settings. The step-by-step method of conducting the PD project has been well documented (CORE, 2003) and is based on the ‘learning by doing’ principle and ‘grassroots empowerment’.

Selection of Implementation Areas
The PD/Hearth programme was implemented in 20 barangays in the three main geographical island groups: Luzon, Visayas and Mindanao. Sites were selected according to the prevalence of malnutrition using annual data collected through Operation Timbang (an annual survey of children from birth to 71 months collecting height, weight, and upper-middle arm circumference. Based on the findings of Operation Timbang 2010, one municipality was selected from each island. The sites were Paranaque City (Luzon), San Remigio (Visayas) and Lake Sebu (Mindanao). Within these municipalities, a total of 20 partner barangays were selected based on their high prevalence of malnutrition, positive collaboration of the local leaders, and the peaceful situation.

Selection and Training of PD/Hearth Team
After selecting the areas, representatives of each barangay were trained to conduct the PD/Hearth sessions. The 3-day trainings were conducted from May to August 2010 with key people, including Municipal Nutrition Action Officers, Barangay Health Workers (BHW), Barangay Nutrition Scholars (BNS), Mother Leaders and other barangay officials. The training consisted of lectures, discussions, a practicum, and the development of an Action Plan for each barangay.

Positive Deviance Inquiry
Once the training was completed, workers conducted the Positive Deviance Inquiry (PDI) to identify positive strengths. Through home visits, interviews and observation, a PDI checklist (CORE, 2003; p 99–103) was completed to record positive household practices related to feeding, food security, child rearing, hygiene and health–seeking. PDI is also used as a screening tool that identifies malnourished children. Good practices followed by deviant households identified during the PDI were:

1. Cleanliness
   • The kitchens were kept clean and uncluttered.
   • Stray pets or animals were not allowed inside the house.
   • The area around homes was kept clean.
2. Food
• Some mothers prepared food as per needs of their children. For example, food would be less spicy, semi-solid consistency, etc.
• Some mothers also used a different plate and utensils to serve the food rather than feeding the child from the mother’s plate.
• Some mothers gave smaller, more frequent meals to the children based on child’s needs.

3. Other
• Some mothers allocated more time to care for their children. They did the household chores before their children woke up in the morning. Once child was up, she spent time with her child.
• Family planning was observed in some households.

Practices observed during the PDI that were not beneficial included:

1. Cleanliness
• In many households, toilets were not available, or toilets were not kept clean and hygienic.
• Hand washing was still not a common practice, especially before cooking and eating.

2. Food
• Families were not purifying their drinking water.
• Only rice was used as the main and primary ingredient for food consumption. Mothers prepared watery porridge or sticky rice which had low nutritional value.
• Thorough washing of vegetables was not done.

3. Other
• Practising home delivery. Child birth in many households was done by traditional birth attendants with no formal training.

PD/Hearth Sessions
Caregivers of malnourished children identified during PDI, were asked to attend a 12-day hearth session which consisted of supplementary feeding and education. After determining the number of children to be enrolled in PD/Hearth, mothers were requested to bring their children to the health station to collect baseline data including the child’s birthday, age in months, de-worming information, weight, height and upper-middle arm circumference data. This was repeated on the 6th and 12th day to observe any changes. They also received Vitamin A and iron supplements. An orientation regarding PD/Hearth was given to the mothers and schedules and menus were developed. Mothers were responsible for getting the raw materials/ingredients for the menu including the firewood for cooking. The work and ingredients for the menu were clearly divided between mothers beforehand to prevent any kind of confusion and duplication.

During these sessions, community volunteers and caregivers practiced cooking, feeding, hygiene and care-giving behaviours shown to be successful for rehabilitating malnourished children. The selected practices and themes for sessions come from both the findings of the Positive Deviance Inquiry and emphasis behaviours and enhanced highlighted by local health and nutrition service providers. Volunteers actively involve caregivers and the children in rehabilitation and learning in a comfortable home situation of one of the mother volunteer taking part in Hearth Session to sustain the child’s enhanced nutritional status at home. The five basic practices introduced during the Hearth Sessions were child care, hygiene, feeding, health-seeking practices and food security. Based on these five themes, topics for discussion were identified. The parent education sessions were held the first 6 days of PD/Hearth and then repeated during the last 6 days. The previous sessions were repeated to emphasise the importance of the sessions and to help the mother retain the information.

Each session was usually conducted by a team of four to five people consisting of the Barangay Nutrition Scholar (BNS), one or two Barangay Health Workers (BHW) and mother leaders (who was identified during PDI). Mother leaders were the mothers of malnourished child who had shown improvement or had been rehabilitated back to their normal weights, were motivated to participate, and were quick learners.

The Hearth Sessions were conducted in one of the mother’s home or in other mothers’ homes in rotation for 12 days. The Hearth sessions were spread over parts of the house e.g., kitchen for preparing food, dining table for discussion and eating, and the living room for children to play and eat. In urban areas where there was space constraint, the sessions were sometimes conducted in open available areas in the community. However, preference was always given
to the mother’s home. A PD/Hearth Kit (see above photo) was provided to each barangay which includes a mat (for children to sit on), toys (wheels, balls and tambourines) and story books. In some areas, the project provided measuring spoons and cups, hand towels (for hand washing), a nail cutter, soap, soap dish, water pitcher, bag, feeding cups, etc.

Each PD/Hearth session usually started with the attendance and a welcome song where all the children and mothers sang songs in their local language (tagalog). Ingredients brought by mothers for the nutritious snack were collected. Then, children sat on the mats and the PD/Hearth Kit is provided to them. One BNS or mother leader was responsible for the stimulation activities like playing, storytelling, dancing, and poem recitation. Alongside stimulation activities, another or same BNS was responsible for checking children’s hygiene. They cut nails, checked teeth, and helped wash hands. Simultaneously, other mothers, BHWs and BNSs cleaned and chopped vegetables, fish, meat and other ingredients. They cooked the nutritious day’s snack for the children. In addition to cooking, the BNS led the discussion on the importance of a balanced menu which includes carbohydrates as a source of energy, proteins for tissue building, vitamins and minerals for immunity and growth, and fat for absorption of fat soluble nutrients. The local sources of getting these nutrients were also discussed. When the food was ready, the “Positive Spoon Test” was performed to check the consistency of the food. If the food did not fall from the spoon and was thick, it ensured that food is energy rich and calorie-dense. Thick food is preferred because young children need nutritionally dense food. If the food is thin and watery, it does not have appropriate nutrients and a child’s stomach would be filled without receiving adequate calories.

Once the food was prepared, the children’s hands were washed and they sat with the mothers. Mothers were asked few questions as a pre-test to understand their knowledge on a specific topic, e.g., immunisation, breastfeeding, complementary feeding. After the pre-test, the children prayed and started eating. Mothers helped children eat the nutritious snack. The food prepared did not substitute for the regular family meal but was a hot nutritious snack which could be eaten by young children between the meals. While the children ate, mothers were counselled on a specific topic on which pre-test was based. The BNS was responsible for the interactive sharing session and counselling. She used learning materials such as flip charts and posters to explain the topics. Once the discussion finished, a post-test was given to the mothers to check improvement in their knowledge. Once the children finished eating, the mothers washed the utensils and cleaned the kitchen.
Home Visits
On completion of the 12-day PD/Hearth sessions, a round of 12-day home visits were made by BNSs and/or BHWs to observe if mothers were applying and sustaining the practices taught to them during the sessions. The upper-middle arm circumference was also recorded on the 6th and 12th day of home visits. In cases where children did not make any improvement from the original weight or cases where child had shown only a slight improvement, they were referred for further medical check-up and were advised to join the next PD/Hearth session.

Outcomes
PD/Hearth evidenced significant improvement in the nutritional status of the malnourished children in the pilot areas. The value of the consolidated percentage from all the three pilot areas indicates that more than 50% of the undernourished children showed improvement and achieved normal nourishment standards after repeated cycles of PD/Hearth.

Apart from improved nutritional status of the children, Save the Children was able to bring positive behaviour change among the mothers, caregivers and their families. These positive behaviour changes have eventually led to improved growth and nutrition among the young children. The positive behaviour changes include:
- Washing vegetables
- Mixing ingredients to make food more nutritious (adding vegetables as sources of vitamin and minerals, fish/chicken/pork/beef/egg/milk as sources of protein)
- Washing hands
- Bathing children every day before bedtime
- Cleaning house and surroundings regularly
- Allocating time with children and getting involved in stimulation activities like storytelling and playing
- Basic care for illnesses and preparation of the homemade Oral Rehydration Solution to prevent dehydration due to bouts of diarrhoea
- Separate plates and utensils for children
- Pets not allowed inside the homes
- Increased socialising with neighbours and children
- Boiling water before giving it to the children to drink
- Constructing family toilets
- Establishing backyard vegetable gardens
- Family planning
- Fathers getting involved in health programmes for the children

Challenges
Challenges that were identified and addressed in the process of implementation included:
- Families lacked interest and acceptance initially because they did not understand the concept of PD/Hearth. This approach, rather than providing food as “dole-out” programmes usually do, required mothers to bring ingredients from their homes. Once the positive changes and results were seen on the first group of malnourished children, other families were motivated to enrol their children in PD/Hearth.
- Lack of money to buy ingredients was another issue faced. A few mothers were unable to get ingredients for the sessions due to financial constraints. They felt ashamed and did not participate in the sessions. Therefore, mothers were asked to bring anything from the backyard garden or even fuel (wood which was available free of cost in the rural areas). If a mother was unable to get any ingredient, she was encouraged to offer her services during PD/Hearth in terms of cooking or cleaning. This way, mothers felt part of the sessions and did not feel ashamed.
- Distance between the PD/Hearth sessions and mothers’ homes was sometimes an issue. For such situations, a few motivated mother leaders were trained on the ways of conducting the PD/Hearth session and were responsible to conduct the sessions in those areas.
- Relapse cases also were observed. These children were enrolled in next cycle of the sessions, and so on until they became well nourished. If a child relapsed or stayed malnourished for three consecutive cycles, they were then referred to the doctor for a check-up of other diseases like childhood TB.
- Absenteeism during PD/Hearth sessions was sometimes a problem. The child missed the nutritious snack served and the mother missed the learning imparted during the session. For such cases, BNS's visited the homes of the mother who missed the session to inquire the reason of her absence and to take the prepared food to the
child. This motivated the family to become part of the next session.

**Noteworthy Practices**

PD/Hearth is a strategic community-based approach to reduce malnutrition among children birth to 3 years. Some of the noteworthy practices are:

- **It is cost effective, affordable, readily acceptable, and sustainable practice** among mothers.
- **It can be easily replicated** with little adaptation to other communities.
- Mothers participating in PD/Hearth learn positive practices from other local community mothers and health workers to improve child health and development.
- **PD/Hearth addresses malnutrition holistically** by strengthening family practices in child care, hygiene, feeding practices, health-seeking behavior and food security.
- **It linked the PD/Hearth programme with other community projects that had common goals of promoting food security and nutrition.** These linkages were facilitated by additional trainings and projects that complemented the PD/Hearth programme but took place outside of the 12-day PD/Hearth sessions.

Other community projects or initiatives that PD/Hearth linked with included:

- Developing food menus based on culture and community practices during PD/Hearth for better uptake by the larger community.
- Promoting backyard vegetable gardening and fish ponds
- Promoting community vegetable gardens in the areas with space constraints
- Training families and communities on composting and seed regeneration to make gardening self-sustainable.
- Integrating PD/Hearth with livelihood programmes to improve finances and thus food availability
- Creating community self-help groups to promote home health care, food preparation, saving and lending mechanisms
- Promoting innovative ways to bulk buy staple food such as rice and legumes
- Integrating PD/Hearth approach with the national programme on conditional cash transfer to reinforce education, health and sanitation practices in the homes
- Coordinating and scaling up the PD/Hearth programme with other local NGOs/CBOs, health and nutrition offices at the municipal and regional levels

**Recommendations**

The PD/Hearth approach was found to be a successful approach with few limitations. The major challenge as well as advantage of this approach is that it is community specific. Positive as well as negative behaviours of two separate communities can be different and thus identifying them could be time consuming. This approach is based on self-reporting subject to reporting bias.

- **Cognitive milestones for children should be monitored as well.** During PDI and PD/Hearth sessions, the children’s weight and MUAC were recorded which prevents the recognition of possible cognitive delays. Each child’s cognitive development should also be assessed and monitored.
- **Standard servings for children based on age should be used to avoid wasting of food.** During sessions, it was observed that all the children are given the same quantity of food irrespective of their age.
- **Accurate documentation of menus and sharing these with mothers will facilitate ongoing learning and attention to nutrition.** The nutritive value of all menu items should be calculated and given to the mothers. This will help mothers understand the importance of the energy dense snacks.
- **Improving nutritive values of the supplementary snacks can be realised by training the BNSs and BHWs in basic nutrition principles.** For example, avoiding coffee during breakfast will increase iron uptake. Coffee can be replaced by drinking lemonade rich in vitamin C which will increase absorption of iron. Or children can be encouraged to eat sour fruits like citrus or guava. Similarly, adding bean sprouts and other legumes will increase the protein, vitamin and mineral content of the food.
- **Involvement of local government officers like health and nutrition officers is crucial for understanding, launching, implementing and...**
evaluating the programme. If involved, local government representatives would aid in the development, action planning, implementation, and policy phases of the programme.

- **Developing a training manual for PD/Hearth** is important as the programme is scaled up and becomes self-sustainable. Also, in areas difficult to reach, mother volunteers can conduct sessions using the manual.

- **Sharing of results with local government officials and community** will enable them to understand the importance of the programme and keep them motivated to support the programme.

The Positive Deviance/Hearth approach adopted by Save the Children was found to be successful in reducing malnutrition among children aged birth to 3 in a resource constrained environment. Thus this approach was considered noteworthy to be documented and taken up by other countries.

**References**


**Web resource**


---

**Conversation with a Mother**

Shane is 1 year and 5 months old. He is the third and the youngest child of Nancy. He is malnourished for his age weighing only 7 kg. Shane’s family lives in an urban slum in Barangay BF, Paranaque City.

“We are poor and I do not know how to take care of my children,” said Nancy. She said that she did not know how to care for her children and what to feed them once they grow up. She thought that rice and water were enough to keep her children and her family healthy.

Shane was underweight for his age. “He was very thin and cranky all the time. He never used to eat and fell sick frequently. He didn’t play much or go out of the house because he felt shy,” said Nancy.

In November 2011, being malnourished, Shane was enrolled in the PD/Hearth programme when BNS and BHW visited the families in Barangay BF to assess the nutritional status of the children.

After 12 days of the session, Shane’s weight improved remarkably by 3 kg. Nancy shared that she learnt many new innovative concepts in the sessions like mixing vegetables into the meal, the benefits of hand washing, boiling water before consumption, covering leftovers with lids, family planning, immunisation and the importance of regular weighing her children.

“Shane is now friends with the neighbourhood’s children and I have friends too,” shared Nancy. “I am so thankful that the weight of my child has increased.”