

Cost Effectiveness Analysis

Improving Parenting Practices in Liberia and Thailand



The International Rescue Committee (IRC) implements parenting and family skills programs in fragile and conflict-affected areas around the world to encourage safe home environments for vulnerable children. Such interventions seek to reduce the violence and insecurity that children might face within their homes while encouraging positive physical and mental development. Such programs are standard in the United States, but their implementation in conflict areas has not been fully studied. In collaboration with researchers from Harvard and Duke universities, the IRC conducted an impact evaluation of parenting programs in Liberia and Thailand to understand the impact of these programs on parent's behavior and children's psychosocial wellbeing.

In Liberia, caregivers of young children participated in 10 weekly sessions of a program called "Parents Make the Difference" (PMD), which focused on the reduction of harsh discipline, activities to promote children's cognitive development, and malaria prevention practices. A similar program, called "Happy Families," was implemented with families of older children along the Thai-Burmese border. In the Thailand program's 12 weekly sessions, both parents and children focused on building positive family relationships and discipline strategies, as well as methods for caregivers to reduce stress. Evaluations of PMD and Happy Families show that these programs successfully reduced harsh discipline practices and improved positive interactions between parents and children. Relatively short programs are a viable strategy to improve children's home environment, even in difficult contexts where resources are scarce.

Cost analysis of these two small-scale pilot programs showed they cost between \$650 and \$900 per family that participated, or between \$200 and \$500 per 0.2 standard deviation¹ change in parenting practices. Because this is the first cost analysis of a parenting program in a conflict area, it is difficult to say whether the costs are high or low until more programs are studied. This analysis serves as a first step in that area of research, providing early lessons about the cost structure of such programs and possible ways to make them more cost effective. In particular, the cost per family could be dramatically reduced if the 'fixed' costs of management and curriculum development were spread over a larger pool of clients through a larger-scale program.

Why Cost Effectiveness at the IRC?

Cost effectiveness analysis measures how much impact an intervention achieves relative to the resources invested in it. It measures the ratio of a program's costs to the effects it has on specific outcomes, such as improvements in parenting practices or health outcomes.

The IRC is committed to maximizing the impact of each dollar spent to improve our clients' lives. Achieving the best use of resources involves looking at four dimensions of our work: Economy, Efficiency, Effectiveness, and Equity. This means that every time the IRC conducts an impact evaluation of its programs, the organization will also examine the costs of the program and disseminate the results publicly. We aim to find the most impactful and the most cost effective programs by comparing and costing different approaches and their related impact and improve our programs' influence and reach.

¹ Program impact results are given in terms of "standard deviations" (SD)—a measure of how much parenting behaviors changed in the intervention group relative to the change in the control group. As an example, changes of -0.61 SD and -0.38 SD correspond respectively to an average decrease of 56 percent and 13 percent in the use of physical and psychological punishment in the intervention groups compared to the control groups.

Improving Parenting Practices

Parents Make the Difference—The PMD program consisted of 10 weekly sessions and one home visit for each caregiver to reinforce good parenting skills. The program curriculum was developed by reviewing existing evidence-based programming and soliciting feedback from community stakeholders in Liberia and content experts on the research team. Class content was also informed by qualitative research conducted in target communities. The final curriculum included sessions on positive parenting skills, such as effective communication, alternatives to physical punishment, activities to promote cognitive and educational development in young children, and education on malaria prevention behaviors including consistent use of mosquito nets.

Happy Families—The Happy Families Program was a 12-week parenting and family skills intervention adapted from the IRC's evidence-based Strengthening Families Program. The content of sessions was also informed by qualitative research conducted in a sample of target communities. Sessions focused on activities to promote setting development expectations for children, understanding the negative consequences of harsh punishment, learning non-violent discipline strategies and positive communication skills, and practicing stress management for caregivers. Caregivers and children participated in parallel group sessions followed by combined family practice sessions. More than the PMD program, Happy Families focused on 'whole family' dynamics in addition to dyadic parent-child relations. The IRC and researchers from Harvard and Duke University conducted randomized controlled trials of both the PMD and Happy Families interventions. The results indicate that short, targeted parenting skills programs can improve aspects of parenting practices and parent-child relationships. Though the interventions were for different age ranges and evaluations and therefore did not include the exact same survey measures, results showed that both programs reduced negative parenting practices and improved positive parent-child interactions.

Details	PMD	Happy Families
Childrens' age	3-7 years old	8-12 years old
Number of communities	5 communities	20 communities
Size of groups	27 caregivers/group	24 caregivers/group
Length of program	10 weeks	12 weeks

The PMD program led to a 55 percent reduction in caregiver-reported use of harsh punishment practices. The program also increased the use of positive behavior management strategies and improved caregiver-child interactions (from perspective of children and caregivers). The average caregiver in the treatment group reported a 4.4 percent increase in positive interactions, while the average child of a caregiver assigned to the treatment group reported a 17.5 percent increase, relative to the control group. The program did not have a measurable impact on child wellbeing, cognitive skills, or adoption of malaria prevention behaviors during this evaluation, but the changes in parental behavior suggest that there could be longer-term positive impacts on children.

The Happy Families program improved parent-child interactions, including parental affection, and reduced negative interactions and negative relationship quality. Children reported an effect on other measure of positive parent-child interactions, including improved family functioning dynamics like increased family cohesion and decreased negative interactions. Caregivers, though not children, reported decreased harsh discipline.

Program Impact

PMD		Happy Families	
<i>Outcome Measure</i>		<i>Outcome Measure</i>	
Parent use of harsh discipline	- 0.61 SD	Parent use of harsh discipline	- 0.38 SD
Parent use of positive discipline	+ 0.24 SD	Positive parent-child interactions	+ 0.20 SD



How much does it cost to improve parenting practices?

The PMD program in Liberia cost approximately \$650 per household that it reached, and resulted in a 0.6 SD decrease in harsh parenting practices and a 0.2 SD increase in positive discipline practices. Happy Families, piloted near the Thai-Burmese border, cost approximately \$900 per household that it reached, and caused a 0.4 SD decrease in harsh parenting practices and a 0.2 SD increase in positive parent-child interactions. By comparison, similar programs run in the United States and the United Kingdom have cost between \$1,200 and \$2,400 per family.

These cost figures are estimates, and some costs (such as staff salaries) may vary significantly based on the country context or the implementing organization. It is important to explore these factors, rather than simply comparing cost effectiveness ratios to determine the best program. As more parenting programs are examined with cost analysis, conclusions can be drawn about the types of programs that tend toward greater cost effectiveness. In the meantime, cost analysis can help illuminate the cost structure of individual programs, and suggest ways to make programs

more efficient.

When this cost information is combined with data about the impacts of the program, the cost effectiveness of each program can be calculated. The results suggest that the PMD program cost approximately \$210 per 0.2 SD decrease in harsh disciplinary practices, while the Happy Families program cost approximately \$470. These figures compare the total cost of the program to the impact against one outcome measure, although both programs had impacts on several facets of parent-child relations.

Directly comparing these results to determine whether one program is better than the other is impossible, given the many varied factors between the two programs. Yet, it is possible to estimate the resource costs of implementing parenting programs in these two environments, which provides a primary set of data points for costs of parenting programs generally. Such analysis also allows researchers to estimate the cost effectiveness of these programs if they were scaled up more widely. If no change in effectiveness existed when operated at a larger scale, the PMD program would cost only \$130 per 0.2 SD change in parenting practices, while the Happy Families program would cost \$230 per 0.2 SD change.

Cost Effectiveness of PMD

Cost Effectiveness of PMD			
<i>Outcome Measure</i>	<i>Impact</i>	<i>Cost per beneficiary</i>	<i>Cost per 0.2 SD change</i>
Parent use of harsh discipline	- 0.61 SD	\$650	\$210
Positive parent-child interactions	+ 0.24 SD	\$650	\$540

Cost Effectiveness of Happy Families

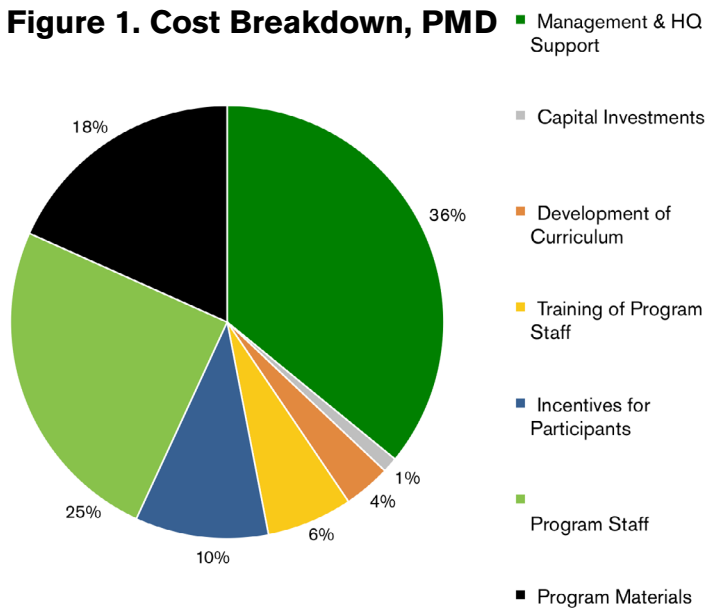
Cost Effectiveness of Happy Families			
<i>Outcome Measure</i>	<i>Impact</i>	<i>Cost per beneficiary</i>	<i>Cost per 0.2 SD change</i>
Parent use of harsh discipline	- 0.61 SD	\$890	\$468
Positive parent-child interactions	+ 0.24 SD	\$890	\$890

What makes parenting programs more or less cost effective? Approximately one-third of PMD program costs went to support costs such as HR staff or country-level management, a percentage driven partly by the high (relative to the price of other inputs) salaries of international management staff. Management and

headquarters support composes a large proportion of program expenses in many small-scale programs, but as a program is scaled up these 'fixed' costs would be spread over a larger number of beneficiaries, driving down the cost per beneficiary, and improving the program's cost effectiveness. Assuming that program effectiveness



Figure 1. Cost Breakdown, PMD



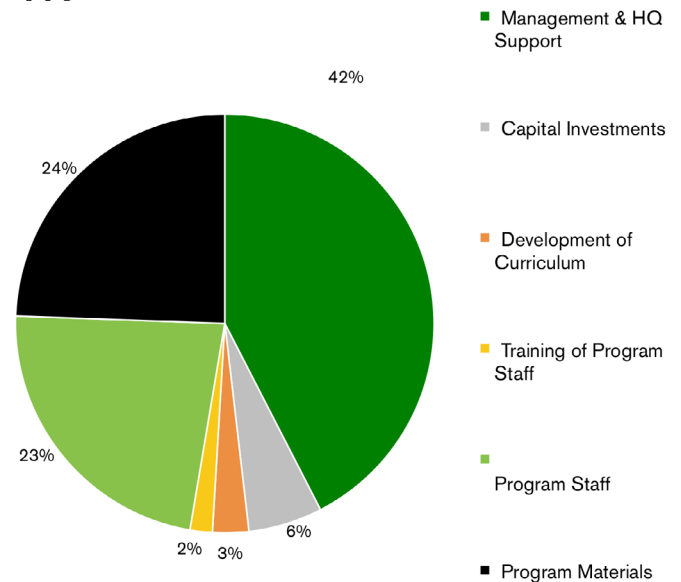
would not change if it were scaled to more communities, scaling PMD up to 150 communities would drive the cost per beneficiary below \$400. Similarly, as the program is operated during a longer time frame, the costs of developing curriculum and training program staff will be spread over more generations of clients in the program.

Nearly 20 percent of costs of the PMD program went to cash and in-kind transfers used as rewards for caregivers who attended and completed the training sessions. These cash and in-kind transfers totaled approximately \$100 of the per-beneficiary cost, including roughly \$60 per family of cash attendance incentives, and an end-of-training kit worth \$45. This represents a significant influx of resources into these households; Liberia's Gross Domestic Product per capita is \$450, so in addition to their effect as incentives, cash transfers may have had secondary impacts by boosting household income.

For the Happy Families program, more than 40 percent of costs went to management and overhead, again driven by the relatively expensive salaries of international management staff. The proportion of costs spent on program staff is similar across the PMD and Happy Families programs, but the Happy Families program had higher materials costs. This may be, in part, due to supplies provided throughout the program, instead of giving participant incentives as in the PMD program.

Such detailed cost breakdowns means it is possible to calculate total program cost if it were operated at a larger scale, where overhead 'fixed' costs were spread over a larger pool of beneficiaries. If this program were scaled up to 150 communities, the cost per household reached would fall to \$515.

Figure 1. Cost Breakdown, Happy Families



Cost Effectiveness Lessons

- In a small-scale pilot in Liberia, a 10-week positive parenting program cost approximately \$650 per household reached, and caused a 0.6 SD reduction in harsh parenting. Another parenting program piloted in Thailand cost approximately \$900 per household reached, and caused a 0.4 SD reduction in harsh parenting.
- Roughly one-third of program costs for these small pilots went to management and overhead; as such programs are scaled up, per person costs of management and overhead would fall and make the program more cost effective. If the Liberian pilot program were scaled up to 150 communities, estimates suggest that the cost per beneficiary would fall below \$400 per household.
- One of the major cost components was the high salaries of international staff (relative to the cost of other inputs). It is worth investigating whether such a program could be run through lower-cost local institutions while maintaining the same high level of impact observed in the pilot.

