



Hands to Hearts
INTERNATIONAL

Hands to Heart International: Effectiveness Evaluation

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Executive Summary

Hands to Hearts International (HHI) is a US based non-profit organization that is meeting the needs of the world's children, at the most important time in development, with the most cost effective, replicable form of prevention available. Through the provision of a newly designed curriculum and training, HHI is empowering and raising the capacity of caregivers all over the world. The purpose of this effectiveness evaluation was to identify whether or not the newly implemented curriculum is raising levels of knowledge, both gained and utilized, among caregivers as intended and whether the implemented knowledge has translated into observed change in the affected children. Using a mixed method, post intervention design, the findings of this evaluation suggest that HHI's curriculum and training is beneficial to trainees, that mothers have more to gain from training than secondary caregivers and that children are benefiting from the knowledge gained. Implications for further research are made.

Organizational Context

Hands to Hearts International (HHI) is a US-based non-profit organization founded in 2004 to reach the world's neediest children – at the most important developmental time, zero to five years old – with the most cost effective, replicable form of prevention available. The mission of HHI is founded on two intertwining principles: to empower women and nurture children. With its main office in Portland Oregon, HHI has been leading early childhood development (ECD) training efforts in India since February 2006. HHI has also provided resources to organizations in Romania, Moldova, Uzbekistan, Russia, Sri Lanka, Indonesia, Liberia, Kenya, Malawi and Uganda.

HHI promotes linkages between early childhood development (ECD) and health, nutrition, education and other community-based efforts to support child survival and healthy development. HHI offers an innovative early childhood care model through Technical Assistance (TA) and Training to local partners, specifically providing consultation, working knowledge, instruction and skills training in the design, implementation, and evaluation of ECD interventions and programming. HHI's TA model builds the capacity of partners and caregivers to improve ECD for vulnerable children, in both community and institutional settings. Through HHI's support, caregivers improve their capacity to nurture a child's language, social, cognitive and physical development, as well as enhance attachment and bonding.

“If parents do not realize that their interactions with their children are important for their child's development, or they are not aware of the need to support their child's emerging capacities, they are less likely to provide appropriately stimulating and responsive caregiving” (Richter, 2004, p. 48).

Curriculum Materials

In 2006, HHI began with a simple curriculum designed by the Early Intervention Research Institute at Utah State University, intended to train orphanage caregivers. The curriculum consisted mainly of identifying developmental milestones, while the implementation of the curriculum was made much richer with trainers injecting local stories, examples and illustrations of child

development, as well as games and massage. Over time, as HHI responded to invitations to train day care workers, pre-school teachers and village mothers, HHI Trainers learned innumerable lessons and added new and expanded information to their trainings.

In 2008, HHI released its copyrighted *Curriculum for the Study of Early Childhood Development, Trainer's Manual*, written by Portland State University's Dr. Christine Chaille, Professor and Chair of the Department of Curriculum and Instruction and Frank Mahler, Graduate School of Education & Helen Gordon Child Development Center and formerly of the US Head Start Program. This manual captured all of the lessons learned in the field and was developed with the intention of being applicable to caregivers in any culture or country. It was developed with a four-day agenda (for parents and primary caregivers of children 0 –5 years), and a two-day agenda for secondary caregivers (this shortened training typically does not involve the participation of children and does not include birth -1 year development themes or baby massage instruction). This curriculum has been used as a base for HHI's ECD training in India within various settings, and is currently available in English and four Indian languages (Tamil, Hindi, Oriya and Malayalam).

Additionally, HHI developed and copyrighted (2008) a 25 minute DVD, *Baby Massage Nurturing & Bonding Through Touch*, which was filmed in India and narrated in English, with subtitles in 18 languages through dotSUB technology. This DVD has been a useful complement to HHI's four-day training and has also been used in contexts outside HHI training venues (e.g. via NGOs in Eastern Europe, Asia and Africa).

There are a few unique aspects of HHI's training approach that are important to highlight. First, HHI trains caregivers interactively by emphasizing what caregivers can do to improve their relationship with children, versus learning "facts" about child development as an intellectual exercise. Additionally, trainings are held in extremely low-resource environments, where tools such as books, pens, paper, or children's toys are rarely available, and are not required for the training. This is particularly positive, as many caregivers HHI trains have

low literacy levels, and the most needy areas commonly lack material resources. HHI's training approach empowers parents and caregivers to focus on their interactions with children to promote healthy development -- which of course is infinitely more important than any material resource available.

Evaluation Objectives and Research Questions

The purpose of this effectiveness evaluation was to identify whether or not the newly implemented curriculum, released in 2008, was raising levels of knowledge, both gained and utilized, among caregivers as intended. More specifically, the research questions were:

- How much did mothers and secondary caregivers learn from HHI's training?
- What were the greatest areas of learning?
- How are participants implementing the knowledge gained?
- What changes are being seen in children affected?

Table 1: Operationalized concepts

Mothers	Biological mothers of a child aged 0 to 5
Secondary Caregivers	Any other adult responsible for the caregiving of a child aged 0 to 5, including institutional staff, day care workers and preschool teachers
Training	Both two-day and four-day trainings offered by HHI
Greatest areas	The topic areas of the curriculum that were most commonly mentioned
Implementing	The use of knowledge covered in HHI training
Children affected	The number of children aged 0 to 5 that the trainees work with directly. Limit of 15 children counted for day care and preschool staff.
Changes	Reported differences in children cared for; ie. weight gain, language development, responsiveness, ability to self soothe or be soothed, etc.

Background

Based in years of evidence from empirical studies and words of wisdom from global experts in ECD, the work of HHI is steeped in best practices for ECD and support of caregivers. HHI works from a strengths-based approach, assuming that all parents and caregivers are deeply committed to providing the best possible to their children. HHI recognizes that despite socioeconomic and environmental struggles, communities do have the resources to provide nurturing environments for children. They involve the tools and resources of parents and caregivers of the world, and focus on the simplest of skills like play and psychosocial stimulation. “The many factors that influence ECD come down to these simple attributes of the child’s day to day experience. Improving the quality of children’s day to day experience through relationships needs to be a primary goal of all initiatives” (Irwin et al., 2007, p. 20).

The caregiver-child relationship is widely recognized as an important predictor of growth. A study in Peru found that after socioeconomic variables, the love and affection received by the child remain the best predictors for growth (Lantana, 2001). Other recent studies have noted that, after controlling for other factors, caregiving skills (including demonstrations of love and affection, decisions about child feeding, and care seeking behaviors) were associated with improved growth indicators, even in poor families with extremely limited resources (WHO 2004).

While some may assume attachment and bonding is an intuition associated with parenthood, depending on environmental conditions and the characteristics of the caregiver, this may not be true (Richter, 2004). Despite the best intents of a mother or caregiver, care for a child is impacted by a variety of factors, including the education of the caregiver, local knowledge and beliefs about child development and cultural expectations of caregiving, the overall health and wellbeing of the caregiver, the amount of autonomy and control of household resources a caregiver has, the amount of stress related to workload both internally and externally of the household, and the social support received by the caregiver (Engle & Menon, 1999). Unfortunately, as a result of these challenges

and interruptions, “problems in this emotional relationship can contribute to child malnutrition or ill health or may result in attachment problems” (Engle & Menon, 1999, p. 1311).

Although a number of parenting programs exist around the world to combat the factors that can negate caregiving, few have been evaluated. A recent study out of Bangladesh used an intervention control post-test design to evaluate the impact of a parenting program targeting rural mothers with children under the age of three (Aboud, 2007). The intervention was comprised of weekly, 90 minute educational sessions facilitated by locally trained women. Topics covered during the sessions included common diseases, hygiene and sanitation, breastfeeding, stages of cognitive and language development, positive discipline and gender equality. While the mothers of the intervention group experienced increases in knowledge and improvements in stimulation techniques used in the home, there was no change seen in nutritional status or language development of the children (Aboud, 2007).

UNICEF also reminds us of the global evidence that intervening in the earliest years of life is among the most effective methods to break the cycle of poverty. Their 2006 report *Programming Experiences in Early Childhood Development* highlighted an ECD intervention in Maldives for its learning that presenting ECD information in a creative and engaging environment is more effective than educating participants with information that is often too technical. Through increasing the agency and capacity of caregivers, confidence is boosted among these parents, an important consideration especially when working with populations that have experienced centuries of oppression and discrimination.

Methods and Data Collection Plan

Quantitative and qualitative methods were used to answer the evaluation questions, using pre and post tests, observation, and semi-structured interviews that occurred both in person and over the phone.

Table 2: Data collection plan

How much did mothers and secondary caregivers learn from training?	Pre and post tests, Participant Evaluation
What were the greatest areas of learning?	Pre and post tests, Participant Evaluation
How are participants implementing the knowledge gained?	Observation, village interviews, phone survey
What changes are being seen in children affected?	Observation, village interviews, phone survey

Quantitative data

Quantitatively, HHI trainings included the administration of identical pre and post tests to assess knowledge gained during trainings (See Appendix A). HHI trainers and curriculum designers developed the pre and post test to best identify the key learning objectives. All developers were aware of language and cultural differences and made this central to the curriculum design process. HHI trainers gave feedback on language usage and translated tests into four different Indian languages. The pre and post test instrument was launched in conjunction with the new curriculum. The pre and post test is administered by the HHI Trainers, either orally or written, dependent on the participants' literacy level. The test has 10 true or false statements which evaluate the mothers and caregivers' knowledge of the key concepts of physical, social, emotional and cognitive child development as well as hygiene. One point was given for each correct answer, with a total of 10 possible points for each test. For data analysis, the average gain of knowledge was measured for each question and each training group. In addition to the 10 item post test, a Participant Evaluation with five open-ended questions was used at the close of training to act as another measure of knowledge gained, as well as intended changes in trainee caregiving (Appendix B).

Qualitative data

Qualitatively, semi-structured interviews, administered both in person and over the phone, were developed to gather information regarding what knowledge

caregivers were utilizing at home and what changes were seen in the affected children (Appendix C).

In addition to interviews during village visits, observation of child and parent appearances and interactions during the follow-up interviews was used to evaluate both utilization of knowledge by caregivers and change in child behavior.

Sampling

Pre and post test. The HHI trainings evaluated were conducted between May 2008 and December 2008 in the Indian states of Kerala, Tamil Nadu and Orissa. This time period was evaluated for two key reasons. First, this followed the launch of HHI's new training curriculum, and the agency capacity was increased during this period in the form of an intern. Forty-eight trainings were conducted during this period with groups of community mothers and secondary caregivers. Of the 752 participants who took part in the training during this period, 705 completed the pre-test and 641 completed both the pre and the post test. Some participants do not complete the full training, therefore only 43 trainings (19 trainings with community mothers and 24 trainings with secondary caregivers) had complete data and were used in this evaluation.

Village visits. During a three month follow up period, five villages were visited by HHI Director Laura Peterson and HHI Master Trainer Sujatha Balaje for observation and interviews. Given time and transportation barriers, convenience sampling was used to determine which villages were visited using networks of community health volunteers to organize the participants to gather after work. In total, 56 participants were interviewed based on who was able to attend in the village on the day or evening of the visit.

Phone surveys. While the goal for phone surveys was to follow-up with 25% of participants, only a few surveys were collected by phone, using convenience sampling of the participants who provided phone contact information.

Limitations

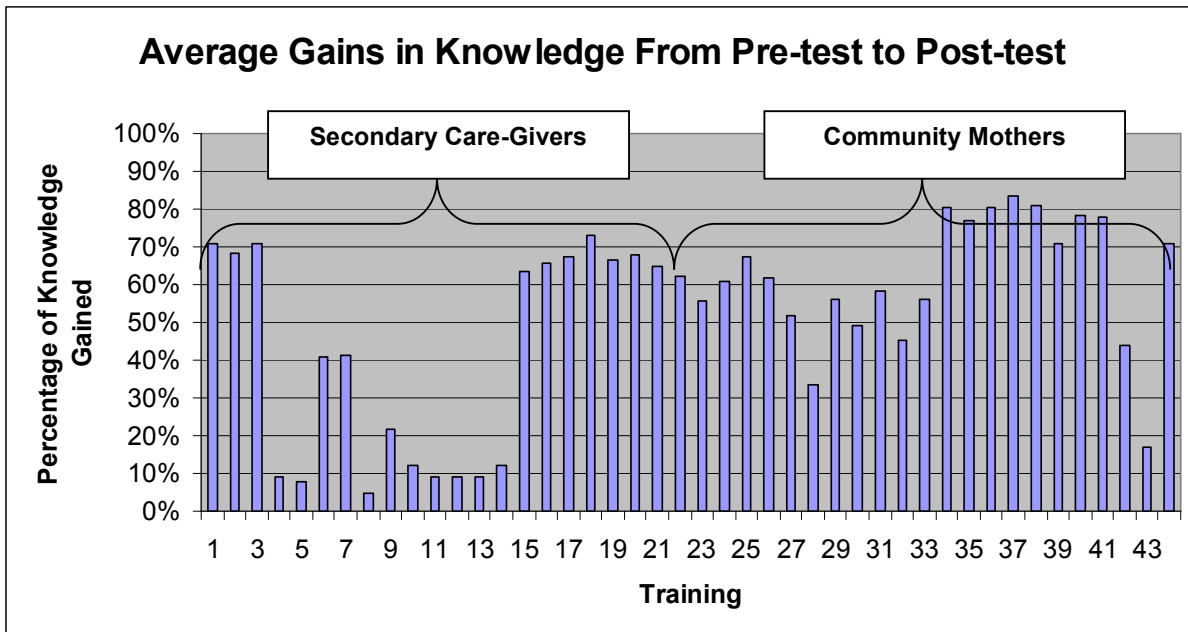
Given numerous communication and geographic challenges, there were several limitations to the methodology. There was a general concern, based on reports from local staff, that women being interviewed would be shy to speak truthfully. Considering the context of these historically marginalized groups, the social desirability bias could not be controlled. Finally, although every attempt was made to gather a reachable telephone number for every participant, many women resisted giving out such information for a reported fear of being tracked, because they saw the phone as a male dominated resource, or simply because they did not have consistent access to a phone number.

Results

- How much did mothers and secondary caregivers learn from training?

Overall, both mothers and secondary caregivers had gains in knowledge as measured by pre and post tests. On average, participants doubled their amount of knowledge from pre test to post test. Community mothers benefited more from the trainings as compared to secondary care-givers.

Chart 1: Average gains in knowledge from pre-test to post-test



- What were the greatest areas of learning?

The trainees seemed to gain knowledge in all areas, signaling that areas of content in the training were equally important and useful. Based on answers to the open ended questions used in the training evaluation, participants reported that they would change the way they work with children with regard to developmental activities, the use of massage, and improved hygiene practices.

Chart 2: The percentage of gain in knowledge from pre test to post test

Statement	Percentage of Gain in Knowledge
Question 1 - Babies think before the age one	64%
Question 2 - Babies have emotions	56%
Question 3 - Babies do not communicate until they can speak	54%
Question 4 - All babies develop at the exact time	39%
Question 5 - The children development, a loving, trusting relationship to a nurturing and consistent caregiver is an extremely important building block for later relationships and for all aspects of development.	48%
Question 6 - When you play games with children you can support their language, physical, cognitive and social/emotional development.	52%
Question 7 - The brain development that happens before the age five will impact the child's ability to think and form relationships for the rest of their lives.	62%
Question 8 - Children experience the world differently than adults.	62%
Question 9 - It is not really necessary for caregivers to stick to a predictable routine for children.	41%
Question 10 - Hand washing, clean floors, diapers, bottles and bed sheets affect the health of the children and the caregivers.	41%

- How are participants implementing knowledge gained?

The follow-up interviews conducted in the field supported what was predicted in the post-test results. Mothers trained by HHI reported a greater awareness of child health and development, more frequent and meaningful interactions with their children, a better understanding of child's needs, were finding children easier to handle and they had greatly improved hygiene, sanitation and nutrition practices. It was also frequently reported that once trained, approximately half of HHI trainees, parents as well as secondary caregivers, shared components of the training with other caregivers in their communities. Trainees reported that the most common lessons passed along were practices for improving hygiene, sanitation, nutrition and baby massage.

- What changes are being seen in children affected?

When interviewed and observed, participants noted differences in the way children were responding after the training in terms of physical, language and social development. Caregivers responded that children were sick less often and recovered faster when ill, were gaining greater weight and were more responsive to nurturing. One mother stated, “my baby talks sooner and has more words, I think this is because I sing to her”, other mothers nodded in agreement, a powerful language development outcome that she attributed to learning from HHI’s Training. It was also reported that babies were easier to soothe when fussy, had improved digestion and slept better after massage was given.

Lessons Learned

Based on the findings above, there are a number of conclusions that can be drawn.

- Community mothers have more to gain from training than secondary caregivers. It would be interesting to inquire about why community mothers experienced greater learning from training as compared to secondary caregivers. One could hypothesize that secondary caregivers, usually found in pre-school or crèche centers, have more experience and education in childhood development. Further research could help to define whether or not this was a factor.
- Mothers, secondary caregivers and children are positively effected by HHI curriculum and training. Trainees are implementing the knowledge gained in training, and are not only using this knowledge in their own caregiving but are passing on this knowledge to other caregivers.

Recommendations

Based on the findings of this effectiveness evaluation, a number of suggestions can be made for further research, evaluation and programming of HHI.

- Given the challenges of following up with participants, further research should also explore the best methods for tracking HHI trainees.
- Monitoring and evaluation processes should be improved to fully capture the long term impacts on women's empowerment and child health outcomes that HHI programming achieves. While the evaluation tools HHI is currently using are helpful for evaluation, these tools do not generate information or data on how HHI trainings have impacted more long term changes in a child's health status. The interviews used here are helpful, but have not been consistent or repetitive enough to draw conclusions about the sustainability of positive outcomes. Partnering with an NGO with monitoring and evaluation experience would be very beneficial as HHI currently does not have the capacity to effectively meet the demands of effective evaluation.

Appendix A: Pre and Post Test of Knowledge

1	Babies think before the age of one.	True	False	I Don't Know
2	Babies have emotions.	True	False	I Don't Know
3	Babies only communicate by speaking.	True	False	I Don't Know
4	All babies develop at the exact same time.	True	False	I Don't Know
5	The child's development a loving, trusting relationship to a nurturing and consistent caregiver, is an extremely important building block for later relationships and for all aspects of development.	True	False	I Don't Know
6	When you play games with children you can support their language, physical, cognitive and social/emotional development.	True	False	I Don't Know
7	The brain development that happens before age five will impact the child's ability to think and form relationships for the rest of their lives.	True	False	I Don't Know
8	Children experience the world differently than adults.	True	False	I Don't Know
9	It is not really necessary for caregivers to stick to a predictable routine for children.	True	False	I Don't Know
10	Hand washing, clean floors, diapers, bottles and bed sheets affect the health of the children and the caretakers.	True	False	I Don't Know

Appendix B: Participant Evaluation

1. What was the most important thing you learned in this training?
2. Because of this training, how will you change how you work with children?
3. What part of the training did you like best?
4. What part of the training did you like least? Or was hardest to understand?
5. What would be helpful to add to this training to best support you to work with children?

Appendix C: Semi-structured Interview

1. Is there a difference in how you spend your time with children?
2. Are the children responding to you differently since the training?
3. Have you implemented any changes in hygiene since the HHI trainings?
4. Is there anything else you want to add?

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