



Whole Child International Latin American Children’s Home Project

Project Description

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Purpose

The purpose of this pilot project is to demonstrate that training of caregiver staff and structural changes can improve the development of children in orphanages and other childcare settings. Specifically, it will demonstrate the feasibility and potential effectiveness of an intervention — to be implemented in one children’s home in Managua, Nicaragua, and two in greater San Salvador, El Salvador — which previous research suggests will be effective in improving the development of children in the institutions.

Background

The influence of the care and environment that young children experience is long-lasting and can enhance or compromise a child’s overall development and life opportunities. For instance, an

impoverished environment with no stable relationships early in life places children at risk for poor school performance, learning disabilities, challenging behaviors, school drop-out, delinquency, criminality, and welfare dependency (Brooks-Gunn & Duncan, 1997).

This proposal is intended to evaluate this very point of improving the early experience of young children in orphanages. Specifically, we propose to evaluate the developmental outcomes of children birth to six years of age who reside in one orphanage in Managua, Nicaragua and children birth to five years of age who reside in two orphanages in San Salvador, El Salvador. These orphanages are relatively devoid of toys and nurturing and stable caregiving, but subsequently will experience a variety of interventions that are intended to enhance caregiving. These interventions include 1) training caregivers to be appropriate and socially responsive to the children, 2) manipulating staff schedules to increase consistency in caregiving, and 3) improving the physical environment to reduce group size and facilitate relationship building.

The Latin American Context

Managua, Nicaragua

The Republic of Nicaragua is a Central American country with a population of approximately 5.5 million people, of whom approximately 40% are under 18 years of age. Nicaragua's population is roughly 69% Mestizo (mixed European and Native American descent), 17% European, 9% black (also referred to as Afronicaraguense), and 5% pure Native American. This diverse demographic composition is reflected in the Nicaraguan culture that is an interesting blend of European-Iberian culture enriched with the flavors and sounds of the Amerindian culture.

The capital city of Managua, situated on the northwest shore of Lake Managua, has a population of about 1.8 million people. The city suffered a devastating earthquake in 1972 and was never formally rebuilt, with part of the downtown area left desolate and empty. A bloody civil war

during the majority of the 1970s and 1980s left the capital city and the country in poor condition. During the 1990s the political climate calmed and the country worked on rebuilding itself and was relatively successful even after being hit by Hurricane Mitch in 1998.

San Salvador, El Salvador

The Republic of El Salvador is a country in Central America with a population of approximately 6.7 million people. It is the most densely populated state on the American mainland and the most industrialized in Central America. The population of El Salvador is about 90% Mestizo, 5-10% pure Native American, and about 1% European. Salvadoran culture reflects both native and European roots (Osborne, 2002).

The capital city of San Salvador has a population of about 1.4 million people. It is a modern city, covering an area of approximately 75 square kilometers. During the 1980s, conflicts in El Salvador erupted into a civil war, and many people fled to the city since most of the fighting occurred outside of it. San Salvador itself was not directly affected by the war until the final offensive of 1989. However, the city itself has suffered from severe earthquakes over the years. The most recent earthquake, in 2001, resulted in considerable damage.

Children's Homes in Managua and San Salvador

By the 1990s, a large number of Nicaraguan children had become orphaned by the extremely bloody civil war of the previous two decades. Strict adoption regulations require interested parents to tolerate a large amount of paperwork and relatively long waits, resulting in only 11 adoptions of Nicaraguan children by U.S. parents during 2004 (International Adoption, 2006). These two factors make Nicaragua a prime candidate for intervention in its orphanages. The proposed project will

focus on one such orphanage, Divino Niño in Managua, Nicaragua. Divino Niño houses and cares for approximately 83 children six years of age and below and employs approximately 35 caregivers.

In El Salvador, an estimated 20,000 children live in orphanages. The intervention will focus on two children's homes in greater San Salvador. At San Vicente de Paul, approximately 42 caregivers care for 124 children birth to 60 months; at Adalberto Guirola approximately 42 caregivers care for 90 children.

Children's homes for children birth-5/6 years of age in Managua and San Salvador are fairly similar to those described by Gunnar (2001), MacLean (2003), and the St. Petersburg-USA Orphanage Research Team (2005) in other countries, with respect to their lack of social-emotionally responsive caregiving and poor physical environment, and such orphanages are still common across much of Central America, Eastern Europe (Smyke, Koga, Johnson, Zeanah, & BEIP Care Group, 2004), and Africa. To change this, the investigators need empirical documentation that an intervention that promotes responsive, respectful care with a focus on the environment and staffing patterns improves children's development while they reside in the orphanage. Presumably, this will also have long-lasting beneficial effects on children who return to their biological parents or are adopted. Providing this empirical documentation is the purpose of this proposed project from the University of Pittsburgh Office of Child Development.

Conclusion

The theoretical and empirical literature suggests and we hypothesize that social-emotional training and structural supports for caregiver stability and sensitive/responsive relationship building will improve children's development. This proposal is to document those results through an evaluation of the intervention outcomes. This result could provide a substantial basis for improving the behavioral climate of similar orphanages in Central America and elsewhere.

Intervention Description

Collaborative Description

This is a collaborative research and demonstration project involving the Nicaraguan government, one orphanage in Managua (Divino Niño), the Salvadoran government, two orphanages in San Salvador (Hogar del Niño San Vicente de Paul and Hogar del Niño Adalberto Guirola Santa Tecla), and a team of intervention and evaluation specialists from the United States. The team of interventionists are employees of Whole Child International, 11726 San Vicente Blvd., Suite 222, Los Angeles, CA, 90049 and WestEd, 180 Harbor Drive, Suite 112, Sausalito, CA 94965. They will conduct the training intervention and structural changes. The evaluation team is headed by Christina J. Groark and Robert B. McCall, Co-Directors of the University of Pittsburgh Office of Child Development (OCD), 400 N. Lexington Avenue, Pittsburgh, PA 15208, and includes Larry Fish, statistician and coder (OCD), a part-time secretary (OCD); Ian Downing, Assistant to the Co-Director, project assistant, and coder (OCD); Marisol Vanegas, data supervisor, University of Central America (UCA) in Managua, a student data collector who will also be employed as a coder (UCA Managua); a second student coder (UCA Managua); Mauricio Gaborit, data supervisor, University of Central America (UCA) in San Salvador; a student data collector who will also be employed as a coder (UCA San Salvador); a second student coder (UCA San Salvador). Currently, the project is being privately funded by Karen Gordon, Founding Executive Director of Whole Child International in California.

Training Intervention

The twelve months of training and technical assistance begins with a focus on responsive, respectful care followed by changes in the environment and staffing patterns designed to improve relationship building. The first orphanage to receive the interventions is Divino Niño, Managua. Six months into the project, training intervention will start in the two Salvadoran orphanages and run for twelve months.

The training component will consist of monthly training and technical assistance visits by a team of three trainers. Diane Harkins, Program Director of Whole Child International, is the training coordinator; Consuelo Espinosa and Edilma Silva will lead and conduct the on-site training (both are from WestEd).

Each group of caregivers will participate in an eight-hour training session once a month. At the end of each training week, the training team will spend four hours in each of the rooms providing hands-on assistance to the caregivers. The team will also conduct one- to two-hour technical assistance meetings with supervisors and coordinators each month. This technical assistance will focus on the topics addressed in the eight-hour training sessions presented earlier in the week. The training will emphasize active experiential learning, demonstration of caregiver strategies and techniques, discussion, problem solving, and follow-up. Training topics can be found in Table 1. The second part of the intervention, a focus on creating appropriate environments and redesigning staffing patterns, will be implemented in the same twelve-month period as the training regimen.

Table 1
Training Topics

Overview of Relationship-based Responsive and Respectful Caregiving
 Ages of Infancy
 The Responsive Process of Watch-Ask-Adapt
 The Role of Self Awareness and Self Reflection in Providing Responsive Care
 Concrete experiential activities that focus on responsive caregiving during routines—dressing, bathing, diapering, feeding

Follow-up on Responsive Caregiving and Routines
 Introduction and Discussion of primary care, small groups, and continuity of care
 Dividing space so that children and their caregivers are in small groups
 Creating spaces for children (including infants 6-18 months) to facilitate play on the floor
 Identifying and introducing play materials that offer children opportunities to explore and manipulate a variety of age appropriate materials
 Arranging the schedule to allow teachers to spend more time with each child, in particular, how to schedule bath time at other times of the day in order to avoid having to bathe all the children in the morning

Follow-up on Providing Responsive Care during Routines
 Continued exploration of how to implement primary care and continuity of care
 Exploration of how to revise staff schedules to increase continuity of care and reduce the number of adults who care for an individual child during each week
 Introduction of new play materials

Temperament
 Individualized Care
 Socialization and Guidance
 Facilitating Peer Interactions
 Follow-up on Responsive Caregiving

Observation of Young Children
 Setting Up the Learning Environment
 Facilitating Language Development
 Facilitating Cognitive Development and Learning
 Adapting the Environment and Play Materials to be Responsive to Special Needs

Documentation, including using photos, keeping journals and diaries, and note-taking
 Individualized Planning
 Reflection on Training Experience

Observe each classroom; Provide technical assistance on all topics, including a 1- to 2-hour meeting with Coordinators and Supervisors.

Evaluation Proposal

Measures

The evaluation methodology includes assessing child development outcomes by searching and analyzing past (back five years) and current intake information and developmental test scores of children ages birth to 5/6 years. The orphanages in San Salvador routinely administer a general developmental screening test originally created for UNICEF every three to six months to all children. This assessment has the advantages of being available at minimum cost, being very general in content (i.e., not measuring specified skills promoted in the training), and being based on a well-known development test (Bayley, 1993); it has the disadvantages of having only one item or milestone per domain (i.e., language, personal-social) per age level (or six items across domains at any one age level), which means it is more variable, less precise, and more general than a full-scale alternative assessment and it is administered by orphanage psychologists (not independent assessors). This means that the intervention will need to produce a fairly large improvement in the children, as it should, for this assessment to detect it.

The professional staff in the orphanage in Managua routinely administers three tests including the Denver Developmental Scale, the Gesell Developmental Schedule, and the Children's Learning Achievement Profile (CLAP) every 3 to 6 months for infants and toddlers, and then less often. All three are very commonly used throughout the world and are the standardized tests of general development of young children. The assessments are conducted by trained orphanage psychologists, rather than independent assessors. This limitation is outweighed by the fact that such assessments are routinely given in the orphanage, assessors do not need to be trained or monitored on site, a no-treatment pre-intervention comparison group is obtainable, and the cost is substantially less than alternatives. Given the pilot nature of this project and the limited resources available, the benefits of using these assessments outweigh their limitations. However, to avoid the appearance of

examiner bias, an independent assessor will conduct a similar developmental test (the Battelle Developmental Inventory (BDI), another commonly used standardized instrument). If a bias is detected in orphanage results, more independent tests will be conducted. The Battelle was used in the applicants' Russian study and provides the opportunity for limited comparisons.

In addition, we will administer components of the Infant/Toddler Environment Rating Scale (ITRS) and Early Childhood Environment Rating Scale (ECRS) to evaluate the room environments. Only those components that do not duplicate other instruments to be used will be administered. We will also code and analyze in person the behavior of each caregiver in the units for children under 5/6 years of age to determine pre-intervention and post-intervention caregiving behaviors. The live coding of the individual caregivers will focus on the amount and nature of caregiver-child interactions—precisely what will be taught in the training.

Assessment Procedure

The records search for the Nicaraguan orphanage will be conducted by the University of Central America (UCA) Managua, Department of Psychology under the guidance of the University of Pittsburgh Office of Child Development. The policies and structure for this record search have already been put into place for both Salvadoran orphanages where it was originally believed that OCD would begin its evaluation. However, the only difference between the two records searches is that the Managua records search will review data for children up to 6 years of age as opposed to 5 as this is the target population for the intervention in Divino Niño.

We expect to record from orphanage records intake information and test scores (which are given approximately every three months during the first year and every six months thereafter) on every child under 5 years of age in San Salvador and under 6 years of age in Managua in the orphanage beginning in year 2000. In Divino Niño, there are approximately 83 children in residence

between the ages of birth and five years. In the San Vicente de Paul orphanage, there are approximately 130 children in residence at any one time between the ages of birth and 5 years with approximately 30-60 new children each year, or over 200 children for the years 2000-2005. The second orphanage in San Salvador is a bit smaller, with approximately 87 children under the age of five.

Caregiver behavior rating scales will be administered by live coders. The primary task of the coders is to observe and code each caregiver who is taking care of children from birth to approximately 5/6 years of age in the three orphanages for a total of 40 minutes. Typically, between two and six caregivers take care of groups of 14 to 56 children in the San Salvador orphanages and approximately 35 caregivers attend to nine groups of 10-12 children (83 children total ranging from birth to six years of age) in Nicaragua. They follow a schedule in which all the children are fed, changed, and bathed, and engage in free time or play at a certain time. For each caregiver, the coder would observe the caregiver changing/dressing two different children (approximately five minutes), bathing two different children (approximately five minutes), feeding two different children (five minutes), and 10 minutes of what the caregiver does when not feeding or changing children when the children are awake (presumably playing with them or attending to other duties). For research purposes, this coding must be done systematically according to a prearranged schedule, not because the caregiver is doing something interesting and unusual with one of the children. Since two to four caregivers may be performing these duties simultaneously, the coder can observe one caregiver changing three consecutive children, and then move to the next caregiver changing three children, and so on. Ultimately, however, the coder must end up observing for 40 minutes the prearranged caregiver tasks for the prearranged amounts of time.

Coding will take place predominately in the morning, although some codings, especially for older children, can be conducted at other times in the day and early evening. Orphanage schedules

for children should not be disrupted. We estimate that it will take approximately four hours each morning in a single group of children. We also estimate that it will take approximately 18-20 mornings (divided among the number of coders available) for each of the three orphanages to complete the observation and coding process, because caregivers do not work every day. Relevant and non-redundant portions of the ITRS and the ECRS will be administered in each group to evaluate the environments and the BDI will be used to evaluate the development of each child age birth-5/6 years residing in the three orphanages. Ideally, we will test, observe, and code the Nicaraguan orphanage during months 1, 2, and 3 of post-planning year 1, and pre-intervention assessments could be done in both Salvadoran orphanages (approximately 36 mornings) in months 3, 4, and 5 of the same year. A second round of live coding would occur in all three orphanages immediately after the interventions, and a third round of coding would occur approximately 12 months after that (three observational sessions in total) for each orphanage.

In addition, faculty members Marisol Vanegas at UCA in Managua and Mauricio Gaborit at UCA in San Salvador, will act as an onsite resource persons to insure that the coding, assessments, and record reviews are running smoothly and be available to answer any questions that may arise.

University of Pittsburgh Office of Child Development Personnel

Christina J. Groark, Ph.D., will be the Evaluation Project Director and principal contact person responsible for managing the logic model sessions; hiring and supervising the project assistant; hiring and training the data collector, coders, and environment and child assessors; timely collection of data and reports; writing the proposals and summary reports; and interpreting the findings.

Robert B. McCall, Ph.D., the Project Co-Director, will oversee the technical details of constructing the database, coding the observation data, analyzing the data, and writing the technical reports.

Larry Fish, Ph.D., the OCD statistician, will design the computerized databases and forms that are needed for the UCA staff to complete and clean and check the data. He will also travel to the orphanages in both countries to assist with the live coding and act as back-up if needed in conducting ITRS and ECRS ratings. His time on this project will be approximately 40% for the first post-planning year to include those responsibilities as well as the data analysis work. The equipment cost (one laptop computer) represents the minimum piece needed for the coding and data analysis work.

Ian Downing, Assistant to the Co-Director, will act as a project assistant, live coder, ITRS and ECRS rater, and back-up for Battelle testing in both countries. His time on this project will be approximately 70% for the first year to include all coding and testing tasks as well as any other miscellaneous tasks that must be handled.

Design and Analysis

The basic design is a pre-post-post- intervention assessment for each orphanage with an independent longitudinal no-treatment comparison group of children obtained from records for the five/six years prior to the intervention for each orphanage.

For caregiver behaviors coded live, the design is:

	Pre-Intervention	Post-Intervention 0	Post-Intervention 12 mos.
Divino Niño			
Adalberto Guirola			
Vicente de Paul			

For children's developmental assessments, baseline will consist of assessments made at all ages for all children in each orphanage beginning in 2000. Such assessments can be plotted as a function of age to produce an equation that describes what scores can be expected of children of any age in that orphanage with no treatment experience. Then each child exposed to the intervention will have a pre-intervention score and one or more post-intervention scores. We will predict for each child, based on his or her pre-intervention score and the no-treatment expected developmental function, what his or her score would be at post-intervention without treatment. The difference between the child's actual score and expected no-treatment score is that child's "intervention treatment effect/benefit." Each orphanage will have a before- versus after-intervention group and a before- versus after-comparison group (from the orphanage records). Longitudinal comparisons between a sample of children enrolled in 2000 (no treatment) versus children enrolled in the first year of treatment who experience the treatment can be made using raw test scores.

Deliverables

Interim reports for each country will be written six months after the intervention has been implemented and describe pre-intervention caregiver behavior and baseline child development; final reports for each country will be issued approximately 12-13 months later (20 months after the intervention is implemented, and an integrated final report covering all three orphanages will be issued in month 38 (month 2 of post-planning year 4).

Table 2 gives a timeline of the proposed assessments, interventions, and reports. Each report will contain a non-technical summary of method and findings plus a more extensive technical description of the evaluation suitable for scholarly publication.

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