

**ENHANCING PEER RELATIONSHIPS IN NATURAL ENVIRONMENTS
IN URBAN COMMUNITIES**

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I. Project Summary

The purpose of this model demonstration project was to increase access to and participation in activities in community natural environments for children receiving early intervention. This was especially important for children in urban areas as the accessibility of natural environments is affected by factors such as transportation, safety issues, and lack of resources in the city. An important aspect of this project was looking at expanding the opportunities for learning in community environments. Families were asked to identify home and community activities in which they participate. This information, as well as information gathered from a community mapping process, was used to link families to new natural environment opportunities for their children, as well as help them accomplish goals within existing activities in their homes. Another objective of the project was to increase the effectiveness of early intervention in natural environments through the implementation of a social competence curriculum focused on the development of peer relationships. The curriculum was also implemented in the home to insure family participation. Participation in natural environments and developing peer relationships were encouraged to be included in each child's IFSP. Training on project content and methodology was provided to families, early interventionists, and community program staff on an individual basis to insure project implementation across a range of children and families. The project began by targeting infants and toddlers who were receiving early intervention within two programs serving Hartford, Connecticut (Connecticut Children's Medical Center and HARC Stepping Stones). It was then extended to other urban communities. Project implications extend to the early intervention and community service providers, as well as the statewide early intervention system and the communities within Connecticut through community mapping and demonstrating interventions within community natural learning environments.

II. Project Objectives

Recruitment of Participants

Prior to grant application submission, two Hartford-based agencies, Connecticut Children's Medical Center (CCMC) and Hartford ARC (HARC) Stepping Stones indicated they were interested in participating in the project and subsequently wrote letters of support. At the time, it was expected that all of the families residing in Hartford and enrolled in early intervention in those agencies, excluding those who chose not to participate, would join this project. In order to begin that process, the Principal Investigator, and Project Coordinator attended the staff meetings of the two provider agencies. The Project Coordinator also shadowed early interventionists on home visits to meet parents and explain the project in more detail. In March of 1999 the directors of CCMC and HARC were each asked to refer three families who they thought would be interested in participating in the project. After three weeks, five names were provided by the agencies. The Project Coordinator again accompanied providers on visits and spoke to parents about the project. Initially, all five families were interested in participating. However, due to personal reasons, one family asked to be re-contacted in six months almost immediately after becoming involved. When this request was followed up, they shared that the situation had not changed but would contact us in the future if it became possible to participate. Another family moved to Ohio in May 1999. Of the remaining three children, one child reached his third birthday and two children and their families stopped answering the phone and did not respond to attempts to make face-to-face contact. Project staff contacted the children's service coordinators who were having similar experiences trying to contact the families.

After the initial request for referrals, the directors of CCMC and HARC were again contacted by phone and in person during staff meeting times to request the opportunity to meet more families and discuss the project with them. There was little cooperation. Requests were made to accompany providers on visits, but no concrete times or places were offered. In September 1999, a luncheon was arranged between the Principal Investigator, the Project Coordinator, and the two directors to discuss recruitment. One director committed to prompting her staff to contact the Project Coordinator. The other director did not commit to any additional recruitment assistance. The offer to join service providers on all of the visits with Hartford families was refused. As a result of that meeting, two staff members from one of the agencies contacted the Project Coordinator. These contacts provided the opportunity to meet one family who chose not to become involved.

Although these agencies were identified as project participants, the difficulties encountered over a 12-month period resulted in other recruitment strategies. Hartford-based recruitment efforts included meeting with three additional early intervention agencies and identifying community-based agencies that might be possible recruitment sources. Another approach to boosting recruitment was to implement the project in other urban communities in Connecticut. All early intervention providers in Hartford, Waterbury, New Haven, and Bridgeport were contacted to assist in recruitment efforts. In addition, a parent of a child who participated in the project accompanied staff to those meetings to share her positive experiences. Early intervention regional managers were also contacted through a letter and follow-up phone call. Other recruitment efforts included "word of mouth" from a family already participating, and calling

families who participated in a Birth to Three Outcomes Study who expressed an interest in hearing more about ongoing research programs at the UConn Center for Excellence in Developmental Disabilities. Attempts were made to recruit from early intervention providers in Springfield, Massachusetts and Albany, NY; one family in Massachusetts agreed to participate. These combined recruitment efforts resulted in 25 families agreeing to participate in the project.

Project Participants

A total of 25 children were involved in the project. Of the 25, 17 were boys and 8 were girls. Four children were diagnosed with Cerebral Palsy, one child with Erb's Palsy, two children with Down syndrome, three children with speech impairments, one child with Di George's syndrome (an immune disorder), two children with autism, and one child with Dandy Walker Hydrocephalus. Eleven children were diagnosed with developmental delays (two of which had infantile spasms with global developmental delays and cortical blindness).

Twelve children lived with their mother and father, eleven children lived with their mother, one lived with their adoptive parent(s), and one child lived with their foster parent(s).

Eight children were African American, ten were of Latino heritage, and seven were Caucasian. Spanish was the primary language spoken in seven of the homes and English was the primary language spoken in the remaining eighteen homes.

Table 1 illustrates the urban areas where the participants live. More than half (n= 14, 56%) of the participants reside in the five cities targeted in community mapping. As stated previously, one family was from Springfield, Massachusetts.

It should be noted that the description above represents a reflection of the families recruited for the project however; it includes four children who prematurely ended their participation in the project. One termination was due to a change in foster care placement. Three children were no longer eligible for project participation because one child was discharged from Early Intervention services, one moved out of an urban community, and one aged out of Early Intervention services. However, these families were valuable for determining the usefulness of the interviews, for developing community maps, and for determining that the protocol is effective in increasing a family's participation in their community.

Objective 1.0 To demonstrate the effectiveness of a social competence curriculum to facilitate peer relationships.

Activity 1.1 To assess children's and families' beliefs and behaviors on social competence. Specific measures used to assess children's behaviors on social competence included the Assessment of Peer Relations (APR) and the Battelle Developmental Inventory (BDI). Other instruments included the Activity Setting Observation Scale, the Child and Parent Global rating scale, and the Parent Child Play Scale. The Activity Setting Observation Scale was used to obtain information about the characteristics and consequences of the activity settings for both the child and the parent. A child's social behaviors were recorded as well as all of the activity settings they participate in during the observation time. Ratings were made on a 4-point scale

ranging from *None/Not at All* to *A Great Deal/A Lot*. Information about the family's beliefs on social competence was collected through facilitated discussions with families over two to three weeks. How the initial data was obtained changed from using a series of questionnaires and scales to an interview format in January of 2000. A complete copy of the latter interview protocol can be found in the Natural Environments Procedural Handbook in Appendix A. The protocol has proven successful in accessing community activities with families and identifying social competence objectives for their children.

Table 2 provides overall developmental scores, using the BDI, when they joined the project and follow-up. As expected for a group of children enrolled in early intervention, developmental status varied from near chronological age to significantly delayed. The majority of experienced at least a six-month discrepancy between their chronological age and age equivalent on the BDI. At initial assessment, the mean age was 23.2 months ($sd = 7.91$), with the youngest being 10 months and the oldest 36 months. Mean age equivalent was 11.52 months ($sd = 7.16$). The difference between age equivalent and chronological age ranged from 1 to 30 months. Follow-up BDIs occurred for 19 of the children, resulting in a mean chronological age of 30.00 months ($sd = 6.24$) and age equivalent of 18.53 ($sd = 10.44$). Follow-up occurred between 2 and 15 months after the initial assessment.

The results of the Assessment of Peer Relations (APR) show that the children in the project tended to play alone. They did not pursue their peers to complete an interaction and only rarely responded to peer initiations. Table 3 illustrates the percent of responses to positive and negative items that parents scored as either *sometimes*, *often* or *almost always* displaying at initial assessment and last follow-up. Because certain items on the APR indicate skills with negative social competence outcomes, such as "becomes anxious when approached by others," these items were examined separately from the positive items. Initial APR scores ranged from 0% to 100% of both positive and negative items scored *sometimes*, *often* or *almost always*. The same range occurred for positive items in the follow-up. Negative scores at follow-up ranged from 5.0% to 100% of the items scored as *sometimes*, *often* or *almost always*. The positive scores increased for 70% (14/20) of children. Negative scores decreased for 80% (16/20) of children. Of the four children whose negative scores increased, three of them demonstrated a decline in positive scores. It is important to note that children with ID numbers 328, 347, and 349 show no score on the APR. This is due to the fact that the measurement tool is not appropriate for these children's particular developmental level/skills given the complexity of their medical and developmental needs.

Appendix B provides activity setting data for each child as observed by project staff in family identified locations. Activity settings vary across each child, due to child and community context – where the activity settings take place. Community activity settings include different centers and routines within childcare centers, car/bus rides, mall activities such as going to different types of stores, riding the elevator and mechanical rides, different experiences at the park, library or museum, and eating and playing at fast food restaurants. Examples of parent responses to questions about their beliefs surrounding social competency included learning from experience, learning from others, learning to interact with others, and sharing similar experiences as other children his or her age.

Activity 1.2 To develop social competence curriculum objectives for children and families as part of the IFSP process. Social goals were obtained over the course of the first three interviews through questions such as, “What, if anything, would you change about your child’s social interactions? What might you want your child to be learning or doing that isn’t reflected in these activities? What do you want your child to learn from these activities?” An IFSP objective table was completed for each child based on the information gathered from these questions. Every three months these tables were discussed with the families in order to include additional social goals identified by the family and/or update how the goals were implemented. Examples of IFSP objective tables and three-month updates can be found in Appendix C.

When families reach the point in the project protocol when social competence outcomes are developed, project staff asked parents if they would like to incorporate these social outcomes into their IFSP. If the family was interested in doing this, the family or project staff contacted the service coordinator and a program-planning meeting was scheduled. Other families chose to pursue the addition of the social competence outcomes on their own. For example, when one child reached an IFSP review date, the parent identified/presented the early interventionist with social goals that she wanted added to her child’s plan/goals/objectives. In another IFSP meeting, one family requested that community locations be added as sources of service delivery (this was reportedly something for which she did not know she could ask). In addition, another family attached the project’s IFSP objective table to her IFSP in order to include the social competency goals in the plan. Lastly, a family member reviewed the project’s IFSP objective table with her daughter’s primary caregivers in order to include them in goals and interventions.

Activity 1.3 To implement the social competence objectives with infants, toddlers, and families. Once social competence objectives have been identified according to the protocol manual, project staff supported families in meeting those objectives both at home and community natural learning environments. Families identified the locations where they would like to see their child participate (See Activity 1.4). Implementation of the social competence objectives began during the fourth family visit. Project staff accompanied the family as they participated in the activity settings to facilitate peer interactions and model the strategies for the family.

Activity 1.4 To implement social competence objectives in settings in which typical children participate. Community activity settings were drawn from the family’s individual community map completed as part of the three interviews. The family map was a listing of the community locations the family chose and was based on the larger community map and/or any novel natural environments that the family identified.

For the five families who participated in the project using the earlier protocol, implementation took place in the following natural environments: a parent-run play group at a recreation center in a park, play groups at a Family Resource Center and at The Hispanic Family Center, a parent created and run play group at a local elementary school parent center, as well as visits to parks and a friend’s house. For the families who participated using the revised protocol, natural environments included McDonald’s play place, a community play center, a library story hour, and a swim class at the YMCA. Table 4 contains a sample of locations visited during time with the families.

Families identified barriers to considering involvement in the community. The major issues preventing their use of community settings as learning opportunities for their children were a lack of knowledge of places to go, financial difficulties (including paying a fee for a program and/or paying bus or cab fare to get somewhere) and transportation. Solutions were explored through the project. They included offering families a wide array of choices such as informal versus formal activities, sharing the community map with families, accessing programs through the Department of Social Services that help families pay for bus fare, and identifying natural environments that do not have a fee and are within walking distance.

Objective 2.0 To demonstrate the delivery of early intervention and social competence curriculum in natural community environments in urban settings

Activity 2.1 To assess the type, availability, and possible natural environments in the community for children age birth to three in Hartford, Connecticut.

Identifying and using community natural environments for young children continues to be difficult for early interventionists in Connecticut, particularly in the urban settings, citing the lack of social opportunities for children of this age. In fact, the State Interagency Coordinating Council (ICC) released an RFP to fund 10 programs at \$2,500 each to support the creation of community-based inclusive group opportunities for toddlers. However, the extent to which community natural environments are already available and utilized is uncertain. To support families in accessing and fully participating in chosen community natural environments, interventionists must be familiar with the options available. Therefore, the no cost extension year was used to identify or “map” those natural environments in five urban cities in Connecticut – Bridgeport, Hartford, New Haven, Waterbury and Windham/Willimantic.

Community Mapping Survey. A community mapping survey was designed as a telephone interview with community providers for children three years of age or younger. General information regarding the natural environments offered was obtained, such as address, contact person, website, types of activities, registration procedures, hours of operation, transportation availability, adult-child ratio and any associated fees. Disability specific information, such as whether the program has ever included a child with a disability and any accessibility information or general accommodations made for children with disabilities, was also obtained. There were 14 open-ended questions around including children with disabilities in the activity, such as recruitment efforts; program values and philosophy, past successes and perceived supports needed to ensure children with disabilities can fully participate. See Appendix D for the survey.

Training. The research assistants responsible for identifying and contacting community providers were trained in the concept of natural learning environments as well as interviewing techniques to elicit the necessary information. Research assistants read relevant articles and watched videos describing activity settings and the role of early intervention in promoting participation in activity settings. Types of natural environments were brainstormed. The Project Coordinator described the project, reviewed the responsibilities of conducting the community mapping interviews and explained the interview questions to ensure research assistant understanding. The research assistants practiced describing the project and asking the interview questions with the Project Coordinator and, once trained, another research assistant. Each

research assistant was responsible for conducting two mock interviews, using UCE staff who formerly worked in community-based early childhood programs. The staff were instructed to respond as if they were still in their previous program. The Project Coordinator and/or trained research assistant oversaw the mock interviews, providing feedback as needed and in summary after the interview was complete.

Database Design. A database was created in Microsoft Access that mirrors the interview form. This database program was chosen since most early intervention agencies have Microsoft Office on their computer systems, and Access is a part of that package. Therefore, the database is easily portable to the early intervention agencies and can then be used by service coordinators to map specific natural environments for individual families. Early intervention agencies can also add to and/or edit the database as new natural environments or changes to the current natural environments are identified. There is also the flexibility for agencies to add other towns to the database. In summary, the database for the Urban Environments project can be used to create a comprehensive community map of the entire geographic area supported by individual early intervention agencies. The community mapping interview data were collected through paper survey then entered into the database. The research assistant responsible for database creation and management confirmed accurate data entry by cross checking the raw and entered data.

Database Description. Two hundred twenty-nine community natural environments were mapped across the five urban cities. As illustrated in Table 5, the number of natural environments ranged from 66 in the City of Hartford to 22 in Windham/Willimantic, a smaller urban city. The community mapping process has determined that, despite early intervention providers report otherwise, there are in fact community options for children under the age of three years in these urban cities. However, less than one-third ($n = 69$, 30%) of respondents reported at least one child with a disability participating in their program at some point in time. These findings suggest that community natural environments in urban settings are an untapped resource for families of young children with disabilities living in these areas.

Families may identify specific types of activity settings they would like for their child, but not specific activities or places. To provide the type of activity settings offered at the natural environments, each of the community natural environments was analyzed for the types of activity settings provided. A research assistant trained in identifying nine activity setting categories determined by the Research Institute on Families and Learning reviewed the description of each of the natural environments and coded them into the categories. One natural environment could be identified with more than one activity setting category since natural environments offered more than one activity. Table 6 delineates the number of activity settings identified for each of the activity setting categories. One activity setting not explored in the community mapping process was church/religious activities. This is an area that will be encouraged for the early intervention providers to focus on should they choose to expand the database for their community mapping purposes.

As stated previously, survey respondents were asked to not only provide general program information, but also to describe their experiences including children with disabilities in their program. Fifty-eight respondents were available and agreed to answer the 14 open-ended questions. Six of the respondents were responsible for and able to discuss more than one

community natural environment, such as multiple library branches, play groups or parks. Two of the six were responsible for two natural environments identified in the database; three were responsible for three natural environments and one for four natural environments. Therefore, 69 natural environments (30%) were described in terms of their inclusionary practices of young children with disabilities. Note that these respondents include both those who have and have not previously had a child with a disability participate in their program.

When describing how their program views and values the participation of a wide variety of children, most respondents answered there was a positive attitude. Respondents used words like “appreciate,” “important” and “open (minded).” Respondents also used phrases like “all are welcome” or they “turn no one away.” One respondent stated that, “Variation is something that makes their neighborhood unique.” Some respondents felt that the value placed on inclusion was individually determined and varied within the organization. Others felt that it had not really been discussed within their organization. No programs identified specifically recruiting children with disabilities, but instead identified word of mouth (e.g., other families of children with disabilities or early intervention providers) as the most frequently used “recruitment” of children with disabilities. While some respondents cited specific adaptations or accommodations so individual children could successfully participate, most noted no specific strategies to ensure or enhance the participation of children with disabilities. Common themes among respondents regarding what was most helpful in working with a wide variety of children were communicating and collaborating with families, early interventionists and other specialists, knowing the individual child’s characteristics, and the personal characteristics of the staff such as patience, flexibility and a positive attitude.

Community Maps Evaluation. The community mapping database is currently being piloted with six early intervention programs in Connecticut, two that support families in Hartford, and one program in each of the remaining four cities. In Hartford, there are three service coordinators at CREC Birth to Three (physical therapist, occupational therapist and special educator) and one service coordinator at CCMC (physical therapist) who have committed to completing the survey. Two special educators/service coordinators, one in Bridgeport at the early intervention agency Cooperative Educational Services and one in New Haven at REACHOUT, Inc. will participate in the evaluation. An occupational therapist/service coordinator and speech pathologist/service coordinator in Waterbury and Windham/Willimantic, respectively, also committed to participating in the evaluation. Each early intervention program was provided a compact disc (CD) of the database tailored to the city they support (by provider request) and instructions for searching the database (See Appendix E for letter and searching instructions). A CD of all 5 urban environments is included with this final report.

A two-page evaluation survey was created to obtain feedback on the utility of the database (See Appendix F). To determine the extent the database would be institutionalized, respondents were also asked whether they would use the database on an ongoing basis (1) in its current form, (2) by updating it for the urban setting already created, or (3) by updating it to include all the communities supported. More importantly in terms of impact on families of young children with disabilities, the second part of the evaluation survey inquires about actual use of the database with an individual family supported by early intervention. Respondents are asked about the information provided to the family, family’s use of the natural environments, interventionist’s

role in the natural environment (if any) and sharing of the natural environments found with other interventionists. The service coordinators described above have committed to completing both the feasibility and utility components of the survey, and will encourage other staff members to also complete the entire evaluation. However, it is expected that some of the other staff members will only complete the feasibility component, while others will contribute to both the feasibility and utility components. The pilot phase will continue until January 31, 2004. At that time, the evaluation surveys will be analyzed; the database refined and, if deemed useful by the early intervention providers, disseminated to all early intervention agencies in Connecticut.

Activity 2.2 To identify community environments and activities for children age birth to three with disabilities as part of the IFSP process and parent input. As with IFSP objectives, the inclusion of community environments within the IFSP was an activity addressed in the project. Natural Environments project staff attended IFSP review meetings to facilitate the incorporation of community activity settings. The content and quality of IFSPs as well as use of natural environments within these plans was coded according to the protocol outlined in the coding manual (See Appendix G).

An in-depth review of the initial IFSPs collected indicated that 92.9% of the goals were child-related outcomes, 100% of the goals did not reflect or specify home or community daily routines/activities, and only 9.5% reflected an outcome in the social emotional developmental domain. In addition, 88.1% of the outcomes were written in lay versus professional language. Furthermore, some of the initial IFSPs collected made reference to the project and included community activities as strategies/methods for working on the outcomes. Although these were the initial IFSPs, they were drafted once a family had become involved in the project. It seems that project involvement may have had an impact on the content of the IFSPs. The section of the IFSPs where the community activity information was included was not at the outcome/goal level. It appears that service coordinators would require further support to include community activity information within a goal or objective.

Activity 2.3 To implement intervention in community activities and places in which typical children participate. Both formal (library story hour) and informal (playground) activities were used as sites for community visits with families. The individual community activities offered to families were derived from a map of their communities and included resources for all young children. In both formal and informal settings, the number of children varied from week to week. Therefore, project staff noted how many children were present the day of the visit.

As the number of community visits increased, it became obvious that the length of the visit was frequently longer than the typically allocated time within a traditional early intervention visit. While not an issue for project staff, this could become a barrier in early intervention agencies using the model in practice. Therefore, a process of transitioning families was explored to shorten the length of the visits. This included the project staff initially accompanying families from home to community natural environments, and then meeting them at the natural environment. Thereafter, families were able to independently access community natural environments.

Objective 3.0 To provide training to those involved in the project

Activity 3.1 To train early interventionists to assess, implement, and evaluate a social competence curriculum approach with infants and toddlers. All service coordinators were invited to participate in the program-planning meeting with the project staff and the family. The structure of the meetings included a discussion about the curriculum, completion of the Assessment of Peer Relations, and development of the child's social outcomes. That way, the service coordinators could be a part of the development of the IFSP objective table, which included family objectives, child social behaviors identified by the family, under what conditions/how this will be implemented, with whom (peers, siblings, etc.), where (home and community), and by when/review date. Even if service coordinators did not attend the meeting, all service coordinators were contacted and the project discussed. Weekly phone calls were made by the project staff person in an attempt to maintain contact and introduce new information. Although invitations to attend two formal training sessions were extended to the early interventionists, none participated. It was anticipated that early interventionists would attend community visits with the project staff to address training specific to assessment, implementation, and evaluation of a social competence curriculum approach. During these visits, the project staff used The Play Tools for Toddlers Curriculum as a source of facilitation strategies. Some of these strategies included adapting the environment to include children with disabilities, modeling appropriate peer interactions, and facilitating developmental outcomes and objectives in inclusive learning environments.

Activity 3.2 To train early interventionists to facilitate the inclusion of infants and toddlers with disabilities within natural environments within the community. On April 19 and 20, 1999, Serena Umstead provided training about facilitating the inclusion of children with disabilities in natural environments. While early intervention staff from both HARC and CCMC were invited, no representatives attended the training. Because of time constraints expressed by providers, very little training information was shared during meetings with individual providers.

The program-planning meetings and community visits described earlier were perceived as a source of training in natural environments as well (See Activity 3.1).

Activity 3.3 To train community service providers to accommodate a child with disabilities into community activities. Project staff spent time meeting with the community service providers to discuss the child's social competence objectives, when appropriate. They modeled strategies and techniques related to those objectives and provided any requested information. Training was based on the individual needs of children and programs.

Activity 3.4 To develop training materials and manuals on project methodology. The Natural Environments Procedural Manual was created and all project staff were trained on and implemented project protocol through this manual (See Appendix A). A written handbook has been created for families (See Appendix H). A handbook for providers is currently in draft form (See Appendix I).

Objective 4.0 To develop policies and procedures for early intervention programs on the use of a social competence approach to early intervention in natural environments in urban settings.

Activity 4.1 To develop IFSP protocols and procedures to facilitate the implementation of a social competence curriculum with infants, toddlers, and families. Both the Natural Environments Manual and The Play Tools for Toddlers Curriculum provided protocols and procedures to facilitate the implementation of IFSP objectives and a social competence curriculum. For example, a table was created which meets the criteria for use as an IFSP objective form. Information pertaining to the child's social behavior and/or adult's facilitation of their child's social behavior, the environment where the behavior will happen, and measurement criteria were recorded on the form. These forms or the information recorded on them can easily be incorporated into the child's IFSP.

Activity 4.2 To develop IFSP protocols and procedures to facilitate the use and development of early intervention in natural community settings in urban environments. The protocol and procedures explained in the Natural Environments Manual facilitated the development of outcomes in which early intervention can be delivered in natural community settings. The protocol also ensured that the family was included as an equal participant.

Activity 4.3 To develop policies to guide the IFSP process in regard to curriculum and natural environments. Project protocol used a process that embedded curriculum and natural environments into the IFSP process. It included the use of the Assessment of Peer Relations, which is directly linked to The Play Tools for Toddlers Curriculum. A copy of the curriculum and the APR can be found in Appendix J. By using this assessment during the development of the IFSP, objectives are closely tied to a curriculum. The Play Tools for Toddlers Curriculum also provided the strategies to be used with children in the community locations identified through the mapping process. In addition, the development of IFSP objectives included questions about the location of implementation. The list of existing and new community activity settings outlined during the initial three interviews was referred to as a way to integrate objectives into natural environments.

Activity 4.4 To develop and monitor fiscal policies to enable early intervention to be delivered in natural environments in the community. Through conversations with Birth to Three providers, three common themes emerged around delivering early intervention in natural environments in the community. First, the issues of time and subsequent reimbursement were identified. If an individual provider spent time on an activity such as community mapping, that time would not be reimbursable as if they were spending it in an intervention visit. Since community mapping would reduce a provider's time available to support families in direct intervention visits, it reduces the income to the agency. As a result, activities like community mapping become difficult to accomplish when agencies are driven by reimbursement rates. Linked closely was the issue of large caseloads that prevent even the most willing people from exploring the community. Early interventionists have limited work hours that are not spent in intervention visits or traveling between visits.

A second theme was the issue of transportation as a related IFSP service and the associated cost, which might impact the decision to use a community-based natural environment if the family cannot provide their own transportation. The third theme that emerged was the issue of the availability of cost-free programs appropriate for children ages birth to three years. At the present time there is no mechanism for an early intervention agency to cover the cost of a program for families who cannot afford it themselves. This latter issue should have the least impact on incorporating natural environments other than the home into early intervention. Certainly every community has free access to a public library or parks, and walks to play at a friend's house are free. It appears that early intervention providers require more support in identifying informal, unstructured community activities for children from birth to three years.

Activity 4.5 To develop procedures and policies for personnel development, supervision, and consultation for early interventionists and community service providers in natural environments in the community. The Natural Environments Manual, the assessment tools, and the family and provider handbooks are sources of personnel development, as well as supervision and consultation guides for early interventionists and community service providers. The use of these tools by the project staff during their implementation of the project objectives in the community was a way to introduce them to providers to access the information to enhance peer relations in natural environments.

Objective 5.0 To replicate the project in two urban communities in CT.

Activity 5.1 To replicate IFSP procedures to use social competence curriculum and natural environments in the community. The project was replicated in additional Connecticut urban communities outside of Hartford. For a specific description of implementation efforts for this activity see Activity 4.3. Replication procedures are outlined in the Replication Procedural Manual, which can be found in Appendix K.

Activity 5.2 To replicate early intervention service delivery in natural community environments in urban settings. The project was replicated in additional Connecticut urban communities outside of Hartford. For a specific description of implementation efforts for this activity see all of the activities under Objective 2.0.

Activity 5.3 To replicate a social competence curriculum to facilitate peer relationships with infants, toddlers, and families. The project was replicated in additional Connecticut urban communities outside of Hartford. For a specific description of implementation efforts for this activity see Activity 1.3.

Activity 5.4 To replicate the training of early interventionists and community service providers on IFSP procedures, social competence curriculum, and service delivery in natural environments in urban communities. The project was replicated in additional Connecticut urban communities outside of Hartford. For a specific description of implementation efforts for this activity see all activities under Objective 3.0.

Activity 5.5 To disseminate project description, methodology, training products, and outcomes. The project was replicated in additional Connecticut urban communities outside of Hartford.

The dissemination of all project-related activities including dissemination, methodology, training, and outcomes was addressed through interactions with families, early interventionists, and community service providers.

Objective 6.0 To evaluate the effects of the demonstration and replication across children and families, service providers, policies and procedures, and communities.

The following information applies to activities 6.1 through 6.5. Evaluation of meeting project objectives are described in the preceding narrative. Case studies illustrating the individual impact of the project on families and children are in Appendix L. These case studies result from a Child and Parent Global Rating Scale, Activity Setting Observation Scale, Parent Child Play Scale, the Family Activity Setting Log and detailed visit log notes. An omission to the evaluation plan are the lack of child change data since only 19 children have pre/post developmental assessments and the project was not designed to control for rival hypotheses to warrant statistical comparisons. Post developmental assessments are not available for 6 of the children because they participated for less than three months. A second omission is evaluation of formal training. This is because formal training was not instituted with early intervention providers due to their reluctance to take an active role in project-related activities, utilize community settings as sources of service delivery, and attend formal training sessions.

An exit interview was held when a child ages out of the project. Table 7 provides examples of parent responses to the exit interview, which assesses parents' satisfaction with the project, perceived helpfulness, and recommended changes. Overall, it appears families were very satisfied with the project and met their expectations. Families reported receiving valuable information while the benefits to their children included independence, fun, learning and exposure to different experiences.

III. Project Conclusion

The Enhancing Peer Relationships in Natural Environments in Urban Communities model demonstration project impacted 25 families by supporting them in accessing and participating in community activity settings with their young child with disabilities. Handbooks in using a social competence curriculum within natural environments were created for families and early interventionists. A database of five urban communities in Connecticut was created which can be augmented by early intervention agencies to create comprehensive databases for mapping the communities in which they support families of young children with disabilities. The project had less of a direct impact on early interventionists due to a lack of interest in training and participation as partners in the process. Fiscal barriers to use of community-based natural environments were identified, however there was limited interest by Connecticut's early intervention system to analyze and address them.

IV. Tables

Table 1

List of Towns/Cities Participants Live In

Town	Number Living in Town/City
Bridgeport, CT	2
Bristol, CT	1
Hartford, CT	5
Meriden, CT	2
Middletown, CT	1
New Britain, CT	4
New Haven, CT	2
Springfield, MA	1
Wallingford, CT	1
Waterbury, CT	4
West Hartford, CT	1
Willimantic, CT	1

Table 2

Chronological Age Equivalence in Months for Battelle Developmental Inventory

Child ID	Initial Scores	Follow-up Scores
	CA/AE	CA/AE
306	33/12	35/21
308	36/8	42/10
309	35/25	*
310	22/11	35/28
312	17/13	22/20
313	34/4	*
315	23/16	28/22
316	20/18	24/22
318	17/7	27/11
319	34/22	36/26
320	25/11	*
321	33/20	*
322	15/13	*
323	20/16	32/29
324	10/7	24/22
325	17/7	24/12
326	11/6	*
327	18/12	33/24
328	22/0	24/0
329	11/5	17/10
334	26/15	34/33
344	26/25	34/32
347	20/0	31/2
348	28/14	35/27
349	27/1	33/1

* No follow-up BDI.

Table 3

Positive and Negative Scores on the Assessment of Peer Relations

<i>Child ID</i>	Initial Scores (%) Positive/Negative	Follow-up Scores (%) Positive/Negative
306	15.8/100.0	71.4/88.9
308	21.1/83.3	42.1/83.4
309	73.6/88.9	*
310	13.9/50.0	76.3/-
312	16.2/22.2	88.9/22.2
313	60.0/28.6	*
315	77.7/33.3	52.1/33.3
316	77.8/22.2	60.8/11.1
318	40.0/100.0	100.0/33.3
319	33.3/66.6	52.6/55.5
320	22.2/71.5	*
321	44.7/33.3	60.5/22.2
322	85.8/33.3	*
323	39.3/25.0	86.2/-
324	29.6/66.6	87.6/22.2
325	77.7/16.7	71.4/37.5
326	40.1/75.0	*
327	100.0/100.0	87.6/33.3
328	-/-	-/-
329	100.0/-	29.2/22.2
334	50.0/33.3	34.1/88.9
344	26.3/44.4	89.5/22.2
347	-/-	6.3/66.7
348	35.3/100.0	88.0/55.6
349	-/-	5.0/33.3

*No follow-up APR

-No score for responses sometimes, often and almost always

Table 4

Examples of Natural Environment Community Settings Visited/Experienced By Project Participants

ID#	Location
306	Playgroup Dinosaur State Park Kid City Museum Science Center Local Pool Playgrounds Music and Motion Class
309	Park Pond Meriden Mall Toy Store Safari Ride Pet Store Card Store McDonald's
310	New Britain Library Science Center New Britain Youth Museum New Britain Museum of Art Chuck E Cheese McDonald's Bushnell Park Carousel/Playscape
312	Hartford Public Library Bushnell Park McDonald's Wet Farms Mall Holiday Activity Center Library Story/Play Hour Science Center
313	Waterbury Bronson Library Mattituck Museum Public Transportation McDonald's Edgewood Park
315	Library Children's Department Park
316	Grandma's Day Care Goodwin Library Story Hour

ID#	Location
318	McDonald's Playscape Fun Zone West Farms Mall Borders Bookstore Holiday Story Hour
319	Bridgeport Library Mall
320	Hungerford Park Little People's Park Library Benjamin Franklin School
323	Library Drop-In Playtime Chuck E Cheese
324	Family Resource Center Playgroup
327	Playgroup Stork Club
329	Edgewood Park Longwarf (nature trails/walking along water)
334	Preschool Intervention Program Playground Backyard
347	Forest Park Zoo Adventure Land
349	Library Jonathan's Dream Playground

Table 5

Community Activities Available in the Database (n = 229)

Urban Community	Number of Activities Identified
Bridgeport	44
Hartford	66
New Haven	59
Waterbury	38
Windham/Willimantic	22

Table 6

Activity Settings Available Across Community Activities

Activity Settings	Number Identified
Family Outings (Shopping, eating out, visiting friends)	42
Family Routines (Running errands, car or bus rides, weekend chores)	69
Play Activities (Outdoor playgrounds, indoor play lands)	47
Community Activities (Libraries, fairs, festivals)	26
Physical Activities (Horseback riding, swimming, sledding)	9
Children's Attractions (Petting zoos, nature centers, pet stores)	2
Arts and Entertainment (Children's theater, storytellers, music activities)	20
Church/Religious Activities (Sunday school, church services)	0
Organizations and Groups (Karate, movement classes, parent/child groups)	14

Table 7

Parent Responses to Exit Interview

Was the project explained clearly? Did you have a good sense of what would be accomplished and what would be needed from you as the child's parent? If "No" please explain what was confusing and how it could have been made clearer.

ID	Comment
306	Yes.
309	Yes, the project was explained clearly. I understood that it was important for children to be with other children and that I needed to keep track of the things child did during the week (activities and how he related to others) for the project.
310	Yes, it was explained clearly and I did have a good idea of what was going to be accomplished and needed from me.
312	Yes, it was. I knew we would work towards getting my girls involved in different activities. I also understood we would help my daughter play.
313	Yes, Yes.
349	Yes, it was explained clearly. I understood the goals. It was hard to stay involved all the time though because of child's health.

What are your thoughts about the initial interviews done preceding you and your child's involvement in the community setting(s)?

ID	Comment
306	We were comfortable about our involvement. Everything was spelled out clearly and we were told we could back out of anything we weren't sure of. We saw it as an opportunity to get to know what was available in the community for us.
309	I thought the questions were good and they asked about what we were currently involved in and what we wanted to do in our community.
310	I thought the interviews were trying to get a feel for him, a better picture of him and us, what his personality is like, and his environment in general.
312	They were fine. I felt comfortable. It wasn't hard to express myself. I felt relaxed. I had no problem answering the questions.
313	I thought a lot of the questions were repetitive, I don't know if anyone could answer them – the same questions over and over again, asked in a different way.
349	I thought the questions were a little confusing. I didn't always understand why they were being asked.

Did this project help you do something you would not have done yourself?

ID	Comment
306	We wanted to introduce child to a setting where he could interact with his peers but if mom was around, he would cling to her and not venture out. With Jill's help, we were able to have him be at Little People's where he learned to be with other children his age.
309	Yes, because I have the twins and an infant I rarely had the opportunity to go out with the kids. I would not have done these things without the support of the project staff and or my husband.
310	I think I would have still taken him out but it definitely wouldn't have been as often as it was/is because of the project.
312	Yes, it made me make the time to do something with the girls.
313	Probably the bus trip to the library. I would have avoided that, but now I know my rights and I know T.'s rights too.
349	Yes, I would not have taken child out if I had not known someone was expecting me. It was nice to have someone to talk to or to help hold something while I moved my child.

What did you and your child gain from participation in this project? (Parent)

ID	Comment
306	Valuable information on what is going on in the community so we could involve ourselves and our son in worthwhile settings; also we were able to talk to Anne Marie and Jill about our concerns over child and they were a shoulder to cry on sometimes.
309	I am not sure but I did learn a lot about what kinds of things are appropriate for the twins. I also learned how to handle different situations (like trying to get the kids out of the house and how to give them warnings ahead of time before we left an activity) I also enjoyed watching children interact with other children.
310	I gained information on different topics, places to go (including how to get there, times it is open, etc), events, etc. I also learned how to help RW interact with other children when we went out.
312	For me, it was fun seeing my girls enjoy themselves every time we went.
313	The bus thing – I know what kinds of questions to ask now and what to expect (with bus transportation)
349	I gained information about different places I could go with her.

What did you and your child gain from participation in this project? (Child)

ID	Comment
306	Child was able to gain some independence from mom to venture out and be with his peers and this proved invaluable in his transition to preschool.
309	Child has a blast at the different activities. Child learned how to play with other children. He played well and I think he learned a lot by watching other children.
310	He learned a lot. He learned how to communicate, how to sign, how to play with kids. Playing with kids was something he has never done.
312	Since we don't have a lot of kids that live near us, it helped her play and get to know kids her age.
313	She's going to gain in the future because she's had the exposure to these experiences (using public transit going to the library, the museum) and the stimulation she's had.
349	I hope she became used to going to different places, different sounds and smells so when she goes to school next year it will not be so different.

Was participating in this project important to you? Why or why not?

ID	Comment
306	Yes, it made us feel like there were people out there who cared about what was going on with our son. It was a way for us to seek help and not feel alone with our fears about the future of our son. It opened up a lot of doors to activities and other organizations from which we could try to put our son on a path to a future.
309	Yes, it made me realize how important it is to bring the twins out. I think I may be able to do it myself now that I know how much they enjoy it.
310	Yes, the general info I got from it. Stuff/things I didn't even know about, different places/ideas of where to go with him.
312	Yes, it was. It made me feel good that I am useful. They (my girls) learned they can count on me to help. It was important to me that the girls get out and meet other kids.
313	I met Patience! I think it was important because I was interested – I don't know if everyone could answer all those questions. I hope this (my participation) makes a difference for someone else with a special needs child.
349	Yes, it was important because with my child it takes a lot of work to go out and if I know someone was waiting for me or going to help I would push myself to go. It's easy to just sit at home.

Did the project meet your expectations? If so, how? If not, how could we have better served your needs?

ID	Comment
306	Yes, both Anne Marie and Jill were available to talk to us about our concerns about the project and other things. They are valuable resources of information. Jill was very flexible in setting up a schedule to meet with, and we were always told up front about what was expected of us and our involvement.
309	Yes, it really helped me go out and be active in my community.
310	Yes it did. It was very helpful. It encouraged me to go out and get him prepared for preschool.
312	Yes, it did. I couldn't have asked for anything more. We all experienced so much/things and places we probably never would have known about. The kids experienced so much especially from the library group. They even picked up songs and they sing them at home all the time.
313	Oh yeah, it was exceptional because we made a change that we would not have made otherwise – attempting the bus transportation with child.

Looking at the overall project, what do you think worked well, and what do you think might have been done differently?

ID	Comment
306	Jill was very good.
309	Nothing but, I wish I had known about the project earlier so that I could have been doing activities all along.
310	I think the relationship that he and I had with Jill worked really well. He liked her and I was surprised at how friendly he was/how he took to her. It would have been really hard if he didn't want to do things.
312	The only thing that I didn't do is the list because the girls are with my mom except for Wednesdays when we go out son I didn't use it.
313	There wasn't much time for things to go wrong. (Aug 23 rd was the first visit – the last visit was October 2 nd , she was three). The questions were repetitive.
349	No, nothing.

V. Appendices

Appendix A	Natural Environments Procedural Manual
Appendix B	Activity Settings Observed
Appendix C	IFSP Objectives Tables
Appendix D	Community Mapping Interview Survey
Appendix E	Community Maps Evaluation Letter and Searching Instructions
Appendix F	Community Maps Evaluation Survey
Appendix G	IFSP Coding Manual
Appendix H	Natural Environments Family Handbook
Appendix I	Natural Environments Provider Handbook (Draft)
Appendix J	The Play Tools for Toddlers Curriculum and Assessment of Peer Relations
Appendix K	Replication Procedural Manual
Appendix L	Case Studies