



The Positive Impact of a Prevention Approach to Early Childhood Behavioral Support on Children’s Social and Self-Control Skills and Teacher Interactions:

Profiles of the Combined Effect of HealthyCHILD Behavioral Support and Pittsburgh Public Schools Head Start (PPSHS) and Pre -K Programs (July 1, 2005 to June 30, 2006)

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WHAT IS HEALTHYCHILD AND ITS SERVICES AND SUPPORTS?

HealthyCHILD (Collaborative Health Interventions for Learners with Differences)

is an interagency developmental healthcare partnership model designed to serve the needs of teachers/caregivers and families for children with physical health, behavioral health, and developmental needs. HealthyCHILD is a unique collaboration among Children's Hospital of Pittsburgh, The UCLID Center at the University of Pittsburgh, and various types of early childhood intervention programs in the Greater Pittsburgh region, Central Pennsylvania, and the Northern Panhandle of West Virginia.

HealthyCHILD uses a collaborative consultation and problem-solving (CCPS) model to deliver a continuum of prevention to intervention supports to teachers, children, and parents in early childhood intervention programs. HealthyCHILD provides consultation, direct support, and staff training/mentoring *on-site* within school district, early intervention, Head Start and other early care and education classrooms or home/community settings.

HealthyCHILD operates a mobile developmental healthcare team (e.g., nurse, psychologist, early childhood developmental healthcare consultant, and consulting pediatrician) to deliver graduated support (i.e., prevention to intervention continuum) to classroom teachers, parents, and individual children, combining preventive and individualized support strategies.

HealthyCHILD is a field-validated and evidence-based interagency and systems reform model originally funded in its research phase under a four-year grant (1994-1998) from the US Department of Education, Office of Special Education and Rehabilitative Services (OSERS), and The Jewish Healthcare Foundation of Pittsburgh. HealthyCHILD has been recognized as a "best practice" model by the Head Start Bureau (2001).

HealthyCHILD Team Activities

The HealthyCHILD collaborative team, consisting of a developmental healthcare consultant (behavioral support), psychologist, coordinator/liaison, and nurse (direct nursing services under MOSAIC contract only), work with Pittsburgh Public Schools Head Start and Pre-Kindergarten Coordinating staff, Special Services Coordinators, Family Support Specialists, teachers and families within Head Start and Pre-Kindergarten classrooms to provide a variety of services ranging from educating staff dealing with specific issues to more general classroom concerns. The services included: providing individualized interventions, instruction/education to staff, provision of materials, and collaboration to meet the needs of teachers, staff, parents, and individual children referred to HealthyCHILD.

Specific activities and support to the classrooms included both direct and indirect instruction through modeling. For example, HealthyCHILD staff prepared lessons and read children's books to classrooms on Social and Emotional Learning. With the illustration of specific books on Social and Emotional Lessons, children were provided a more positive social interaction to foster the learning of all children, especially those who are already at risk. HealthyCHILD activities included modeling strategies to support children in large groups and curtailing and managing a child's disruptive classroom behaviors. In addition to offering assistance regarding managing more urgent classroom concerns, ideas for creative preventative measures were explored and utilized. One educator found it particularly helpful to understand how a child's daily journaling can be used to help the child process difficult emotions. Other instruction to staff included helping children to explore activities that assist them with emotion identification, labeling, and management helping to increase classroom compliance and cooperation.

HealthyCHILD staff provided materials such as class binders, resources on transitions and behaviors, classroom behavior charts and lessons on Social and Emotional Learning and

labeling feelings were available for classroom use. The HealthyCHILD resource library was made available with appropriate books chosen to provide information and specific instruction on a range of topics from managing routine transitions to dealing with death and teaching the concept and practice of empathy. Specific stressors leading to behavioral problems or regression in previously mastered skills or competencies, such as potty training, were addressed further on a collaborative level. In more severe cases, HealthyCHILD assisted staff in attaining needed assistance from outside agencies.

Collaboration connected teachers, HealthyCHILD, and families and provided needed guidance and information that helped staff and families deal with specific family issues. Specific work provided by HealthyCHILD to teaching staff helped to implement new skills that would address and resolve high-risk behaviors and improve overall classroom management as well as help at-risk children.

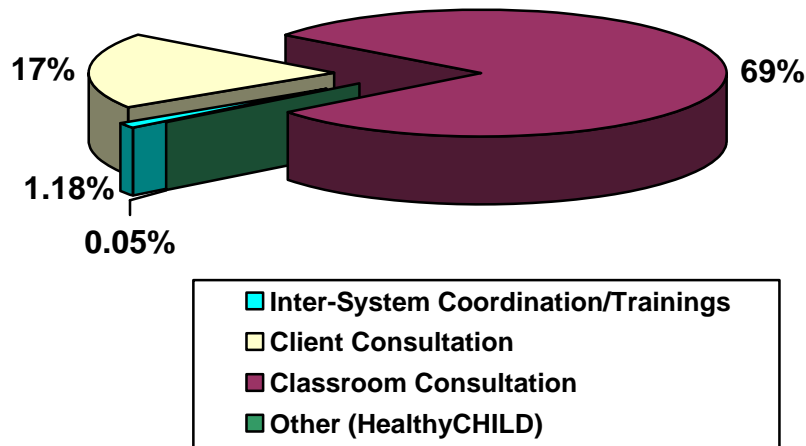
Much research has been gathered in the field of early childhood development to show how early childhood settings are critical ones for setting individual children on positive trajectories toward academic and social success. Furthermore, collaboration facilitated by the HealthyCHILD team has long ranging benefits for educators, families and school systems. As one teacher noted HealthyCHILD staff helped assist, support and guide this teacher in introducing sensitive topics to families pertaining to overall discipline issues and working together to assist children and their families to thrive. Prevention and intervention programs such as HealthyCHILD help to forge important and critical links that have both short and long term effects within our communities.

In summary, feedback received has shown a very high level of satisfaction pertaining to services received. Head Start and Pre-Kindergarten staff particularly appreciated the assistance they received overall and especially appreciated HealthyCHILD's sensitivity to their staffing issues and limitations. Feedback provided has shown an increased demand for

future HealthyCHILD program services. Per request from program manager for Pre-K/Head Start (Nancy Hill) the activity use of Healthy Child staff shows greater time has been spent in classroom consultation and working with the prevention of challenging behaviors. In comparison to last year, Healthy Child Team members spent 48% of their time in the classroom to last years 22%.

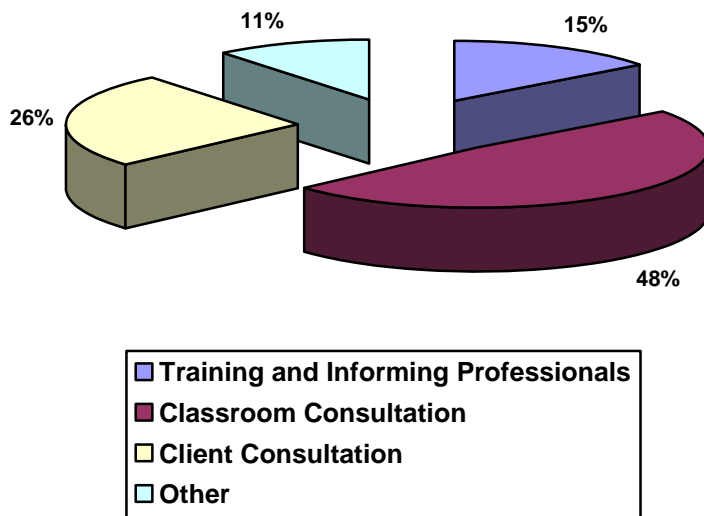
The following charts provide summaries of the variety of activities and services that the HealthyCHILD team provided over the 2005-2006 consultation year. The first chart shows the activities of the Developmental Healthcare Consultants'; the second looks at the Psychologists' activities.* A description of each activity follows these charts.

HealthyCHILD Developmental Healthcare Consultants Hours 2005-2006 School Year



*Activities are based on a sample from July 1, 2005 to June 30, 2006

Psychologist's Hours 2005-2006



- **Training** – preparation and presentation of individual, small group (2-5 individuals) or large group trainings for administrators, teachers, or parents (including in-service trainings); conducting interdisciplinary collaborative team training sessions.
- **Individual Child Consultation and Intervention** – completing referral intake, contacting, or meeting with families; making referrals to other agencies/services; attending meetings on a family’s behalf; developing Developmental Healthcare Resource Planners for individual children; consulting with teachers and/or program staff about a child who has been referred.
- **Classroom Consult** – observing a classroom; making recommendations about a classroom; discussing classroom management with teachers or supervisors/administrators; modeling classroom management for teachers; developing classroom resource planners; consulting other program staff about program issues; attending program administrative/policy/supervisory meetings; attending parent council meetings.
- **Inter-system Coordination** – discussing systems issues; formulating procedures/processes; participating in planning meetings; completing liaison activities with personnel across systems.
- **Organization and Planning** – preparation of materials; internal meetings; project coordination; consultation with other Early Childhood Partnerships professionals.
- **Linkages to Resources** – contacting and/or meeting with outside services/resources; providing resources/information to a program; attending meetings or workshops to

gather resources for a program; making presentations on behalf of a program at workshops, etc.

- **Assessment** – assessing a classroom, professional staff or individual child by administering an assessment tool. This includes assessments for reliability and writing of reports on assessment results. Examples: Completing a PKBS on a child, completing a caregiver assessment, completing a classroom rating scale.
- **Data Management** – data entry, review; reporting; backup; data import and export.
- **Informing Professionals** - conference presentations; article writing; development of brochures, etc. to inform outside professionals of HC and/or ECP's programs, their development and related research findings.

HOW HAS HEALTHYCHILD SUPPORTED TEACHERS, PARENTS, STAFF, AND CHILDREN?

HealthyCHILD has supported 1542 children through preventive and individualized interventions. Depending on severity of need, the HealthyCHILD team worked with Pittsburgh Public Schools personnel and parents using four main methods:

- ***Supporting classroom staff*** by enhancing their knowledge of current behavioral and medical issues; providing input on how to develop classroom environments that reduce conflict and support the engagement of children in activities and foster positive social interactions with peers and adults; and providing support materials, such as journal articles and literature outlining current and time-tested behavior management techniques.
- ***Group and individual classroom trainings*** on developmental and behavioral topics given by the HealthyCHILD psychologists, nurse and/or developmental healthcare staff. Trainings reflected needs expressed by PPS teaching and management staff.
- Conducting ***Child Studies*** to triage child and classroom needs, as well as, discuss specific methods of supporting classrooms and children with potential deficits in social development.
- Collaboratively developing intervention plans for ***individual children referred to HealthyCHILD*** (with signed parent consents) who demonstrated more intense developmental and/or health-related needs.
- HealthyCHILD participated in 11 Parent Meetings throughout the 2005-2006 school year. HealthyCHILD was made available to answer

questions from parents regarding children's behaviors. Parent Meetings were conducted at the following sites:
Lemington II, Faison (2), Kingsley, First Baptist, Fort Pitt, Minadeo, Children's Museum, Roosevelt, Stevens, Morningside

SUPPORTING CLASSROOM STAFF

HealthyCHILD Developmental Healthcare Consultants made bi-monthly visits to Head Start and Pre-Kindergarten Classrooms to familiarize themselves with the specific classroom environments to optimize their ability to provide pertinent preventative strategies. Classrooms that were determined as a focused classroom, needing more intense support were visited more frequently by HealthyCHILD Developmental Healthcare Consultants. These visits set the stage for open communication between classroom staff and HealthyCHILD consultants.

TRAININGS

Trainings were provided throughout the year either as formal group training sessions or as individualized classroom trainings on specific topics. The following topics were covered throughout the **2005-2006** year:

January 13, 2006 (*full day in-service for teaching staff*), HealthyCHILD overview, Toilet Training for Preschoolers

June 13, 2006 (*full day in-service for teaching staff*), Child Development of 3 year olds, Classroom Environment, Building Teacher/ Child Relationships, How to Reach Out to Parents

CHILD STUDIES

Training and educational support was provided to the Head Start and Pre-Kindergarten staff through Child Studies which were held onsite, typically in classrooms during the children's afternoon rest time. The time for the Child Study would range between 20 minutes to one hour with most lasting one hour. Child Studies were designed to support the teaching staff's understanding of classroom management or children's needs. Some examples include:

implementation of new behavioral strategies; strengthening behavioral strategies; clarification of procedures, and provision of resources.

- During the 2005-2006 program year a total of 41 Child Studies were held.
- Preventative strategies were discussed for 25 children (not identified by name) who were not referred to HealthyCHILD
- 11 children were referred to receive behavioral health support through HealthyCHILD
- Early Intervention (EI) support was initiated, including:
 - 1 clarification of goals of EI
 - 1 acquisition of a behavioral plan developed by EI
 - 22 requests for EI evaluation
- Referrals were made for additional resources:
 - 5 pediatrician
 - 3 Family Support Specialist
 - 11 counseling services
 - 7 pediatrician for medical concerns & possible diagnosis
 - 1 outpatient Occupational Therapy Services
- Child Studies were completed at the following sites (unless specified only 1 child study was done per site):

Arsenal, Arsenal III, Children's Museum , Chatham, Clayton, Crescent, Dilworth (2), East Hills II (2), East Hills III, Faison I, Fort Pitt IV, Friendship I (2), Friendship II (2), Friendship III, Hill House (2), Hill House II (2), MLK III, Madison, Minedeo, Morningside (2), Lemington (2), Schenely Heights (2), Sheraden II (2), Roosevelt III, Rosedale, Weil II

STAFFINGS

The key purpose of staffing is to address child and family needs related to the child's educational program in Head Start and Pre-K. Those needs may include challenging behaviors such as externalizing behaviors (e.g. hitting peers) or internalizing behaviors (e.g. withdrawal response to grief or abuse). A staffing usually

includes key staff , including the Family Support Specialist, HealthyCHILD staff psychologist and Developmental Healthcare Consultant and Head Start/Pre-K teaching staff. Other staff invited to staffings, dependent on the needs of the family, may include education supervisors, coaches for the classroom, special service coordinators, principals, Early Intervention staff and other relatives, support personnel (e.g. advocates). The expected outcome of staffings include collaboration, clarification of strategies, referral to HealthyCHILD, Early Intervention or outside agencies (e.g. counseling services). It is assumed that the staffing has documentation and clarification as to follow-up responsibilities for various staff. Staffings are scheduled, initiated and coordinated by Head Start/Pre-K staff with support from HealthyCHILD.

- 56 staffings were conducted within the 2005-2006 school year. Each staffing lasted from 1 to 2 hours.
- 26 Staffings were completed with the HealthyCHILD psychologist for children with referrals—referral already in place or referral as a result of the meeting; 3 not referred.
- Staff present at specific child staffings:
Parents: 30; Head teachers: all (56) [most times assistants were not able to attend]; All HC staff: all (56); Family Support Specialists: 20;
Coaches for class: 15; Special Services Coordinator: 12; Other (EI staff, principals): 4
- Staffings were primarily conducted to address externalizing behaviors and need for parent involvement
- 15 child plans were completed with all staff input
- Staffings were completed at the following sites:

Stevens II (3), MLK II (2), Greenway II, Faison I, Arsenal I, Arsenal II, Troy Hill (2), Dilworth (2), Morningside, Stevens I, Sheraden II (4), Greenway I, Minadeo I, Beeckwood I, MLK III (2), Northview Heights, Spring Garden I, Weil II, East Hills II, Mifflin (2), Kinglsey I, Weil I, Yeshiva (3), Clayton (2), Roosevelt II, Minadeo II, Sheraden I, Friendship (2), Mann (2), Roosevelt IV (3), Murray, Kingsley II, Madison I, Schenley Heights, Fulton, Spring Garden, Lemington II, Chatham, Hill House

CHILD REFERRALS

- The HealthyCHILD team including Developmental Healthcare Care Consultants, Psychologists and Coordinator consulted with Head Start program staff for 31 specific children's behavioral health concerns.
- Of those 31 children, 10 children were provided 3 or more consultations.
- The HealthyCHILD team consulted the parents or guardian of 31 children regarding their child's behavioral health concerns.
- Of those 31 children's parents or guardians, 10 were provided 3 or more consultations.
- The HealthyCHILD team supported the parents of 21 children to receive behavioral health supports outside the Head Start program from local community agencies.

Non-Funded In-Kind Services and Supports Provided by Graduate Students

During the 2005-06 program year, HealthyCHILD was an intern opportunity for two doctoral students, one being from the School Psychology at Duquesne University and another from the School Psychology at the University of Pittsburgh. Each student received supervision from the HealthyCHILD certified school psychologists and coordinator and worked closely with the Developmental Healthcare Consultants. Upon receiving orientation and training about HealthyCHILD services and supports and completing on-site observation

of the psychologists and DHCs, the students were assigned a specific classroom site to provide regular weekly classroom support.

The Duquesne intern provided over 760 hours of services from September 2005 until May 2006 primarily at the following sites: Arsenal, Fort Pitt, Minadeo, Fulton, Homewood North, Roosevelt, and Vann. The University of Pittsburgh intern provided approximately over 16 hours over the course of one month (October through November) providing services to Spring Garden and East Hills. Approximately over 12 hours of service was provided to Lemington Head Start in a course of a month.

While in the classroom the Doctoral Interns worked to support the teaching staff with the implementation of positive behavior support strategies. They also accompanied the psychologists on parent home visits for referred children and wrote collaborative behavioral support plans for referred children with the supervision of the psychologists. Combined both Doctoral candidates combined a total of 780 hours of additional assistance within the Head Start program under the supervision of the certified school psychologists. The interns' activities paralleled that of the Developmental Healthcare Staff and included but were not limited to providing additional support such as class consultants, home visits and intensive interventions.

PART I

HOW DID CHILDREN IMPROVE WITH HEALTHYCHILD SUPPORTS?

Healthy Behaviors: All Children

The social behavior development of children enrolled in PPSHS and Pre-K programs was monitored across the 2005-2006 school year, using the *Preschool Kindergarten Behavior Scale (PKBS; Merrell, 2003)*. Each child's baseline (beginning of the year) and post-intervention (end of the year) social skills and self-control behaviors were observed and recorded by teachers (mentored by HC team) in the fall of 2005 and again in the spring of 2006 to look at the progress of children in acquiring social skills and self-control behaviors and the effectiveness of the PPSHS/Pre-K program and the critical value-added of the HealthyCHILD supports.

The PKBS surveys two areas: Social Skills and Problem Behaviors. A standard score of 100 on each scale profiles typical development. A score of 80 or below on the Social Skills Scale documents that there are potential delays in social skills development. A score of 110 or above on the Problem Behavior Scale indicates significant behavior problems that could be a barrier to early learning and progress.

Who was observed, assessed and supported by HealthyCHILD?

- From July 1, 2005 through June 30, 2006, 1,537 children enrolled in either the Head Start or Pre-K program received at least one PKBS evaluation.
- Thus, 1,537 children and their teachers received a combination of preventive or individualized intervention from the HealthyCHILD team.
- Of 1,537 children, 89 children were eliminated from the sample due to the fact that teachers did not record their birthdates on the forms or provided two different dates for the same child.

- Approximately 66.43% (n= 1021) of these children were assessed by teachers and staff at least twice, enabling an analysis of social skills progress.
- Of the overall number, 48% (n= 491) were male and 52% (n= 530) were female.
- The average age of children during the fall assessment period was 50 months, ranging in age from 34-61 months.
- The average age of children during the spring assessment period was 55 months, ranging in age from 38-67 months.
- Over 118 children were referred to HealthyCHILD (HC) for intensive individualized support by a psychologist and the interagency team: combined PPSHS/Pre-K and HC.

What are social skill and self-control behaviors?

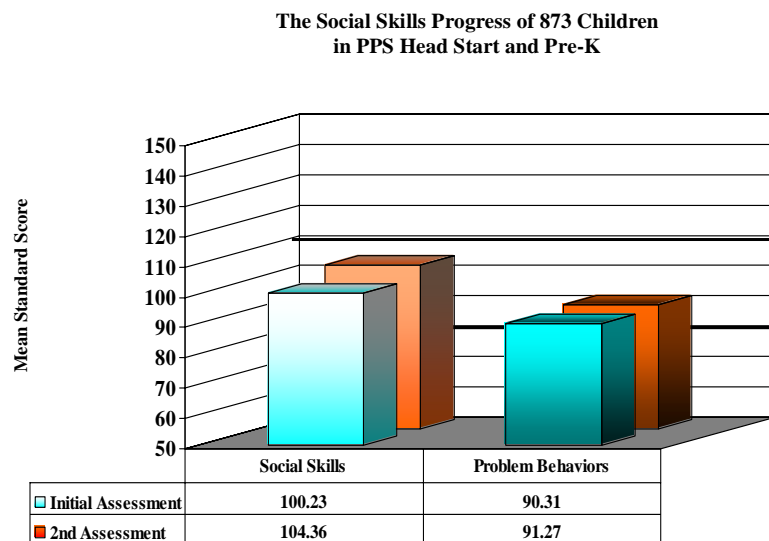
Social development encompasses a variety of social skills, including the way children interact with their peers and adults, how well they follow instructions and take turns and how well they work independently. The Social Skills scale of the PKBS assesses each of these skills and produces a combined social skills score.

Children show a variety of behaviors to express their needs while they are in the process of developing self-control skills. These behaviors can be either external behaviors, such as hitting, biting, and throwing temper tantrums, or internal behaviors, such as withdrawing from other children and adults, becoming physically ill when anxious, and being vulnerable to the actions of other children. The Problem Behaviors scale of the PKBS surveys such behaviors.

How did children enrolled in PPS preschool programs progress?

- As a group the 1,537 children scored within the average range on the Social Skills Scale of the PKBS on their initial assessments (mean score of 100).

- Children who received at least two assessments (1021) scored within the average range in social skills on their end-of-year assessment and demonstrated an overall increase in social skills (100 to 104), that was statistically significant ($p < .001$) and beyond chance. The gain is consistent with the level of improvement observed in most successful early intervention outcomes studies (Forness & Kavale, 1994).
- The beginning-year assessments indicate that on average PPS Head Start and Pre-K children demonstrate self-control behaviors/or behavior problem levels that are typical for their age on national norms (mean score of 90).
- Children who were assessed at least twice appear to maintain their typical and mature self-control skills as demonstrated by performance on their end-year observations (mean score of 91).



Developmental Domain & Score Table

Healthy Behaviors: Children Showing Social Behavior Delays and Problems

As discussed previously, children who score 80 or below on the Social Skills Scale demonstrate some delays in their social development. Those with a score of 110 or above on the Problem Behavior Scale exhibit behaviors that connote delays in self-control skills.

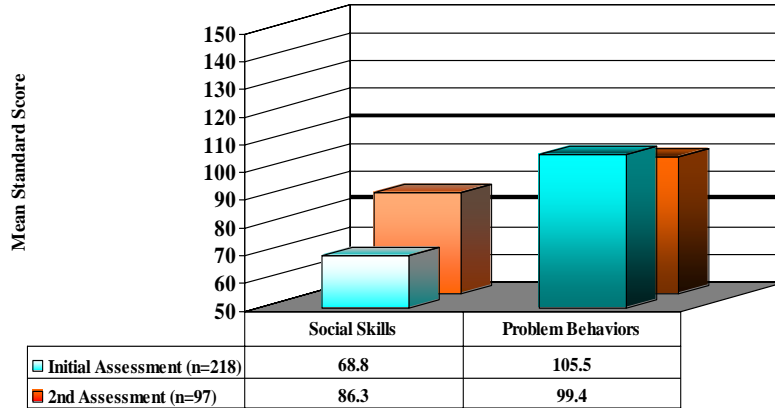
Who demonstrated delays?

- 147 children demonstrated delays in social skills. Of these, 45.6 % also showed delays or problems in self-control behaviors.
- 61.2 % of children displaying delays were male
- Average age of these children at their initial assessment was 46.8 months and 52 months at their 2nd assessment.

What was the progress of children with delays or problems?

- Social skills of children with delays improved significantly ($p < .001$) from moderate to mild (68.8 to 86.3), but as a group remained within the mild delay or at-risk range.
- On average, Problem Behavior levels remained low compared to national peers at both the first and last observations.
- However, children with delays demonstrated a range of problem behaviors from none (75) to severe (142)-enough to qualify for county mental health services.
- As expected, as social skills increased, problem behaviors decreased demonstrating the impact of HealthyCHILD services augmenting effective PPSHS/Pre-K programming.

**PPS Head Start and Pre-K
Social Development of Children Demonstrating Delays and
Problems**



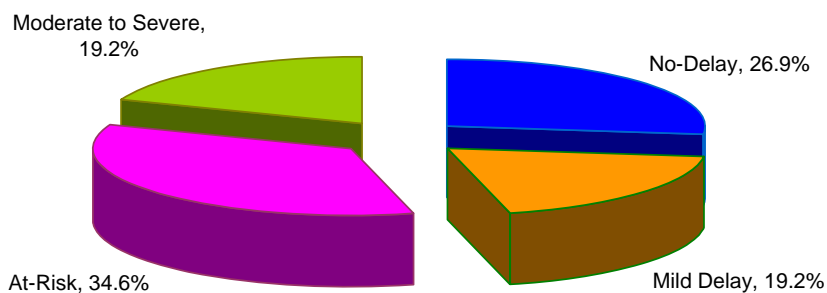
Developmental Domain & Score Table

Healthy Behaviors: Referred Children

Who comprises the HealthyCHILD referral group?

- Over 118 children from the overall assessment group were referred to HealthyCHILD for intensive and individualized behavioral interventions.
- Of the 118 referred children, 77 % were male and 23 % female
- The average age at the initial evaluation was 49.1 months and 54.2 months at the time of their second evaluation.
- Thus, the average period of intervention was only 5.1 months.
- 54 % of HC children demonstrated delays in social behaviors

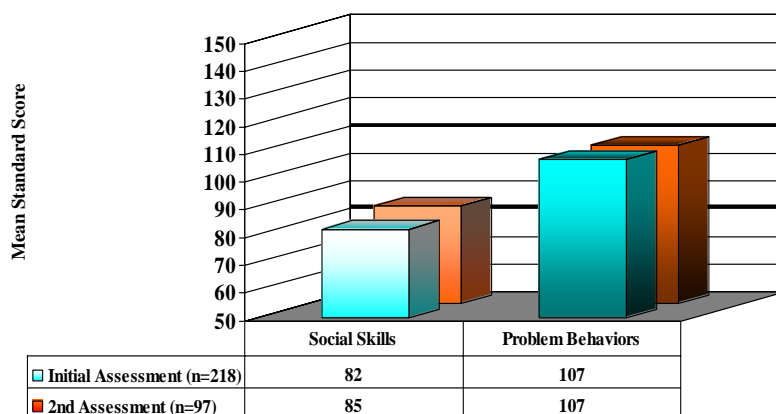
Distribution of Children Referral to HealthyCHILD with at Least Two Completed Assessment by Their Level of Delay



What was the progress of children referred for individual HealthyCHILD interventions?

- As a whole, children referred to HealthyCHILD made significant gains in acquiring new social skills and building self-control skills and reducing problem behaviors ($p < .05$).
- Children who demonstrated delays slightly improved their social skills (73 to 81), but continued to show significant delays that may require early intervention services and supports.

PPS Head Start and Pre-K Social Development of Children Referred to HealthyChild



Developmental Domain & Score Table

PART II

HOW DID TEACHER INTERACTIVE BEHAVIOR WITH CHILDREN IMPROVE AS A RESULT OF HEALTHYCHILD CONSULTATION?

Acquisition of Teacher Competencies on the Inventory of Practices for Promoting Social Competence (IPPSC)

Distribution & Statistics by Classrooms

Observations were conducted of teacher-child interactive behavior on a total of 84 classrooms by HealthyCHILD staff in Spring 2006 (time point 2) and 81 classrooms were completed in Fall 2005 (time point 1). The measure used in this report is the Inventory of Practices for Promoting Social Competence (IPPSC) scale, developed for HealthyCHILD consultation model. This scale is an adapted version of the Inventory of Practices for Promoting Children's Social and Emotional Competence, developed by the Center on the Social and Emotional Foundations for Early Learning (CSEFEL; Hammeter, 2004). This measure can be used by individuals and/or teams to identify training needs and plan actions to address those needs (csefel.uiuc.edu, 2004.) For the purposes of feedback to programs regarding quality of classroom performance an analysis was done for the classrooms based on use of the IPPSC. It is important to understand that the measure is used only for feedback purposes for the program and has been used as a helpful tool in guiding HealthyCHILD consultation to classrooms.

The IPPSC scale was constructed to consist of three domains of 'Building Positive Relationships (7 items, i.e., "speaks calmly to children")', the 'Creating Supportive Environments (22 items, i.e., implements schedule consistently)', and 'Social and Emotional Teaching Strategies (11 items, i.e., "provides children with opportunities to make choice")'. The items are scored as "3= Consistently", "2= Occasionally", "1=Rarely", and "0=Never Observed" practices.

This report represents the performance by classrooms grouped by their range scores based on the Quality Improvement Criteria (QI-C) of 2.75. This criteria represents practices that fell in the upper range between 3 (consistent performance) and 2 (occasional performance.) This assumes that classrooms that fall in this range represent close to "best practices" for promoting social and emotional competence in preschool children. The classrooms were grouped according to their averaged overall mean scores of Time 1 and Time 2 across all domain practices in the IPPSC. The current report is organized into three sections: (1) the

descriptive data for the classrooms in Spring 2006 (Time 2); (2) the description of the categorized groups in terms of the overall IPPSC practice and the domain practices in Time 2; and (3) the changes of classrooms from Time 1 to Time 2 in terms of the overall IPPSC scores and domain practice scores. In the second part of report, the QI-C distribution will be discussed for identifying strengths and needs in the classrooms, so that HC consultants can utilize this information in providing support. The classrooms are grouped into four categories as follows:

1. **Low-Minimal** HC Support Classrooms are defined as the classrooms with relatively high scores for consistent performance, and requiring low to minimal HC staff consultation support to their classrooms, with overall mean scores 2.50 and above.
2. **Standard** HC Support Classrooms are defined as the classrooms with scores from occasional to consistent performance, and requiring standard HC staff consultation support to their classrooms, with overall mean scores range from 2.01 to 2.49.
3. **Above Standard** HC Support Classrooms are defined as the classrooms with scores from rare to occasional performance, and requiring above standard HC staff consultation support to their classrooms, with overall mean scores range from 1.71 to 2.00.
4. **Intense** HC Support Classrooms are defined as the classrooms with scores from never to rare performance, and requiring intense HC staff consultation support to their classrooms, with overall mean scores 1.70 and below.

These groups are intended for HealthyCHILD planning so that consultation, support and resources can be efficiently allocated to each of the classroom groups. Although it is important to recognize that the groups with lower means would be categorized as the group needing more HC supports, it does not necessary mean that they did receive more supports from HC due to other program considerations (e.g. time allocation, days program not in session, etc.).

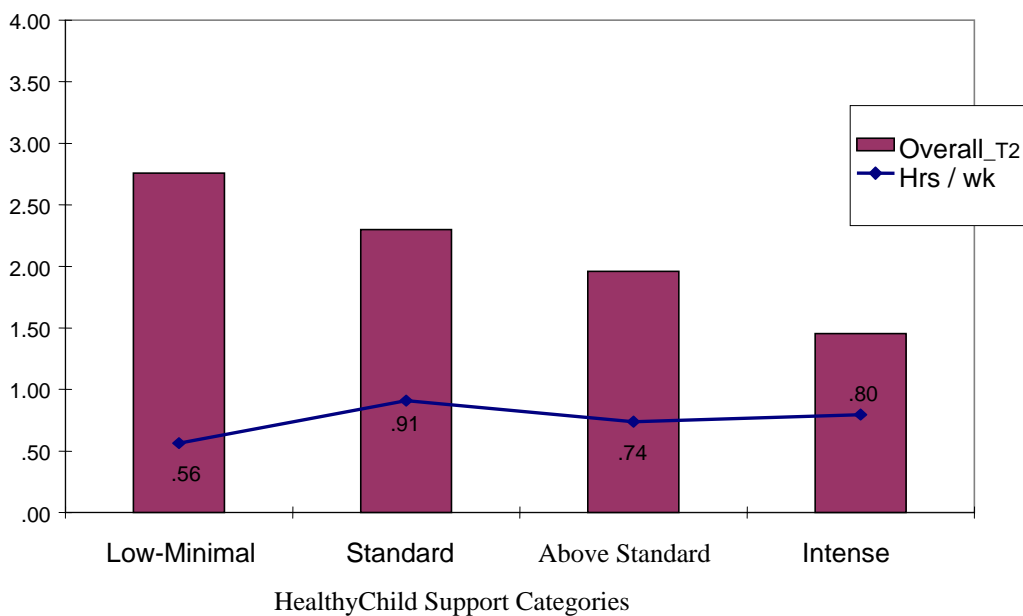
Descriptive data of the classrooms (n=84) in Time 2

There are 3 new classrooms in the second time point evaluation. Two of them fall into the “Low-Minimal” HC Support group, and one falls into the “Above Standard” HC Support group. Overall, 43.2% of the classrooms remains in the same category in four groups; 32.1% show movement up one level (e.g., classroom 22.1 was in Standard HC Support group in Time 1, with change to Low-Minimal HC Support group in Time 2); 7.4 % changes two levels; and 1.23 % changes three levels. 14.8 % of the classrooms decreased to one level, and

1.23% decreased to two levels. The average number of children in the classrooms is 16. Seven of eighty four classrooms experienced a staff change from Time 1 to Time 2.

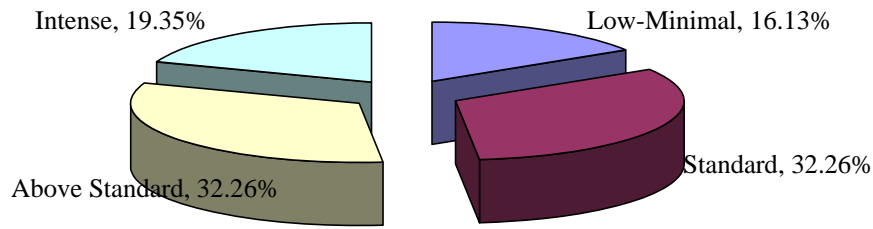
It was estimated that on an average the HealthyChild consultants provided a range of classroom support/consultation between 0.17 to 3.04 hrs/wk in the classrooms (mean= 0.77 hrs/wk) from October 2005 to March 2006. Figure 1 shows the mean distribution in Time 2 and estimated time that HC consultants have spent in the classrooms across groups.

Figure 1. Overall Means in Time 2 (n=84) verse Average Hours HC Staffs in the Classrooms by Groups



On average, HC consultants spend less time on Low-minimal HC Support classrooms, while there is little difference regarding time distribution for the other three groups. One possible explanation may be that a higher percentage of referred children are distributed in the higher functioning classrooms; and HC consultants still need to spend time helping teachers practice specific skills on dealing with children’s behavioral problems. Figure 2 shows the referral percentage in four groups.

Figure 2. The Referral Percentage in Four Groups

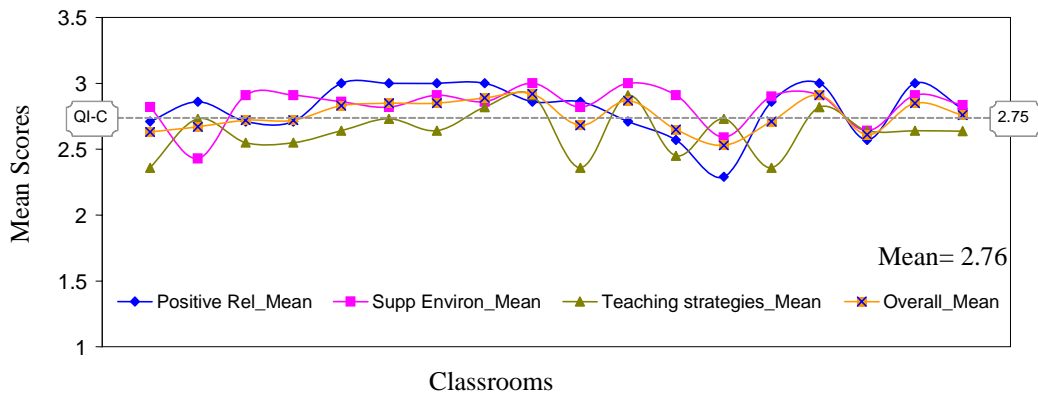


Description of Categorized Groups

1. Low to Minimal HC Support Classrooms

Overall, 17 classrooms were identified as involving “Low to Minimal” HealthyChild (HC) supports. These classrooms had an overall practices mean score of 2.76, which mean these classrooms had a higher frequency of consistently observed inventory “best practices” (i.e., teachers consistently uses a variety of strategies for building relationships with all children). In this model, the classrooms have good foundation for practices representing the “Building Positive Relationships” and “Creating Supportive Environment”, so HC supports focused on helping teachers build skill with practices from the domain of “Social and Emotional Teaching Strategies.” *The overall Quality Improvement Criteria mark (QI-C) was set at 2.75.* Figure 3 shows the overall and domain mean scores for each of the classrooms within this group.

Figure 3. Overall and Domain means in the Low-Minimal HC Support Classrooms in Time 2 (n=17)



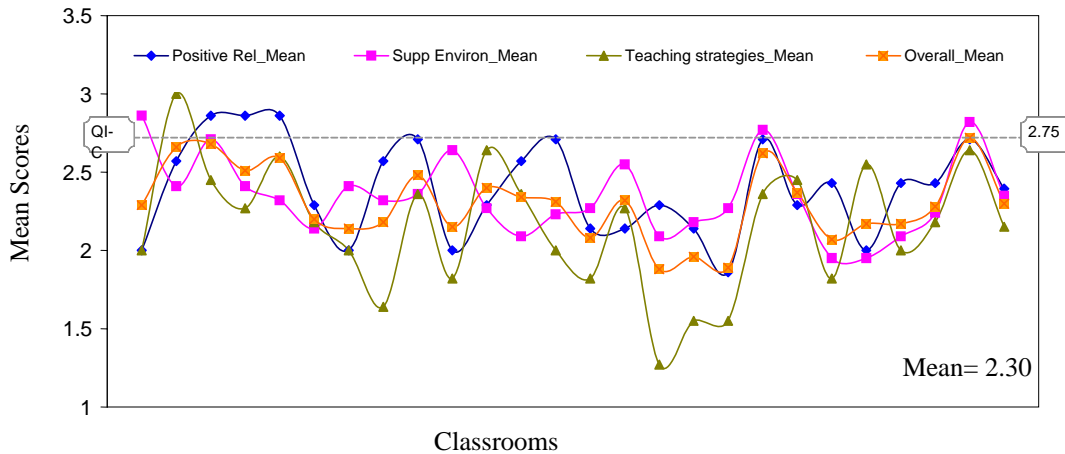
Note: Low to Minimal HC Support Classrooms (n=17 / 84)

For this group, most classrooms are either at or above the QI-C mark (2.75) in one or more of the practice domains, especially in the “Building Positive Relationship” and “Creating Supportive Environment” domains. Overall, it is observed that the “Social and Emotional Teaching Strategies” domain although improved in scores showed less mean change than the other two domains, with mean ranges from 2.36 to 2.91.

2. Standard HC Support Classrooms

The classrooms in the second group are those identified as needing Standard HC support. There are 25 classrooms in this group. These classrooms had an average overall mean score of 2.30, ranging from 1.88 to 2.72. More significant variations are observed in the “Social and Emotional Teaching Strategy” domain with fluctuation between 1.27 (rarely to occasionally observed) to 3.0 (constantly observed). Figure 4 provides the means and QI-C percentage mark distributions in the classrooms.

Figure 4. Overall and Domain means in the Standard HC Support Classrooms in Time 2



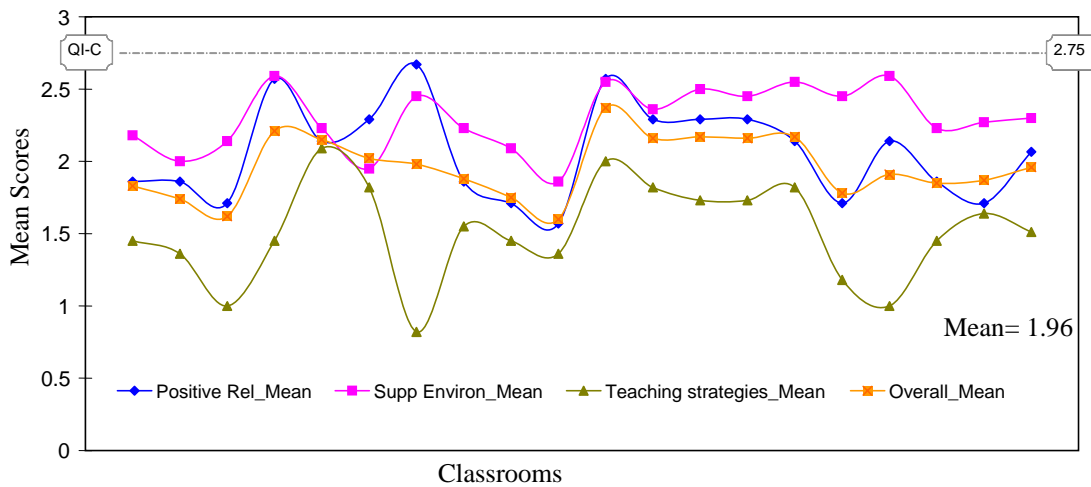
Note: Standard HC Support Classrooms (n=25 / 84)

The fluctuation in the “Social and Emotional Teaching Strategies” domain is more easily differentiated from the other two domains, especially in some classrooms. While the classrooms have been grouped together based on their overall mean scores, it might be useful to organize the allocation of resources and support for these classrooms incrementally and according to the domain needing more attention.

3. Above Standard HC Support Classrooms

The next set of classrooms were classified as Above Standard HC Support indicating that while their mean scores had some variability, these classrooms scored consistently at or below 2.0 (occasionally) and with a higher frequency of mean scores nearing 1.5 (rarely to consistently observed practices). 19 classrooms belonged to this group. The mean score across three domains is 1.96, ranging from 1.60 to 2.37. Figure 5 shows the fluctuations and distributions in terms of overall all means, domain means and QI-C percentage marks in the classrooms.

Figure 5 Overall and Domain means in the Above Standard HC Support Classrooms in Time 2



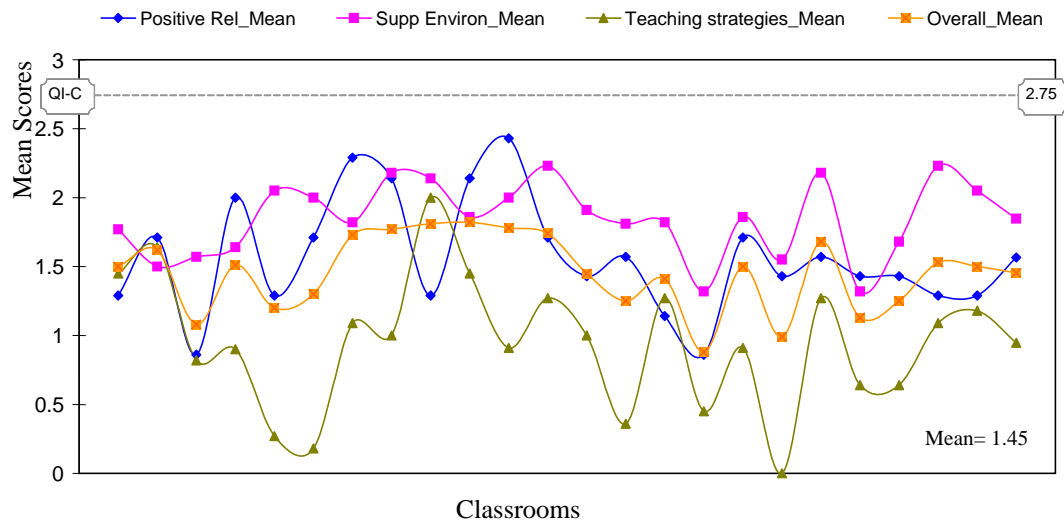
Note: Above Standard HC Support Classrooms (n=19 / 84)

Again, the fluctuation in performance for the three domains is more easily differentiated from each other. One specific example, the “Creating Supportive Environment” domain has the higher mean scores of 2.30, ranging from 1.86 to 2.59. The “Social and Emotional Teaching Strategies” domain shows the widest range from low score 0.82 (never observed to rarely practice level) to high score 2.09 (occasionally practice level), with mean score as 1.51 (rarely to occasionally practice level). In sum, the classrooms in this group have a wide range of scores across the three domains. It may also suggest that these classrooms need more attention on helping to build effective social and emotional teaching practices.

4. Intense HC Support Classrooms

The last set of classrooms has been classified as Intense HC Support. These classrooms were scored consistently lower than all the other groupings in terms of the IPPSC overall mean scores, domain means and the QI-C percentage mark. In this model, the classrooms do not have the foundation regarding to the basic practices, including building positive relationship and creating supportive environment; therefore, the HC supports in this classrooms are more focused on helping teacher to build these basic practices. The classrooms in this group as Figure 6 highlights have the widest fluctuation in mean scores, ranging from .88 to 1.82, with mean score as 1.45. This may represent attempts to improve practices but the efforts not sustained.

Figure 6. Overall and Domain means in the Intense Standard HC Support Classrooms in Time 2



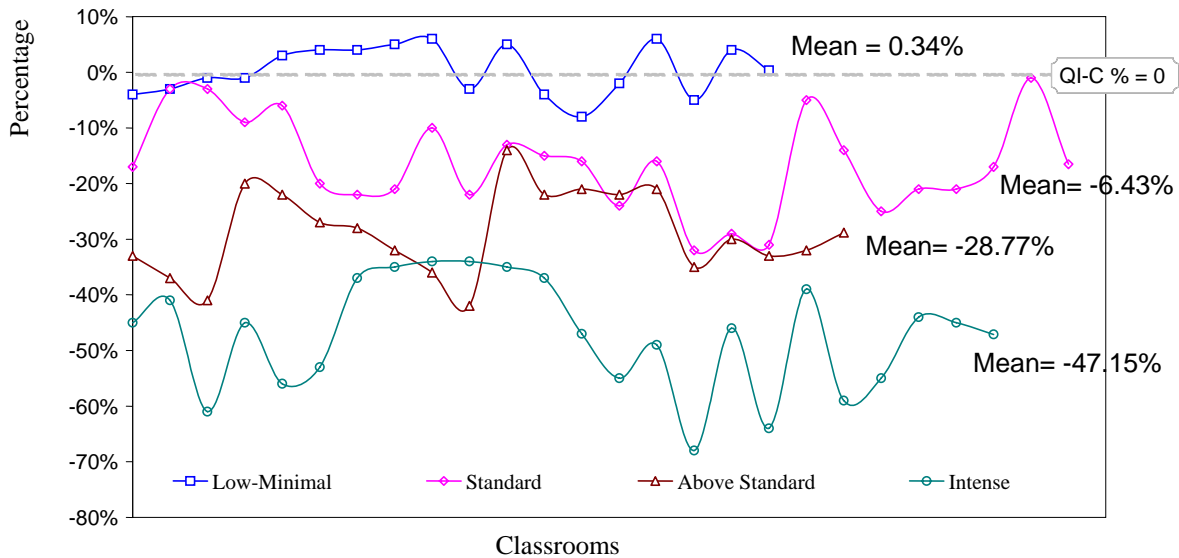
Note: Intense HC Support Classrooms (n=23 / 84)

More specific to the domain level, in general, the classrooms within this group have the higher practice frequencies on “Creating Supportive Environment” domain with mean score 1.85 ranging from 0.91 to 1.32. While they have the lower practice frequencies and wider range of fluctuation on “Social Emotional Teaching Strategies” domain with mean score 0.95 ranging from 0 to 2.0. Therefore, in these classrooms, the adequate practice of using social emotional teaching strategies with challenging behaviors of children is rarely observed. In sum, for this set of classrooms an “intensive” HC support mode is strongly recommended.

5. Overall QI-C Percentage Marks and Supports Distribution

This is another approach to understanding the performance of the classrooms by use of graph demonstrating the QI-C among the groups. By observing the distributions of QI-C percentage marks, it is easier to understand the strengths and needs within each group. Again, the Quality Improvement Criteria is set as 2.75. When the percentage mark of one specific domain is close to 0 %, the classroom has the better practice on that specific domain. In general, the averaged overall QI-C percentage marks for 84 classrooms is -24.24% ranging from -68 % to 6%. In the domain level, the classrooms have higher QI-C percentage points in the “Creating Supportive Environment” domain with mean of -16.42 % ranging from -52 % to 9.0 %; while having lower QI-C percentage points in the “Social and Emotional Teaching Strategies” domain with mean of - 35.44 % ranging from -100 % to 9 %. Figure 7 shows the distributions of overall QI-C percentage marks in four categorized groups.

Figure 7. The QI-C Percentage Mark Distributions across Groups



Note: QI-C percentage mark is calculated by the formula = $[(\text{mean score} - 2.75) / 2.75 * 100]$
 n=17 in Low-Minimal group, n=25 in Standard group, n=19 in Above Standard group, and n=23 in Intense group.

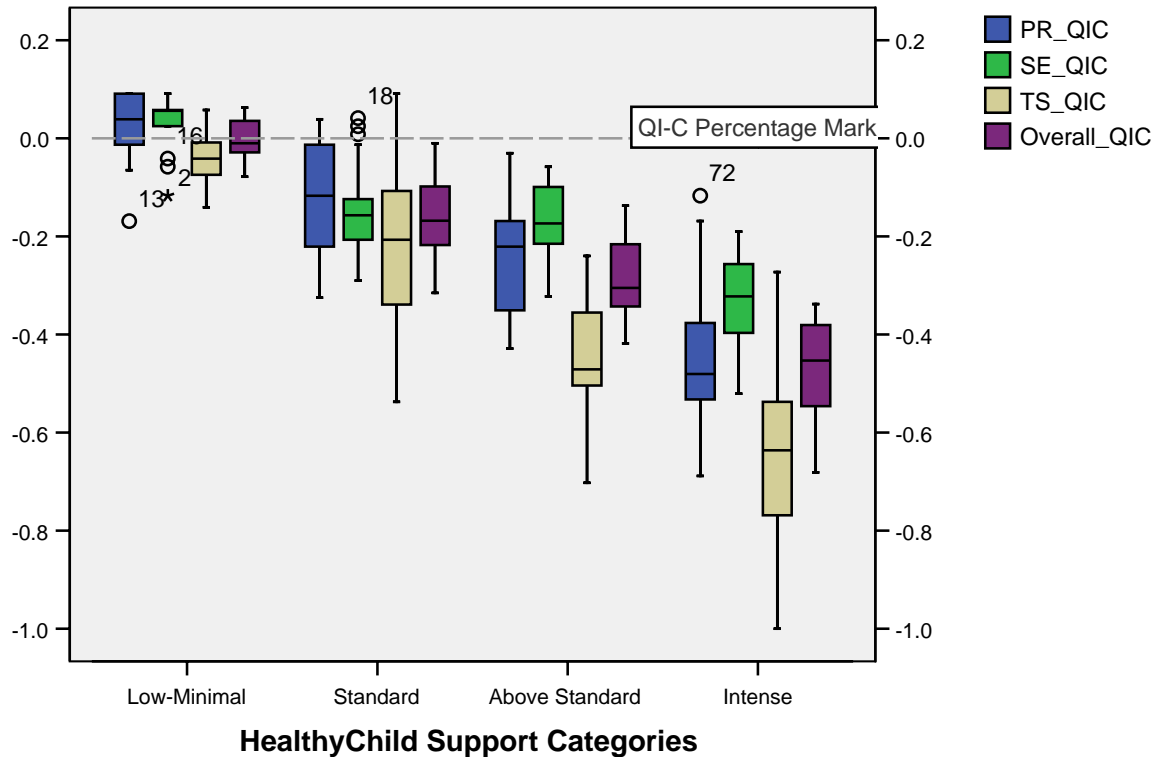
In Figure 7, the closer the QI line is to the 0 point; the closer the classroom is to attend the QI-C goal. The overall mean QI-C percentage marks for four groups range from 0.34 % to - 47.15 %. The “Intense” HC support group has the widest fluctuation in averaged QI-C mark, with the ranges from -68 % to -34 %. It is important to recognize that there are no classrooms within the “Above Standard” and “Intense” HC Support groups nearing the QI-C mark mean

of 2.75. The overall mean QI-C % mark in these two groups are ranging from -14 % to -68 %. Clearly, when the classrooms are categorized as needing more HC supports, the QI-C percentage marks are further away from the QI-C equal to 0 line. That is, there is a larger gap between the observed and the desired QI-C mark when the classrooms were categorized as needing more HC staff supports.

In addition, between four categorized groups, several common scenarios across groups could be observed from Figure 8. First, the “Social and Emotional Teaching Strategies” domain often has lower QI-C percentage points than do the other two domains and has the wider range of scores distributions within the group. It is understandable since the “Social and Emotional Teaching Strategies” is a higher level of practice, while the other two domains are the more fundamental practices. Second, the “Creating Supportive Environment” domain usually has higher QI-C percentage points than do the other two domains, except in group 2 (Standard) with only the small difference from the “Building Positive Relationship” domain. In Figure 8 it is observable that when the classrooms are categorized as needing more HealthyChild supports, the QI-C % points across three domains are becoming far away from the expected QI-C percentile mark (0 %). It is noticeable that even within the lower support class categories, the Social Emotional Teaching Strategies practice is that which consistently has the lowest QI-C% points. This suggests HealthChild May need to distribute more time and attention to attain the goal of “Social and Emotional Teaching Strategies” practice in all classrooms.

Figure 8. Overall and Domain QI-C Percentage Mark Distributions by Groups in Time

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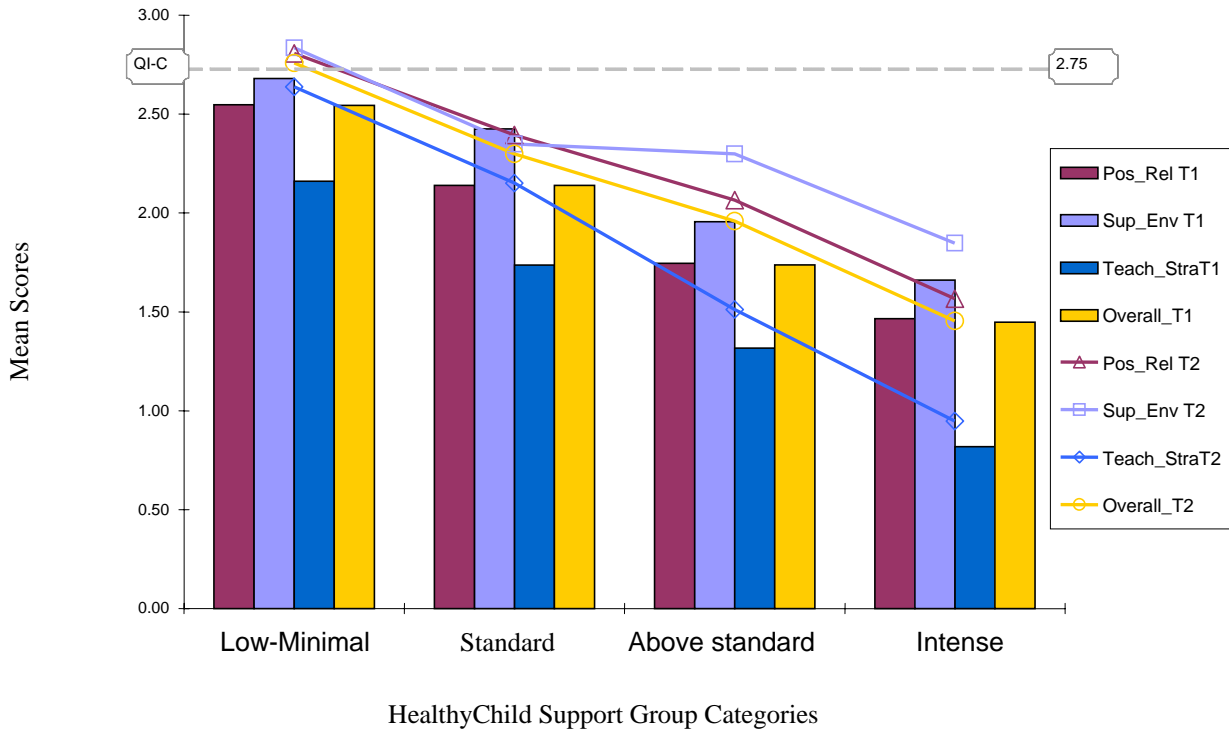


Positive Teacher-Child Interactive Behavior Changes: Fall 2005 to Spring 2006

1. Overall IPPSC scores and domain scores

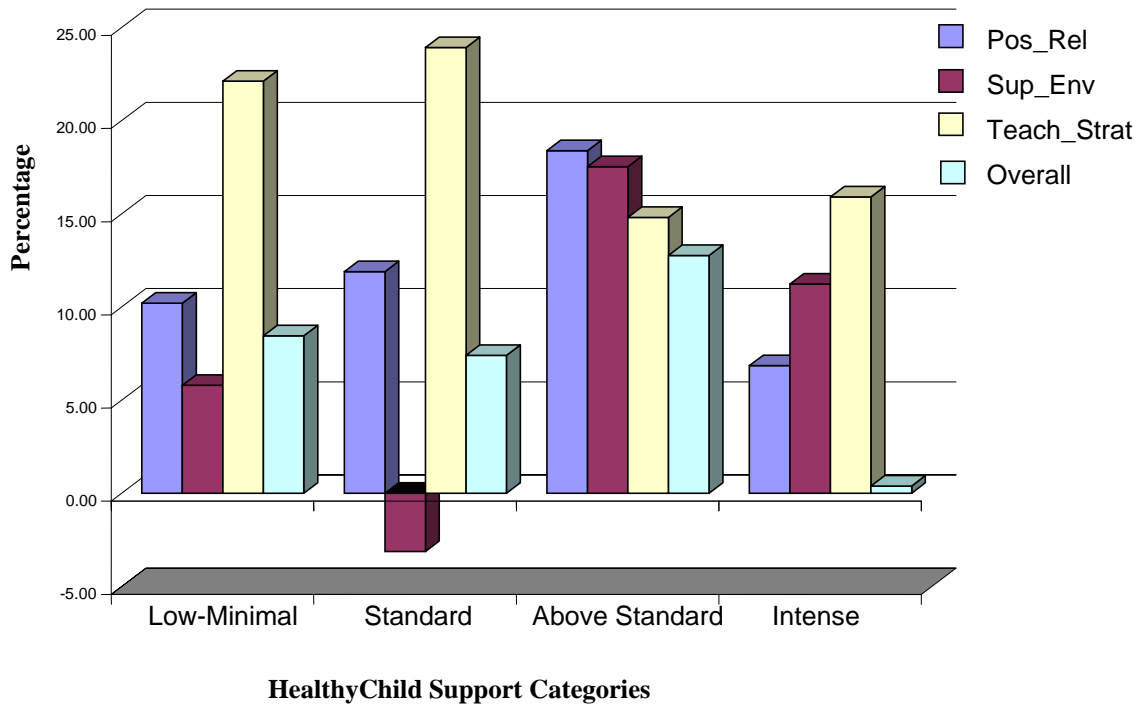
There were 81 classrooms in Fall 2005 Time 1, and 84 classrooms in Spring Time 2. Figure 9 shows the overall mean scores and domain mean scores changed from time 1 to time 2 across four groups. The bars refer to Time 1 mean scores, while the lines refer to Time 2 mean scores. All the scores from Time 1 to Time 2 increase in all domains across all groups. In Time 1, within groups, the “Creating Supportive Environment” domain was scored higher than the other two domains; while the “Social and Emotional Teaching Strategies” domain was scored as the lowest, representing less change in scores in a positive direction. For Time 2, the similar scenario is observed across domains except in the Standard HC Support group where the “Building Positive Relationship” domain is scored higher than the “Creating Supportive Environment” domain.

Figure 9. Overall Means and Domain Means across Groups in Time 1 and Time 2 (n =81)



The improvement rate of domain scores across four groups from Time 1 to Time 2 is seen in Figure 10. The “Social and Emotional Teaching Strategies” domain shows the greatest improvement over the other two domains in every group, except in Advanced HC Support group, where the change is from 23.9 % to 14.8 %. It is important to recognize that the improvement rate is calculated by comparing classrooms to themselves over time rather than comparing to the whole group. The Intense HC Support group has the least improvement in overall mean scores from Time 1 to Time 2; while the Above Standard HC Support group has the maximal improvement in overall mean scores. Unexpectedly, the “Creating Supportive Environment” domain in the Standard HC Support group decreased 3.12 % from time 1 to time 2; while in the overall mean scores, there is still 7.4% improvement rate from Time 1 to Time 2.

Figure 10. The Improvement Rate of Mean Scores and Domain Scores across Groups



Note: Improvement percentage = [(mean scores in T1 – mean scores in T2)/ mean score in T1] *100

2. Statistics analysis in terms of overall mean scores and domain mean scores from Time 1 to Time 2

Repeated Measures was used to analysis the overall mean and domain means statistically from Time 1 to Time 2 across groups. There are three new classrooms without Fall 2005 evaluation, so they were eliminated from the pool of data when doing the statistic analysis (2 were eliminated from Low-Minimal HC Support group and 1 was eliminated from Intense HC Support group). First, without grouping, it was found that the overall mean score and domain mean scores were improved statistically significantly from Time 1 to Time 2 ($F(1,80)=7.405-25.751, p<.01$). When analyze the data in group level, it is easier to find some more detailed information. Table 1 shows the statistic data in group level.

Table 1. F Value of Domain Means and Overall Means across Groups

Groups\means	Building Positive Relationship	Creating Supportive Environment	Social and Emotional Tec	Overall
	F=(1, n-1)			
Low-Minimal (n=15)	12.728**	6.544**	18.714**	20.776**
Standard G3 (n=25)	9.686**	0.836	11.814**	4.801*
Above Standard G4 (n=18)	9.06**	11.773**	2.305	5.433*
Intense G6 (n=23)	1.235	2.301	2.033	0.008

** p<0.01; * p<.05

Overall, even though in Figure 8, it is clear that across groups, the scores are improved from Time 1 to Time 2 except one domain in Standard HC Support group. In Table 1, it is clear that the improvement in the Intense HC Support Group did not have statistic significant change in all domains and overall mean scores over time. In the Low-Minimal and Standard HC Support group, all the improvements are at statistically significant levels. Particularly, the decreased scores in the “Creating Supportive Environment” domain in the Standard HC Support group did not show significant difference.

In summary, all the classrooms show significant improvement statistically in overall practices. At the domain level, the classrooms also improved significantly across all domains. However, not every group shows adequate nor significant improvement in overall practices. This is especially the case for the Intense HC Support group. This report presented several points about the HC Model:

- For classrooms with optimum “best practices” functioning in the “Building Positive Relationship” and “Creates Supportive Environment” domains (the foundation, i.e., the Low-Minimal HC Support classrooms), they continue to improve in all domains as a result of work with the present level of HealthyCHILD supports, including the “Social and Emotional Teaching Strategies” domain.

- For Intense HC Support classrooms, in general, the classrooms improved in all domains. However, they continue to struggle with meeting the minimal standard for the foundation practice and require continued more support from the HealthyCHILD model.
- In general, flexible, long-term and directed involvement in the classrooms helps decrease the referral rate (see additional report materials).
- Closer collaborative analysis of the needs in the classrooms that still function below the quality criteria will help HC consultants better utilize consultation in the future.

PART III

HOW SATISFIED WERE TEACHERS AND STAFF WITH HEALTHYCHILD SERVICES AND SUPPORTS?

Teacher Satisfaction with the Quality and Effectiveness of HealthyCHILD Services

Nearly 50% of teachers, administrators, and staff in PPSHS and Pre-K were provided anonymous surveys so that they could rate the quality and their level of satisfaction with HealthyCHILD prevention and intervention supports provided by the HealthyCHILD team.

The HealthyCHILD Profile of Quality and Outcomes was completed between May and June 2006 by 85 school representatives. Four of them were eliminated from this report since the survey did not apply to their role in the classroom. Of the participants in the survey, 60.5 % (n=49) were teachers, 25.9 % (n=21) were teacher's assistants. The remaining participants were equally divided among Mosaic/EI teachers (1.2 %), Coaches (3.7 %), and unidentified (8.6 %). On average raters responding to the survey report close to 3 years of experience in the classroom (mean = 2.5 yrs.) The results obtained from the survey are reported below.

How satisfied were the teachers and administrators with HealthyCHILD services?

- Overall, teachers showed an exceptionally high level of satisfaction with the quality of HealthyCHILD services (84 %).
- 16% indicated that they needed more HealthyCHILD support.
- The range of satisfaction for specific quality areas was also high ranging from 75 to 94%.
- Satisfaction with psychologist and developmental healthcare consultant support was high (88 %).
- The highest rated areas were the quality of teamwork among the HC team and the teachers and the psychologist services.

- Teachers indicated their need for continuing support for referring individual children and their own need to gain new skills to build social skills and prevent or manage problem behaviors.

Developmental Healthcare Quality Outcomes Profile Results

<i>Skill Level Items</i>	Percent Reporting Satisfaction
I feel that I am able to explain to parents what behavioral support services are all about	91%
I am more confident and skilled in managing children with challenging behaviors since receiving HealthyCHILD consultation	85%
I have learned specific and effective techniques to manage the behavior of children because of my work with the consultant/psychologist	89%
The HealthyCHILD consultant has taught me specific ways that I can arrange the classroom/child care setting to prevent behavior problems and to build positive social skills and self-control behaviors	85%
<i>I feel less need to refer children for individual behavioral support since the consultant (DHC) started working with me.</i>	<i>75%</i>
I am more knowledgeable in discussing developmental and behavioral challenges in young children as a result of my work with the consultant/psychologist	83%
<i>We observed a decrease in the frequency of problem behaviors in our setting since the consultant (DHC) started working with us.</i>	<i>77%</i>
I feel that I am better able to understand the family of specific referred children because of my work with the consultant/psychologist	75%
I am more confident in working with families of my students since receiving HealthyCHILD consultation.	86%

Overall Skill Level: 83 %

<i>Support Items</i>	
The consultant is available to support me regularly in my classroom/child care setting	85%
I feel that regular observations of my classroom/child care setting by the consultant are helpful	89%
The consultant/psychologist promptly responded to my request to see individual children for behavioral support following a referral	84%
The consultant/psychologist worked with me as needed to review and update the behavior plan	83%
The consultant/psychologist provided diagnostic assessment services and linked children and families with other agency supports(I.e. wrap-around; early intervention)	70%
The consultant/psychologist worked to facilitate teamwork and decision-making among our teachers and supervisory staff	77%
We observed increases in the frequency of positive social behaviors in our setting since the consultant/psychologist started working with us	78%

I believe the consultant/psychologist shows sensitivity to community issues and cultural diversity in our setting	88%
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Overall Support: 82 %

Developmental Healthcare Quality Outcomes Profile Results (Cont.)

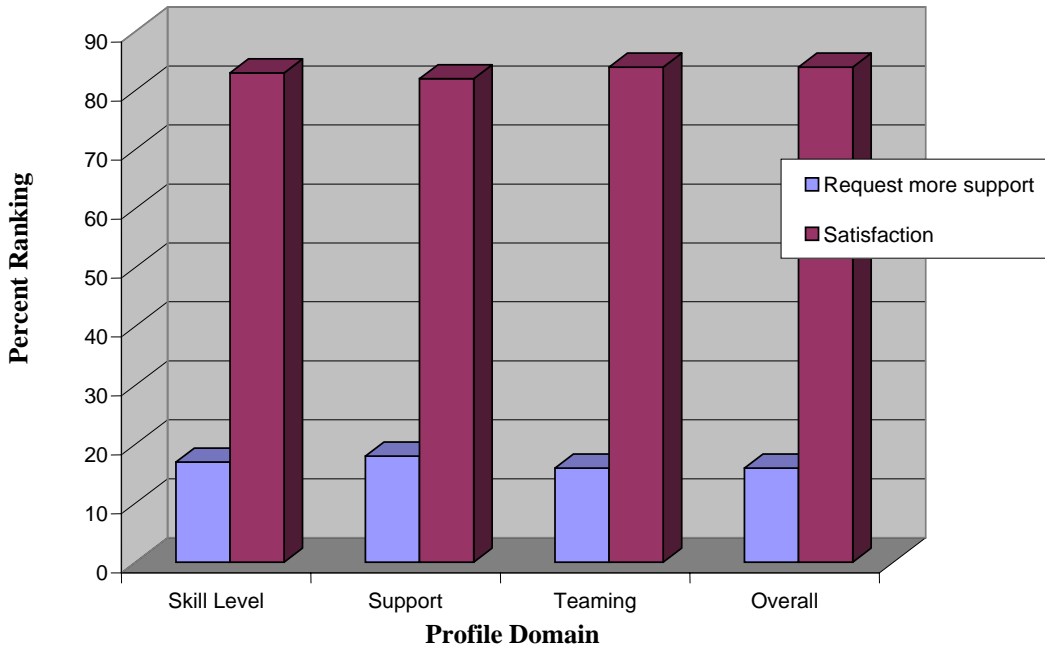
<i>Teaming Items</i>	Percent Reporting Satisfaction
We have been successful in forming a team with our parents, teachers and consultants that helps our children to develop positive social and behavioral skills	86%
I believe that the consultant/psychologist values and uses my suggestions when we design behavioral strategies	94%
Parents are often partners in developing their children's Developmental Healthcare Resource Plan	77%
The consultant/psychologist worked collaboratively with other early intervention specialists to develop a comprehensive IEP when an IEP that included behavioral support was developed.	78%

Overall Teaming: 84 %

<i>Psychologist Support</i>	
The psychologist involved me in decisions and/or problem solving for specific children and families around diagnosis or mental health functioning	91%
The psychologist supported my work with the developmental health consultant	85%
The psychologist provided resources when asked or made sure these were available to families or other appropriate staff	85%
The psychologist was knowledgeable about atypical development and has helped me understand how this behavior may be reinforced or develop	94%
The psychologist provided written reports when needed	87%

Overall Psychologist Support: 88 %

Percentage of Satisfaction with Developmental Healthcare Consultants in Each Outcome Area



Percentage of Satisfaction in Psychologist Support Domains

