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Together for Kids: Three-Year Project Report: A Project Administered by Community Healthlink, Inc.

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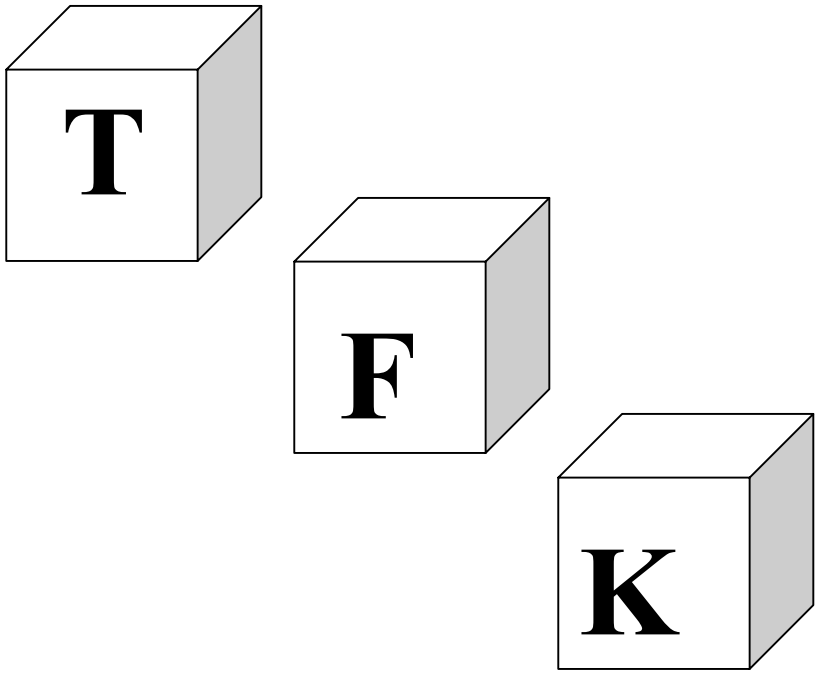
Et al.



TOGETHER FOR KIDS

Three-Year Project Report

A Project Administered by Community Healthlink, Inc.

Funded by The Health Foundation of Central Massachusetts and the United Way of Central Massachusetts

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I. Introduction

The Together for Kids (TFK) project, funded by The Health Foundation of Central Massachusetts and the United Way of Central Massachusetts, has been the result of the dedicated work of over 30 childcare, health care, child welfare and social service agencies concerned about early childhood mental health issues. These concerned constituents formed a coalition to address the increasing incidence of young children exhibiting challenging behaviors in preschool classrooms, as reflected nationally with current estimates ranging from 7% to 25% (Raver & Knitzer, 2002; Webster-Stratton & Hammond, 1997). These challenging behaviors typically include biting, hitting, throwing things, defying adults, or becoming withdrawn and unable to interact with others, and result in disrupted early childhood classrooms and children being expelled from programs (Grannan et al, 1999; Swanson, 2001). The problem of preschool expulsions has received national attention in recent years, and in fact a very recent national study confirmed that more children are being expelled from preschool than for all other grades (Gilliam, 2005). In Worcester, Massachusetts, there was also a concern about the growing number of public school special education students with diagnoses of emotional impairment or behavioral disorders in the early grades.

The first year of the project intervention began as a Pilot to implement a mental health consultation model in two preschools and a Head Start Program, and to use two additional centers as comparison sites. In Year 2, these two additional centers that served as comparison centers during the Pilot phase also received the intervention. The results of the Years 1 and 2 showed behavioral improvement in children receiving the consultation services, as well as suggestive evidence for broader classroom positive effects. In Year 3, some modifications to the model were implemented. Families were allowed to continue with services when necessary beyond the 3 to 6 month intensive intervention. A Family Liaison was also added to the model to facilitate family engagement in the child care programs. The basic model of services, however, remained the same over the three years. This report is a summary of the results of the project, combing data from all three years to increase sample size and provide additional statistical power and confidence. We have determined there is sound evidence for clinical benefits of the TFK mental health consultation model, and the next step will be to sustain the model in child care programs using public resources. Thus, going forward, adaptations to the model will focus on how to establish universal screening and consultation for preschool families, using a ratio of one FTE clinician to 200 preschool children. Future evaluation activities will focus on sustainability issues, and documenting service delivery approaches for a generalizable model.

II. Intervention Model

Using a model of risk and resilience (Sameroff & Fiese, 2000), our approach derives from the assumption that there are multiple sources of both support and difficulty for each child in the preschool classroom and at home. The intervention model used by TFK is based upon the analysis of these sources of risk and support. The intervention has multiple foci, including the family, the child, the teachers, the classroom and the childcare center as a whole. The assumption is that families under stress, experiencing trauma, lacking in resources, and having poor parenting skills will benefit by access to assistance on all of

these dimensions through both individual treatment, and more family-oriented activities and supports from the childcare center. The child can benefit from both one-on-one intervention around specific skills and behaviors, and at the same time modeling appropriate classroom behavior. The teachers need assistance assessing the needs of specific children in their classroom who exhibit challenging behaviors. In addition they need better general knowledge about child development and behavior in order to set appropriate expectations, and specific knowledge, tools and skills to handle challenging behaviors in the classroom effectively. Overall, childcare centers can benefit from enhanced staff training, providing parent training sessions, and knowing how to access other types of resources for families.

The TFK model provided a mental health consultant (called a Child Development Advisor or CDA) for each participating child care center for approximately 16-20 hours a week. (Note: Our experience has refined this model to propose that 1 FTE mental health consultant can provide consultation services to child care programs serving 200 preschool children; billable individual child and families services hours are in addition to this figure.) The CDA provides general consultation and training to all child care staff, works with individual families and children who are identified at risk based on teacher behavioral ratings, helps centers plan center-wide parent activities and training, and refers families to additional services or longer term individual child and family services after the initial 4-6 month intervention provided at the child care program. In addition, the demonstration provided resources for additional services, including staff training sessions; substitute teachers or overtime pay for staff to allow time for regular teachers to meet with families and the CDA; and in Year 3, funded a Family Liaison position at each center, a parent or grandparent empowered to reach out to families and encourage them to become more active in their child's preschool center. Finally, in Year 4, TFK initiated training for mental health clinicians to focus on issues in early childhood and social and emotional development in young children, and also conducted a cost-benefit assessment to develop a financing plan for project expansion and sustainability.

The expectation was that the intervention model would result in improvements in both the at-risk families and children, and the teachers and childcare centers as a whole. Parents would know better how to interact with their child, and children would learn new skills and exhibit less problematic behavior at home and in childcare. In addition, families would have access to more resources and experience lower parenting stress. Teachers would also demonstrate skill development, and the general classroom climate would improve, including lower levels of child behavior problems. Overall, there would be greater collaboration between parents and teachers, and parents would feel a greater connection to childcare centers and more comfort in talking to teachers about their child's behavior. Ultimately, as teachers and parents improved their communication and skills, preschool expulsions should be significantly reduced.

III. Evaluation Methods

The TFK project began in two Pilot Sites (Worcester Comprehensive Child Care Services and the YWCA of Central Massachusetts) and the Head Start program in South County in 2002. Two other sites (Rainbow Child Development Center and the YMCA of Greater Worcester) were enrolled in the study during this first year, but served as comparison sites. In Year 2, TFK continued the intervention in the Pilot and South County sites and expanded the intervention to include the two sites that had served as comparison sites in Year One. All 5 sites continued with the intervention in Year 3 (2005). In each year of the project, the evaluation of the TFK model involved teacher ratings of child behavior using a standardized instrument, center-wide anonymous surveys of parents and teachers, qualitative interviews and focus groups with center personnel and CDAs, and the assessment of behavioral and family change for those children and families who received individual services. Documentation of both the types of services received by individual children and families, and the types of center-wide parent and teacher training and activities, was also completed.

A. Description of Preschool Sites

Site A enrolls 96 preschool children (ages approximately 3-5) in 6 classrooms, with 2 lead teachers, 8 teachers and 4 assistant teachers. The children were almost evenly distributed between boys and girls, and about 45% were white, with 20% African American, 14% Latino, and 21% Asian and other ethnicities. Family incomes ranged from $5,000-$100,000. About 14% of parents needed assistance with English. This site reported very strong parent involvement, with 75% attending annual parent-teacher conferences.

Site B enrolls 30 preschool children in two classrooms with one lead teacher, four teachers and one assistant teacher. Two thirds of the children were Latino, three White, and six children were listed as being of "other" ethnic backgrounds. Family incomes were all below state median income and all children's care is publicly subsidized. Almost all families were noted as needing assistance with English. Few parents reported attending parent-teacher conferences, but 80% reported attending the preschool's social gatherings.

Site C enrolls about 41 preschool children in two classrooms with one lead teacher, 3 teachers and one assistant teacher. Ethnic distribution was 41% White, 24% Latino, 17% African American, and 18% other. About 15% of parents were noted to need assistance with English. Family incomes ranged from $13,000-150,000. About 80% of parents attend the annual parent-teacher conferences, 40% attend social gatherings, and 35% open houses.

Site D enrolls 51 preschoolers in 3 classrooms with 3 lead teachers, 3 teachers, 2 assistant teachers, and one "floater." The majority of families are Latino (55%), with about 24% Black, 6% White, and 15% other. Fifty-five percent of family incomes were at or below $17,000 with a maximum of $50,000. All children's care is subsidized publicly. About a third of families were reported to need assistance with English. This center reported the lowest parent participation, with 16% attending open houses, and none attending parent-teacher conferences.

Site E enrolls 63 children in four locations with one classroom of 14-17 children each. A total of 4 lead teachers, five teachers and 1 teacher aide were employed at these sites. Fifty-five percent of families were White, 6% were African American, 7% were multiracial, and the other 32% were either not defined or of other racial backgrounds. Family incomes averaged from $12,000 to $13,700. Parent participation was rated as 100% attending parent-teacher meetings, 20% attending open houses, and a range of from 10% to 50% attending social gatherings.

B. Identification of Target Population

Screening to identify children who exhibited clinically significant challenging behaviors occurred on an ongoing basis (approximately every 6 months) using the Early Screening Project (ESP) procedure administered by teachers. The ESP measures were scored and compared to national norms for boys and girls. Once children were identified as exhibiting behavior that warranted concern based on the ESP, the childcare administrator and teachers were informed, and administrators and teachers decided which children and families would be offered the intervention services first. Families were then approached and asked to officially consent to services. Over time this method was modified to inform all families whose children were at risk, and services were offered in order of families agreeing to services. As children and families who were enrolled in services reached the 4^{th} or 5^{th} month of involvement with TFK, the individual intervention was phased out. Every 6 months, the classroom teachers where asked to re-evaluate the intervention children, and the remainder of the children previously screened as at risk with

the ESP, so that follow-up measures of adjustment could be obtained for both intervention children and those who were waiting for services. The process of re-assessing intervention and at risk children allowed a new cohort of children to be identified for services, while previously targeted children completed services. This process also identified more children than could be served at any one time, creating a natural comparison group against which to quasi-experimentally compare improvements in the target intervention children.

IV. Summary of Findings, Years 1-3

A. Understanding behavioral problems in children: Characteristics of the children, families and preschools involved in TFK.

Preschool programs and characteristics: Over the three years, TFK services were implemented in four preschool sites in Worcester and one Head Start Program in southern Worcester County, reaching approximately 285 preschool age children per year in 17 classrooms. At the start of the project, about half of the teachers in these classrooms reported having college degrees, and many had several years of child care experience. While slightly over half (56%) also reported a "medium" level of knowledge and experience in managing challenging behaviors, most felt that they did not have adequate training or resources to deal with behavioral problems Despite identifying an average of 6 children in their classroom who had such behavioral issues, teachers all reported high levels of personal accomplishment on the job, and most did not report high levels of job burnout.

Parent satisfaction and perceptions of the preschools: Anonymous surveys of parents in these preschools showed 90% reporting that they liked the center "a lot." However, a sizable minority (14% to 25% of parents responding to different individual questions) reported feeling a lack of sensitivity toward, and acceptance of their families, and a lack of communication regarding handling child behavior, and program changes that affect the child. Parent participation in individual child feedback sessions and in other center activities (open houses, social gatherings, etc.) varied widely across centers with some centers reporting almost no participation, and others reporting 80-100% participation. Thus overall, while preschools had many strengths (college educated and experienced teachers with low burnout, and high overall satisfaction ratings from parents), problem areas were also evident. In particular, teachers reported high numbers of children with behavior problems in their classroom and a lack of specific training and resources to deal with them, and some preschools also evidenced a problem with family participation and connection.

Prevalence and type of behavioral issues among children: Teachers' perceptions of the high number of students with behavior problems in their classrooms were born out by the standardized screening process, which teachers were trained to use to assess child behavior. A total of 208 children were identified as "at risk" through the behavioral screening process over three years. This represents approximately 34% per year, or an astounding 1/3 of all enrolled preschool children at these centers during this time period being rated as having social-emotional behavioral problems at some level of risk. The majority of children screened (66%) exhibited externalizing behavioral issues, and in fact, most of children who subsequently received TFK intervention services (84%) had behavioral problems of this type. While a few children were served who exhibited other social emotional issues (e.g. withdrawn, depressed), the emphasis on serving children with acting out behaviors reflects the disproportionate (but sensible) priority child care centers placed on addressing those children who were likely most disruptive of the entire classroom.

Characteristics of families who received services: Surprisingly, children and families enrolled in services came from very diverse backgrounds and did not necessarily have the traditional risk factors in

terms of lower income, education, or high levels of stress. Parents also showed both strengths and weaknesses in providing a developmentally appropriate home environment. Areas of strength included providing high acceptance, warmth and affection, and modeling of appropriate behavior, while families more often failed to offer adequate social/cultural experiences, academic, or language stimulation. One area where targeted families seemed to more consistently perform poorly was in parent discipline skills. They tended to be more lax in their attention to behavior and more over-reactive in their emotional response to misbehavior than general parent populations.

Characteristics of children who received services: Although these children came from fairly normative family backgrounds, their behavioral scores indicated high levels of need, with clinical cut off levels typically falling into the extreme risk category for aggressive and maladaptive behavior. Further, among those children provided individual services, most showed substantial developmental delays in both social and communication skills. These delays were often previously unidentified by pediatricians or child care workers, and likely represent an important factor in the children's social/emotional deficits. At the same, time however, only half of the children in the service group were rated by parents as having difficult temperaments.

Predictors of child behavior problems: We expected that child behavior problems would be related to multiple factors, including child characteristics, family characteristics and preschool characteristics. The exploration of factors related to child behavioral problems at baseline showed that boys, and children with developmental delays in social skills and self help skills had more difficulties. Child age and temperament (as measured by a parent report scale) did not appear to play a role. As mentioned previously, these children came from a range of family backgrounds. When we looked at the relationships between child behavior and family characteristics (family demographics, parent stress, parent discipline skills, home environment), none of the family characteristics that have been shown to be related to child behavioral problems in the literature showed a significant relationship to behavioral problems in this sample. This may be due to our sample size or the measures used, but in our analyses, child characteristics were more related to behavior problems than family characteristics. Similarly, we found little relationship between child behavior and preschool site or teacher characteristics, although our measure of teacher characteristics was fairly imprecise (an average of all preschool teachers in a center over the three years).

B. Results of TFK intervention model.

Effects of TFK services on child behavior: Analysis of children enrolled in TFK services showed strong support for the effectiveness of the TFK model on child behavior. Across all three years, target children showed statistically significant improvements in teacher rated aggressive behavior, maladaptive behavior and adaptive behavior, while children who were waiting for services showed no change. On average, children's scores for aggressive behavior decreased 23%; for maladaptive behavior they decreased 21%; and for adaptive behavior, they increased 12%. Parents, almost without exception, agreed that TFK services helped their child behave better at school. Most also felt that it helped their child behave better at home, and that it helped improve their child's learning skills. Further, results of follow-up interviews with families whose children made the transition into kindergarten suggest that these gains were maintained. None of the seven children we were able to follow up with were on Special Education plans in the public schools or were receiving special services for behavioral problems. While some children still struggled with their behavior at times, all parents reported that they felt their child's behavior was either the same or improved since graduating from TFK services. While these results are encouraging, the number of families we were able to reach was small. A larger study of the long-term effects of TFK and the transition into kindergarten is planned for Year 4.

Effects of TFK services on parents: While there were strong gains in children's behavior pre- to post-enrollment in TFK services, and some evidence that these gains were maintained into kindergarten and first grade, results in terms of benefits to parents were less clear. Findings of pre-post improvement in parenting stress and parenting skills, were weak and inconsistent from year to year, and when combined across years, did not show significant change. However, over 90% of parents felt that TFK services had taught them better ways to handle their child's behavior. Further, most parents felt that TFK services helped them feel more comfortable talking to teachers, and helped them feel more comfortable at the child care center. Finally, follow-up interviews of parents whose children graduated from services reported gains in their positive interactions with and ability to deal with their child's behavior, and most felt that TFK helped them in advocating for their child after the transition into public school. Taken together, these findings indicate that parenting behavior and stress may be more difficult to impact than child behavior with our model. Nevertheless surveys and interviews with families suggest that TFK services may have taught parents some specific strategies to use with their child, and may have some positive long-term benefits to the parent-child relationship. Further, through TFK, parents felt more comfortable with the preschool center and in talking with their child's teacher. This increased comfort and partnership with teachers at the preschool level may have helped increase parent's comfort in advocating for their child in public school.

Effects on preschool teachers: The TFK intervention model also appeared to have positive effects on preschool centers in terms of increasing training, and access to and use of resources, by teachers. In particular, compared to baseline, teachers in Year 3 felt they had more adequate training regarding children's behavior problems and more adequate help from specialists. They also reported more access to and use of consultation services for individual children, and made more referrals for individual treatment when needed. Overall, teachers rated center resources more helpful in Year 3 than in Year 1. Consistent with this, the majority of participants (both teachers and parents) rated the TFK workshops as "excellent." When asked specifically about the helpfulness of TFK services, almost 70% of teachers felt that TFK was helpful in learning how to handle child behavior problems, with close to 50% indicating that teacher training classes and the in-class modeling were helpful or very helpful in this regard. Finally, about half of the teachers thought that the team meetings for target children (between parent, teacher & CDA) were helpful in developing a better relationship with the parent and managing the child's behavior in the classroom.

Effects on overall center climate: Center-wide benefits also appeared to accrue in terms of overall levels of behavioral problems in the classroom and number of children suspended or terminated due to behavior. Overall levels of baseline behavior problems dropped significantly after one year of TFK services and this lower level was sustained the following year. Further, suspension rates dropped drastically, and the expulsion of children from preschools was all but eliminated. Most parents whose children received the targeted intervention also felt that TFK made the preschool a better place for all children.

Center-wide ratings of parent connection and satisfaction with the preschool did not show differences from Year 1 to Year 3. However, implementation of the Family Liaison component in Year 3, showed some positive benefits, particularly in those centers that had success with finding and keeping an active Family Liaison. Specifically, in centers where the Family Liaison component was most fully and successfully implemented, parents reported better parent-teacher communication and feelings of acceptance than those where this component was less successfully implemented.

C. Factors related to positive behavioral outcomes.

When we looked at the factors that were most related to positive behavioral change, we found that child characteristics (gender, level of developmental delay) and TFK services (intensity, and parent-CDA relationship), as well as low teacher turnover, were key factors. No specific family characteristics predicted child improvement. Specifically, for adaptive and maladaptive behaviors, greater behavioral improvements were associated with greater developmental delays at baseline and with being male. Because boys, and those children with the largest delays tended to have higher behavior problem ratings at baseline, these children had the most to gain from receiving services. It appears that indeed, TFK services are effective with the children who need it most, not just those with mild problems. Further, it appears that treatment intensity, e.g., receiving 24 hours of service or more, is most beneficial, leading to greater decreases in both aggressive and maladaptive behavior. Finally, positive change was also associated with the parent's ratings of their personal relationship with the CDA, and their ratings of CDA skill level. Thus, children seem to benefit more when the CDA is successful in developing a positive relationship with the parent, and earning their respect and trust in terms of their skills.

D. Challenges to implementation, and recommendations for the future.

Overall TFK appears to be a highly effective model of intervention. However, over the three years, we have learned that several factors can produce challenges to its implementation. For instance, the CDA role is a difficult one to fill, requiring not only a solid understanding of early childhood behavior and development, but honed clinical skills, and the ability to adapt those skills to an early childhood educational setting (as opposed to a clinical setting). Gaining teacher buy-in and support is crucial, as resistance and defensiveness can be high. This requires the ability to work effectively with teachers in a collaborative model. CDAs must recognize and support teacher skills and ideas, while helping them to develop greater knowledge and skill in preventing behavioral problems in the classroom and dealing effectively with those that do arise. It also requires skill in fostering communication and collaboration between the parent and the teacher. Finding the right match between the personality and style of the CDA, and the personality, needs, and style of the center can be a challenge. Two key strategies used by TFK to address these issues are: 1) to increase training and credentialing for early childhood mental health specialists; and 2) to change policy at the state level to include social-emotional development in the curriculum for all preschool teachers. TFK in Year 4 has begun to offer pilot courses to address the needs of both of teachers and clinicians, as well as successfully advocating for policy changes at the state level.

Adequate coverage and release time for teachers to work with families and the CDA can also be a barrier to successful implementation of TFK. Funding needs to be provided to allow teachers to participate in collaborative meetings with CDA's and parents, and to attend trainings and other skill development workshops. In addition, regular communication with teachers as to the goals of TFK, the necessity of their collaboration, and how to talk to parents about the project are needed. Teachers, too, need to get positive feedback and recognition of their efforts in making TFK a success. While TFK appears to be beneficial for teachers and the center, much of the burden falls on teachers in terms of screening children, filling out surveys, and additional time for meetings and trainings. Therefore, teachers need to fully understand and see the benefits of their efforts. In this regard, regular communication with teachers on the successes of the project in terms of children's behavioral improvements and center-wide benefits is needed.

Finally, gaining parent participation and buy-in can also be a major challenge. A first contact regarding the sensitive issue of a child's behavioral problems requires personal communication with the family by the teacher, administrator, or the CDA. By the same token, the more families feel a part of the center, and the more collaboration there is between teachers and parents, the easier and less shocking or

threatening this conversation should be. The Family Liaison component was intended to create greater connection between parents and the preschool center and teachers. We found that when this role works well, it can achieve this goal. However, similar to the CDA, the role requires a good fit between the personality and style of the Family Liaison and the center staff. It also requires a good deal of time, flexibility in scheduling, self-direction, and initiative. Few parents have the time or initiative to take on and follow through with this type of commitment. In the center where this role worked best, the Family Liaison was a parent that was already well integrated into the center and worked as an after school staff member. Clearly to make this role work effectively across centers, it will take creative solutions to address these barriers and probably additional funding to attract parents to the role.

In sum, the TFK model has demonstrated that early childhood behavioral issues are highly prevalent, yet a modest level of preschool center-based intervention services can significantly improve children's behavior and social-emotional development. Such early intervention also appears to sustain itself into kindergarten and first grade, suggesting that this model has long-term benefits for children and families, schools and the service system. At the same time our work has demonstrated it takes thoughtful and careful implementation activities with each child care center to successfully manage the multiple complex systems that affect children and families. It takes the commitment of preschool centers and teachers to change their practices, an adequate workforce to supply quality early childhood mental health consultants, and a commitment by the Commonwealth of Massachusetts to establish new policies and resources that make this model sustainable. The increasing numbers of children with behavioral problems, and the long-term consequences for society, make the outcomes of the TFK project extremely valuable and cost-effective. We have successfully demonstrated that publicly-supported child care centers are an essential venue to screen and provide social-emotional and developmental services to at risk young children; that such services need be of only modest intensity and cost; and that such services can significantly improve behavioral and functional skills for children who would otherwise continue to demonstrate difficult classroom behaviors, lack of school readiness, and require more extensive mental health and other support services as they enter elementary school and adolescence.

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I. Introduction

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The importance of addressing the needs of these children at an early stage has been emphasized by a broad array of mental health and childcare professionals. Without appropriate services, these children end up with impaired ability to interact appropriately with family and peers; create family stress; become stigmatized as problem children; fail to develop school readiness skills and behaviors; cause disruptions to other children's learning, socialization and safety; and contribute to burn out and turnover of preschool teachers (Grannan et al 1999; Shonkoff & Phillips, 2000). The wide-ranging implications of the growing numbers of young children with challenging behaviors provides crucial evidence for action to both better understand the reasons and to develop effective intervention approaches.

The TFK Coalition collected information from the research literature and from local day care centers about the extent of children at risk in the Worcester area. They found that 3.1% of children in four local day care centers, enrolling over 300 preschool children, were so disruptive they were expelled or would have been if the parents did not voluntarily withdraw them, with an additional 14% identified as at risk of expulsion. Subsequently, Gilliam (2005) confirmed this high rate of expulsion, with 16% of Massachusetts teachers reporting expelling at least one preschooler in 2004. In fact, Massachusetts ranked 9th highest in preschool expulsion of the 40 states with state-funded pre-kindergarten programs. Massachusetts' preschool expulsion rate of 11.1 per 1,000 was found to be over 13 times higher than the K-12 expulsion rate. When TFK was initiated, however, only one Center reported access to early childhood mental health services. Based on this information, the TFK Coalition developed an intervention model focused on challenging behaviors of preschool children (ages 3 and up) enrolled in childcare centers.

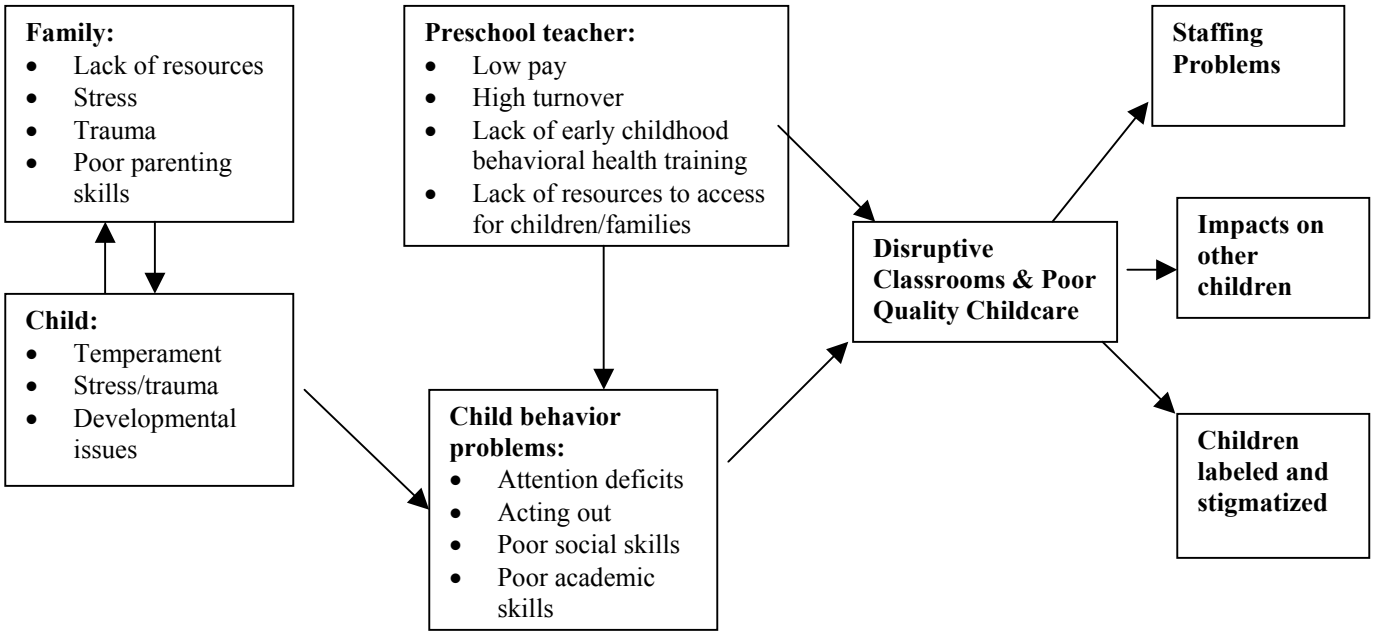
The first year of the project intervention began as a Pilot to implement a mental health consultation model in two preschools and a Head Start Program, and to use two additional centers as comparison sites. In Year 2, these two additional centers that served as comparison centers during the Pilot phase also received the intervention. The results of the Years 1 and 2 showed behavioral improvement in children

receiving the consultation services, as well as suggestive evidence for broader classroom positive effects. In Year 3, some modifications to the model were implemented. Families were allowed to continue with services when necessary beyond the 3 to 6 month intensive intervention. A Family Liaison was also added to the model to facilitate family engagement in the child care programs. The basic model of services, however, remained the same over the three years. This report is a summary of the results of the project, combing data from all three years to increase sample size and provide additional statistical power and confidence. We have determined there is sound evidence for clinical benefits of the TFK mental health consultation model, and the next step will be to sustain the model in child care programs using public resources. Thus, going forward, adaptations to the model will focus on how to establish universal screening and consultation for preschool families, using a ratio of one FTE clinician to 200 preschool children. Future evaluation activities will focus on sustainability issues, and documenting service delivery approaches for a generalizable model. In addition, for an economic evaluation of the model, please see the report by Marji Erickson Warfield, entitled "Assessing the known and estimated costs and benefits of providing mental health consultation services to preschool age children in early education and care centers in Massachusetts" (The Health Foundation of Central Massachusetts, 2006).

II. TFK Logic Model

The Project has drawn upon a multidisciplinary framework to develop an analysis of both the problem and the necessary intervention strategy. The approach is to recognize that there are multiple sources of risk for children, and that prevention and intervention require addressing multiple factors that impinge on early child development (Bronfenbrenner, 1994; Shonkoff & Phillips, 2000). Diagram 1 (below) outlines the basic elements of a multifactor analysis of how a child ends up developing challenging behaviors that result in negative consequences for the child, other children in the childcare center, and the childcare center itself.

Diagram 1. Problem model: Sources of difficulty for young children with challenging behaviors and the outcomes



Research has demonstrated that behavioral problems in early childhood are linked to environmental factors in the home such as harsh and inconsistent discipline, and a lack of monitoring and reinforcement of positive behavior, and to family characteristics such as low income, low parent education, abuse in parent's own upbringing, high levels of stress, and maternal depression (Sanders,

Markie-Dodds, Tully, & Bor, 2000; Webster-Stratton & Hammond, 1998). By contrast, parental warmth, responsive caregiving, and providing cognitively stimulating experiences are protective for children, particularly in low income families (Kim-Cohen, 2004). In addition, factors in the preschool setting may also contribute to problem behavior. For instance, preschool teachers often lack the skills and training to deal with and prevent behavioral problems in their classrooms (Phillips, et al., 1994), and there is often a lack of parental involvement and positive communication between teachers and parents (Webster-Stratton & Taylor, 2001). Together, these two environments (the home and school) may serve to inadvertently reinforce and escalate behavioral problems in the child. Finally, characteristics of the child may also play a role or may interact with environmental factors (Kim-Cohen, 2004; Raver & Knitzer, 2002; Yoshikawa, 1994). For instance, developmental delays (e.g., in language, self help, and social skills) and child temperament often go unrecognized. These child characteristics can make it difficult for the child to express needs and emotions in age appropriate ways, and create problems for the child in not meeting parent and classroom expectations and engaging in appropriate interactions with peers. The important conclusion is that factors inherent to the child are only one causal factor; the way both the family and the childcare center staff interact with a child can exacerbate or ameliorate the child's difficulties.

III. TFK Intervention Model

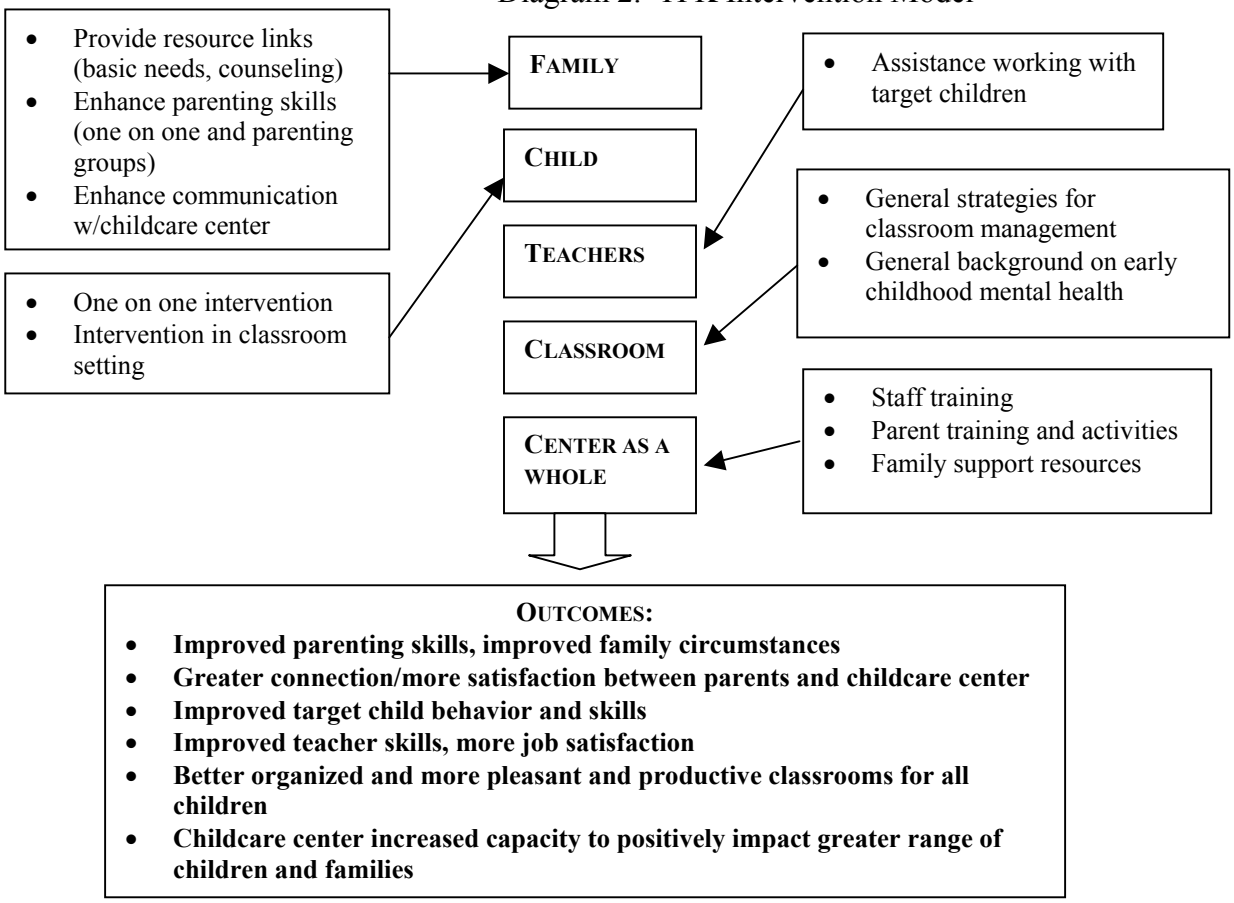
Using a model of risk and resilience (Sameroff & Fiese, 2000), our approach derives from the assumption that there are multiple sources of both support and difficulty for each child in the preschool classroom and at home. The intervention model used by TFK is based upon the analysis of the multiple sources of risk and support. Diagram 2. (see below) illustrates that the intervention has multiple foci, including the family, the child, the teachers, the classroom and the childcare center as a whole. The assumption is that families under stress, experiencing trauma, lacking in resources, and having poor parenting skills will benefit by access to assistance on all of these dimensions through both individual treatment, and more family-oriented activities and supports from the childcare center. The child can benefit from both one-on-one intervention around specific skills and behaviors, and at the same time modeling appropriate classroom behavior. The teachers need assistance assessing the needs of specific children in their classroom who exhibit challenging behaviors. In addition they need both better general knowledge about child development and behavior in order to set appropriate expectations, and specific knowledge, tools, and skills to handle challenging behaviors in the classroom effectively. Overall, childcare centers can benefit from enhanced staff training, providing parent training sessions, and knowing how to access other types of resources for families.

The expectation was that the intervention model would result in improvements in both the at-risk families and children, and the teachers and childcare centers as a whole. Parents would know better how to interact with their child, and children would learn new skills and exhibit less problematic behavior at home and in childcare. In addition, families would have access to more resources and experience lower parenting stress. Teachers would also demonstrate skill development, and the general classroom climate would improve, including lower levels of child behavior problems. Overall, there would be greater collaboration between parents and teachers, and parents would feel a greater connection to childcare centers and more comfort in talking to teachers about their child's behavior. Ultimately, as teachers and parents improved their communication and skills, preschool expulsions should be significantly reduced.

Given the logic model for the intervention, and information on models used elsewhere in the country (Bowdish, 2001; Ehrstine, 2001; Johnson, 2001; Kaufmann & Cohen, 2000), the TFK Coalition designed a consultation model of intervention that focuses on: 1) short-term individual child and family assistance; 2) classroom assistance for teachers; and 3) center-wide activities to enhance parent and teacher competencies in handling early childhood behavioral issues. Staff members with early childhood mental health experience were assigned part-time to a childcare center. Their role (entitled Child

Development Advisor or CDA) is to work with the teachers to help identify children who need extra assistance; assess the child and family needs; develop a short-term intervention plan with the family; assist the teachers with classroom strategies for the child; if needed, refer the families for long term services and for other community resources; provide center-wide training sessions for all staff on early childhood behavioral issues; and assist the centers to design and deliver center-wide parent activities that enhance parent involvement in the childcare center, and provide information and support on parenting skills and other family issues. The model was planned so that the capacity of the childcare center to address the needs of children with challenging behaviors would be enhanced after an early intensive phase, and thus long term could be supported through periodic child or Center services by a CDA serving more than one childcare center. (Note: Our experience has refined this model to propose that 1 FTE mental health consultant can provide consultation services to child care programs serving 200 preschool children; billable individual child and families services hours are in addition to this figure.)

Diagram 2. TFK Intervention Model



IV. Project Implementation Years 1 through 3

The TFK project began in two Pilot Sites (Worcester Comprehensive Child Care Services and the YWCA of Central Massachusetts) and the Head Start program in South County in 2002. Two other sites (Rainbow Child Development Center and the YMCA of Greater Worcester) were enrolled in the study during this first year, but served as comparison sites. In Year 2, TFK continued the intervention in the Pilot and South County sites and expanded the intervention to include the two sites that had served as comparison sites in Year One. All 5 sites continued with the intervention in Year 3 (2005). In each year

of the project, the evaluation of the TFK model involved teacher ratings of child behavior using a standardized instrument, center-wide anonymous surveys of parents and teachers, qualitative interviews and focus groups with center personnel and CDAs, and the assessment of behavioral and family change for those children and families who received individual services. Documentation of both the types of services received by individual children and families, and the types of center-wide parent and teacher training and activities, was also completed.

A. Description of preschool sites

Site A enrolls 96 preschool children (ages approximately 3-5) in 6 classrooms, with 2 lead teachers, 8 teachers and 4 assistant teachers. The children were almost evenly distributed between boys and girls, and about 45% were white, with 20% African American, 14% Latino, and 21% Asian and other ethnicities. Family incomes ranged from $5,000-$100,000. About 14% of parents needed assistance with English. This site reported very strong parent involvement, with 75% attending annual parent-teacher conferences.

Site B enrolls 30 preschool children in two classrooms with one lead teacher, four teachers and one assistant teacher. Two thirds of the children were Latino, three White, and six children listed as being of "other" ethnic backgrounds. Family incomes were all below state median income and all children's care is publicly subsidized. Almost all families were noted as needing assistance with English. Few parents reported attending parent-teacher conferences, but 80% reported attending the preschool's social gatherings.

Site C enrolls about 41 preschool children in two classrooms with one lead teacher, 3 teachers and one assistant teacher. Ethnic distribution was 41% White, 24% Latino, 17% African American, and 18% other. About 15% of parents were noted to need assistance with English. Family incomes ranged from $13,000-150,000. About 80% of parents attend the annual parent-teacher conferences, 40% attend social gatherings, and 35% open houses.

Site D enrolls 51 preschoolers in 3 classrooms with 3 lead teachers, 3 teachers, 2 assistant teachers, and one "floater." The majority of families are Latino (55%), with about 24% Black, 6% White, and 15% other. Fifty-five percent of family incomes were at or below $17,000 with a maximum of $50,000. All children's care is subsidized publicly. About a third of families were reported to need assistance with English. This center reported the lowest parent participation, with 16% attending open houses, and none attending parent-teacher conferences.

Site E enrolls 63 children in four locations with one classroom of 14-17 children each. A total of 4 lead teachers, five teachers and 1 teacher aide were employed at these sites. Fifty-five percent of families were White, 6% were African American, 7% were multiracial, and the other 32% were either not defined or of other racial backgrounds. Family incomes averaged from $12,000 to $13,700. Parent participation was rated as 100% attending parent-teacher meetings, 20% attending open houses, and a range of from 10% to 50% attending social gatherings.

B. Identification of target population

Screening to identify children who exhibited clinically significant challenging behaviors occurred on an ongoing basis (approximately every 6 months) using the Early Screening Project (ESP) procedure administered by teachers. The ESP measures were scored and compared to national norms for boys and girls. Once children were identified as exhibiting behavior that warranted concern based on the ESP, the childcare administrator and teachers were informed, and administrators and teachers decided which

children and families would be offered the intervention services first. Families were then approached and asked to officially consent to services. Over time this method was modified to inform all families whose children were at risk, and services were offered in order of families agreeing to services. As children and families who were enrolled in services reached the 4th or 5th month of involvement with TFK, the individual intervention was phased out. Every 6 months, the classroom teachers where asked to re-evaluate the intervention children, and the remainder of the children previously screened as at risk with the ESP, so that follow-up measures of adjustment could be obtained for both intervention children and those who were waiting for services. The process of re-assessing intervention and at risk children allowed a new cohort of children to be identified for services, while previously targeted children completed services. This process also identified more children than could be served at any one time, creating a natural comparison group against which to quasi-experimentally compare improvements in the target intervention children.

C. Individual child and family interventions

Once families consented to receiving services a comprehensive child and family assessment, a home visit (mandatory in Years 1 & 2, optional in Year 3), and an individualized service plan were completed. Families received a median of 24 hours of service (range 7-85) that included:

1) Child and family assessment (mean=5.5 hours)
2) Child specific classroom observation (mean=5.1 hours)
3) Individual therapy (mean=2.9 hours) or individual work with the child in the classroom (8.2 hours)
4) Family therapy (mean=1.3 hours)
5) Crisis intervention (mean=.1 hours)
6) Case/family consultation with providers (mean=.5 hours)
7) Consultation with teachers re: individual child (mean=2.9 hours)
8) Consultation with parents re: child (mean=3.7 hours)
9) Team meetings (parent, teacher, CDA) (mean=2.8 hours)

Overall then, the intervention provided a mean of about 32 hours of services, 5 devoted to assessment, 16 to individual or classroom-based child services, 5 hours devoted to family issues and family meetings, and 6 devoted to consultation and team meetings.

In Years 1 & 2 these services were terminated after the enrollment period ended (when a child and family received 4 to 6 months of services). Those needing additional assistance were referred to other services. Because few families followed-up with these referrals, in Year 3, if the child was determined to be in need of additional services, the child and family were allowed to re-enroll for an additional 4 to 6 months. A total of 5 families did re-enroll during the 3rd year. Their pre-post scores for this report only included their first enrollment period.

D. Center-wide teacher and parent interventions

Teacher and Parent Workshops. In addition to individualized services, several center-wide training sessions were also conducted across centers in each year. Topics were identified based on the identified needs of each center. Trainings included:

- "Understanding and Managing Challenging Behavior in Preschool Children" (Year 1)
- "The Impact of Violence on Young Children," (Year 1)
- "Positive Discipline" (Year 1)
- "How to Build Positive Relationships with Parents," (Year 2)
- "Special Needs in Child Care," (Year 2)

- "Strengthening Communication with Parents," (Year 2)
- "Promoting Social-Emotional Development in Young Children: The Second Step Curriculum," (Year 2)
- "Living With Your Spirited Child," (Year 2)
- "Strategies to Minimize the Stress of Transitions," (Year 2)
- "Understanding Children's Sexual Behaviors," (Year 2)
- "Understanding and Meeting the Needs of the Traumatized Child," (Year 2)
- "The Learning Triangle: Overview of Strategies from the Challenging Behaviors Conference," (Year 2)
- "Positive Parenting Strategies," (Year 2)
- "The Emotional Development of Young Children: Understanding the Source of Challenging Behavior." (Year 2)
- "Responding to Young Children's Challenging Behavior" (Year 3)
- "Building Trust with Parents" (Year 3)
- "Managing Stress" (Year 3)
- "Effective Discipline Strategies" (Year 3)
- "Working with Culturally Different Populations" (Year 3)

Provision of a Floater Teacher. In Years 1 & 2, a part-time "floater teacher" was hired in each center to release teachers when needed for TFK activities (training, class consultation, parent-teacher meetings, etc.). However in Year 3, because this floater teacher role did not work well (see Year 1 & Year 2 reports), the money for this position was used instead to support substitute teachers or provide funds for after hours meetings as needed.

Family Liaison. Family participation and engagement in centers was noted as a significant challenge in Year 2 (see Year 2 report). In response to this challenge, a Family Liaison component was started in the Year 3 to bolster parent participation in centers. This project was only implemented in the four Worcester sites and did not include the South County Head Start sites. Funded by both the Health Foundation of Central Massachusetts and by a grant from the Fred Harris Daniels Foundation, the goal of the Family Liaison was to improve overall family participation and connection to the preschool centers. Part-time Family Liaisons (who were parents or grandparents of children in the centers) were hired to implement and coordinate various family events and activities, be available to parents during drop-off and pick-up, field questions and concerns of parents, and help to facilitate communication between parents and teachers, develop a newsletter, and help with distributing and collecting evaluative surveys.

V. Evaluation Model: Instruments and Measures

In each year of the project, the evaluation of the TFK model involved center-wide anonymous surveys of parents and teachers, qualitative interviews and focus groups with center personnel and CDAs, and the assessment of behavioral and family change. The latter involved assessing baseline and follow-up data on children receiving services and their families, as well as examining behavioral outcomes of children who were eligible for services but on a waiting list. The waitlist group served as a comparison to children who received services and helped to determine generalized classroom effects. Documentation of both the types of services received by individual children and families, and the types of center-wide parent and teacher training and activities, was also completed.

A. Center-wide measures

Teacher Surveys. Teacher surveys were distributed anonymously to preschool teachers in October/November of each year in all sites. The survey questionnaire combined data collection on demographic and educational background, knowledge about early childhood behavioral issues, and one additional standardized questionnaire rating personal burnout. The Maslach Burnout Inventory is designed specifically for teachers and human service workers. It has three subscales: emotional exhaustion, depersonalization, and personal accomplishment on the job (Maslach, Jackson & Leiter, 1996). Alpha reliabilities for each subscale (.90, .79 and .71 respectively) are adequate. Concurrent validity of the scale was demonstrated using co-worker observers to rate others in the job site. Together, the teacher survey and Maslach Burnout Inventory were used to monitor changes in teacher feelings of competence, need for further job training, as well as job stress and burnout.

Parent Surveys. Preschool parents in each center were also anonymously surveyed regarding their satisfaction with the center. The scale chosen was the National Association for the Education of Young Children (NAEYC) questionnaire, with some items added about communication with the childcare center about children's behavioral issues. This scale is widely used by childcare programs that desire certification from NAEYC and many of the items were also on the Massachusetts Office of Childcare Services (now Department of Early Care and Education) required annual parent survey. This survey was administered in the fall of Years 1 & 2. In Year 3, to evaluate the newly implemented Family Liaison component of the model, this survey was administered in both the fall and the spring.

Qualitative Data. In addition to the standardized measures, the evaluation included small, criterion referenced feedback questionnaires to evaluate the impact of teacher training sessions and parent activities or trainings provided by the childcare centers. Focus groups were also conducted with the CDAs to identify barriers incurred in Year 3. Finally, documentation of the implementation and success of the Family Liaison component of the project initiated in Year 3 was accomplished by interviews with Family Liaisons and their supervisors.

B. Child and family measures for intervention children

Child Measures. Children's behaviors and skills were assessed through a multi-dimensional process that started with the Early Screening Project (ESP) questionnaires (Walker, Severson & Feil, 1995). The ESP is completed by the child's teacher after a training session where early childhood externalizing and internalizing behaviors are described. Teachers identify ten children in their classroom that match these descriptions. They then complete a set of four short scales for each of three to five children who exhibit externalizing behaviors and three to five who exhibit internalizing behaviors: 1) Critical Events Index (a checklist of 16 serious behaviors); 2) either the Aggressive Behaviors Scale (for externalizing children) or the Social Interaction Scale (for internalizing children); 3) the Adaptive Behavior Scale; and 4) the Maladaptive Behavior Scale. Ratings of internal consistency for our sample range from .78 to .81 on the Aggressive Behavior Scale, .85 to .95 for the Social Interaction Scale, .79 to .92 for the Adaptive Behavior Scale, and .84 to .89 for the Maladaptive Behavior Scale. Reported Kappa interrater reliability between teachers and assistant teachers for the scales ranged from .48 to .79, with a median coefficient of .71. Discriminant function analysis also showed that the ESP has a very low rate of false positive diagnoses, with sensitivity rates ranging from 62% to 100%, and specificity rates ranging from 94% to 100%. The scales have been validated against other behavior scales, such as the Connors. The scales are also sensitive to intervention.

Teachers were asked to rate the children at baseline for referral for services. The scales were then scored by the evaluation team and compared to standardized norms calculated separately for boys and

girls. Families of children whose scores fell in the critical range were then approached for a discussion about intervention services by the childcare administration and the child's teacher. Both children who received services and those who did not receive services, but who were indicated as needing services, were rated by the teachers four to six months after intervention services started.

The other child-focused assessment was the Developmental Profile II (Alpern, Boll & Shearer, 2000). This is a brief developmental screen designed to identify children who may have intellectual, social, communication, or adaptive behavior delays. There are five subscales, physical, self-help, social, academic and communication. The instrument has extensive norms and good internal reliability on each subscale ranging from .78 to .87. Interrater reliability is also high, with 71% of raters achieving identical ratings, 79% within one point, and 100% within two points. The measure has shown strong correlations to other more detailed measures of development and intelligence, and has been shown to reflect change due to intervention. This screen was administered either in the home or at the child care site by the CDA, after parents gave permission and agreed to short term intervention for those children determined to be at risk. It was re-administered 4-6 months later at the end of the short-term intervention.

Family Measures. For those families whose children were identified as at risk based on the teacher ratings on the ESP, and a wide variety of parent and family measures were collected. These included: baseline demographic information; the Family Resource Scale (Dunst & Leet, 1987); the Parenting Stress Index-Short Form (Abidin, 1995); the Life Events Scale (derived from the Parenting Stress Index long form); the Parenting Scale (Arnold et al, 1993); and the HOME (Caldwell & Bradley, 1984). The HOME scale was mandatory in Years 1 and 2, but was optional in Year 3. With the exception of the HOME, all the scales are self-report by the parent(s).

The Family Resource Scale measures the adequacy of resources in households with young children. This includes basic needs for food, housing, income, social services, support, and family activities ranging from the most basic to more life enhancing. There are 30 items rated on a five-point scale of not at all adequate to almost always adequate. Alpha reliability for the scale is .92, and test retest stability over five months was found to be .52. This instrument was used to help the project identify family needs that if fulfilled, would lessen family stress and contribute to a better family environment for young children.

The Parenting Stress Index-Short Form consists of 36 items derived from a 100-item, well-established research and intervention instrument. The items comprise a total score and three subscales: Parental Distress (stress in role as parent such as role restrictions/depression); Parent-Child Dysfunctional Interaction (stress related to the child not meeting the parent's expectations); and Difficult Child (stress related to behavioral characteristics and temperament of children that make them difficult to manage). Alpha reliabilities for the total scale are .91, and for each subscale range from .80 to .87, and 6-month test-retest reliabilities range from .84 for the total scale, with .68 to .85 for the subscales, with the Parent-Child Dysfunctional Interaction being the least stable. The questionnaire has been normed on 800 children and clinical cutoff and percentile scores are provided. This measure was used as an outcome measure as well as a predictor of baseline behavioral scores.

Similarly, cut off scores and norms are available for the Life Events Scale, derived from the longer Parenting Stress Index. This scale taps common life events that can generate either positive or negative stress for families, such as a death in the family, divorce, job loss, housing moves, marriages etc. By identifying sources of stress in a family, the intervention plan can assist both the family and the child who may be acting out the stress, to identify coping and resource strategies. This scale was used as a treatment planning indicator not a measure of outcome.

The Parenting Scale is a 30-item scale developed to identify common 'mistakes' in discipline by parents of preschool children. It includes a total score and three subscales: Laxness, Overreactivity, Verbosity. The Laxness scale measures the extent to which parents notice but do not respond to misbehavior; the Overreactivity scale measures emotional reactivity of parents in discipline situations; and the Verbosity scale measures coxing, begging or lengthy explanations versus limit setting. It was initially designed and tested on Head Start parents. Alpha reliability for the total score is .84 and .83 and .84 for the Laxness and Overreactivity subscales. The Verbosity subscale is less well defined and demonstrated an alpha of only .63. The Parenting Scale was used to measure improvements in parental discipline skills.

Finally, the HOME was used to provide basic information on the extent to which parent skills and the home environment were supportive of the developmental needs of young children. It has been well used and standardized across a wide range of children and families. The preschool version is a 55-item scale with subscales for: learning stimulation, physical environment, warmth and affection, academic stimulation, modeling, variety in experience, and acceptance. The total scale alpha with a large sample of families during instrument development was .93, with a range of .53-.85 for subscales. This scale is completed by the CDA and provides an independent observation of some of the dimensions that are also tapped from parent's self-report. This measure was used to assist the CDAs in planning family interventions, more than as a measure of change. This is because certain scales are dependent on family resources that are unlikely to change in the short time frame for individual intervention (e.g. the quality of the physical environment, whether the family takes vacations together, whether the family eats together in the evening—which may be dependent on family work schedules etc.).

In addition to measures of child and family functioning, needs and resources, those families who receive intervention are asked to fill out a satisfaction with services scale and a Parent-Professional Relationship Scale to identify how helpful they found the assistance provided by the TFK program.

C. Schedule of assessments

The table below shows the timeline and instruments that were used across the three years of the project. Assessments where change was anticipated (Early Screening Project assessment, Developmental Profile, Parenting Stress Index, and the Parenting Scale) were repeated at the end of the brief intervention with each targeted child and family. Measures given only at baseline were used for treatment planning and in analyses exploring correlates of child behavior at baseline.

In addition, hours and types of services provided to children with challenging behavior and their families were collected each year through an MIS system.

TFK Evaluation Measures -Years 1-3 (2002-2005)

Measures	**Time of Assessment**						
Centerwide assessments	**Fall**				**Spring**		
	'02	**'03**	**'04**	**'05**	**'03**	**'04**	**'05**
Teacher questionnaire (demographics, child mental health training, job burnout, satisfaction with TFK (at follow-up)	X	X	X	X			
Parent questionnaire (overall satisfaction with child care center, communication with preschool teachers)	X		X	X			X
Classroom observations (teacher-child interaction; fostering positive child identity and well being; social skills facilitation; handling transitions; flexibility)	X	X			X (spring '03) After initial analyses showed that the classroom observations were not sensitive to change, these observations were used only for clinical feedback and goal setting at the classroom level.		

Screening of Children with Challenging Behaviors	Fall/Winter '02	'03	'04	'05	Spring/Summer '03	'04	'05
Screening to Identify Children at Risk: Early Screening Project (ESP) questionnaires: 6-10 children per class screened on critical events; aggression or social interaction; adaptive behavior; maladaptive behavior	X	X	X	Switched to Sutter-Eyberg	X	X	X
Assessment of Children Identified as At-Risk for Challenging Behaviors	**Baseline**				**Follow-up**		
Children meeting critical cutoff scores on ESP and identified as at-risk who are targeted for intervention or put on a waiting list	Ongoing as children are identified through screening process				Follow up with both intervention and wait list children at conclusion of each round of intervention services.		
Developmental Profile- Alpern Boll, Shearer **(only intervention children)**	Ongoing as children are enrolled in services				Follow-up at conclusion of intervention services		
Assessment of Parents of Children with Challenging Behaviors-intervention children only	**Baseline**				**Follow-up**		
Parent demographic background	X						
HOME scale (home environment)	Assessed in '02 through '04, optional in '05						
Family Resources Scale	Assessed in '02 through '04, dropped in '05						
Life Events Scale (family stressors)	X						
Parenting Stress Index-short form	X				X		
Parent Scale-parenting skills for preschoolers	X				X		
Parent rating of behavior problems	Assessed in '03 and '04 using parent version of ESP, replaced with BASC in '05				Assessed in '03 and '04 using parent version of ESP, replaced with BASC in '05		
Parent-Professional Relationship Scale (parent and provider versions)					X		
Parent Satisfaction with TFK intervention					X		
Follow through with referrals, long-term satisfaction and sustained child gains					(~4 to 6 months after intervention)		

VI. Results: Integrated Findings Years 1 Through 3

Findings reported in this section are based on data from all three years of the project. The results are organized to address the following questions:

A. Who was served? What were the basic characteristics of the participating preschool centers and the target children and families involved in TFK at baseline?

B. What factors relate to child behavioral problems at baseline?

C. What effect did the TFK model have on children and families? Were there long-term benefits?

D. What factors were related to positive behavioral change?

E. What effect did the TFK model have on preschool centers? Was the Family Liaison component effective?

F. How satisfied were families, teachers, and CDA's with the TFK model?

G. What were the main challenges in implementation?

H. What were the most positive aspects of TFK?

By addressing the above questions, we are able to contribute to understanding of the proposed problem model (i.e., factors that lead to child behavior problems), as well as assess the impact of the intervention model (i.e., does the TFK consultation model improve behavior in the child, have benefits for families of these children, and improve the overall resources of the centers?). Further, qualitative data gathered through interviews and focus groups give insight into some of the challenges of implementing this model, as well as what were the most positive aspects of TFK.

A. Who was served? What were the basic characteristics of the participating preschool centers and the target children and families involved in TFK at baseline?

1. Baseline Center-Wide Teacher and Parent Surveys

Teachers: In Year 1, before any interventions began, teachers at all sites (n=37) filled out baseline surveys that included teacher demographics and perceived resources as well as the Maslach Burnout Inventory. Results of these surveys showed that teachers ranged in age from 19 to 53 years (mean=31), and most (46%) had a high school diploma (30% had an Associates degree, 19% had a college degree, while only 1 teacher did not complete high school). Most had several years of childcare experience (mean=7 years, range=.5 to 20 years). Sixty-nine percent were white, 17% were Hispanic, and 3% were African American. Teachers reported a mean of 6 children in their classrooms with challenging behavior. While slightly over half (56%) reported a "medium" level of knowledge and a "medium" level of expertise (58%) in managing children with behavior problems, only 32% reported receiving adequate training in this area. Further, many teachers felt that release time for getting expert help (46%) or having experts to turn to for help with managing challenging behaviors (36%) was "not at all adequate." Finally on the teacher burnout scale at baseline, 44% of teachers scored low in emotional exhaustion, 36% scored in the moderate range, and 19% scored in the high range. On the depersonalization subscale, most (83%) scored in the low range, and all (100%) scored in the high range on personal accomplishment. Therefore, while teachers reported medium levels of knowledge and low levels of burnout, there did appear to be a need for further training and resources for managing children's challenging behaviors.

Parents: Parent satisfaction with preschool centers was assessed in Year 1 using the National Association for the Education of Young Children (NAEYC) questionnaire, with some items added about communication with the childcare center about children's behavioral issues. Response rates were good, with 178 (72%) questionnaires returned. Results showed that 90% of parents liked their preschool "a lot" and that the majority of children (86.5%) according to parents also liked the preschool "a lot." Across questions, most parents responded favorably. However, a sizable minority indicated that there were areas that were problematic. Specifically, 14.3% answered "no" or "don't know" to the item "Personally I feel staff are sensitive to feelings of family members." Similarly, 18.5% said "no" or "don't know" to the item, "I feel teachers are accepting of my family." Nineteen percent said "no" or "don't know" when asked whether "Teachers seek parents specific ideas for dealing with the child when at the program." Finally, 24.7% said "no" or "don't know" to the item "Changes that affect children, such as changes in room or teacher or use of special services, are discussed with parents before decisions are made."

Therefore, while general satisfaction was reported, there seemed to be room for improvement in some areas of parent-teacher communication, and in feelings of acceptance by families.

2. Baseline Characteristics of target children and families

A total of 208 children at risk were identified through the initial screening process over three years, representing approximately 34% per year of all enrolled preschool children at these centers during this time period. The majority of children identified (66%) exhibited externalizing behavioral issues, and 84% of children subsequently served had externalizing behaviors. Only 9 children with internalizing symptoms were enrolled in TFK intervention services. Therefore, this report focuses on the 137 children with externalizing behavior problems, 48 of whom enrolled in the TFK brief consultation services, and 89 of whom were wait list controls. Of the 48 children targeted, 1 dropped out shortly after consenting and another dropped out shortly after completing the baseline assessment. The remaining TFK intervention families received a median of 24 hours of services (range 7-85) that included time spent individually working with the child, time for a home visit and child and family assessment, classroom observation of the child, parent meetings, and teacher meetings.

Child Characteristics. Children ranged in age from 38 to 64 months (mean=49.21; SD=7.03 months) and the majority were boys (64%). Children showed a range of developmental strengths and weaknesses. Areas of strength included Physical Skills and Self-Help, with some children scoring two to three years above chronological age norms. However, many children showed developmental delays, particularly in the areas of social and communication skills, scoring two or more years below age norms. Parent's rating of the child's temperament from the Difficult Child subscale of the Parenting Stress measure showed that 23 (49%) fell within the normal range, 6 (12.8%) fell in the high range (85th percentile of normed sample), and 18 (38.3%) fell in the clinical range (above the 90th percentile of normed sample). Children's behavioral scores as rated by teachers showed a high degree of behavioral risk, with one child scoring in the high risk range (93rd percentile) and the rest scoring in the extreme risk range (98th percentile) for aggressive behavior. In terms of maladaptive behavior, two children scored in the "at risk" range (84th percentile), one scored in the "high risk" range, and the rest (44 children) scored in the "extreme risk" range. Children's adaptive behavior ratings showed four children who were not at risk, 7 children scoring in the "at risk" range, 12 scoring in the "high risk" range, and 24 scoring in the "extreme risk" range.

Family Characteristics. Overall, 47.8% of target children lived in a single parent family; 56.5% of parents were employed full time; 47.8% were from minority ethnic backgrounds. Family income ranged from under $5,000 to more than $60,000. Sixty-seven percent of the families made under $25,000, but most reported adequate basic resources and non-clinical levels of family stress. Thirty-seven percent of parents had some college courses or a college degree, while 26% had not completed high school.

We found that while some families were experiencing traditional risk factors (e.g., resource constraints, single parenthood), many families with at risk children had relatively unremarkable levels of traditional risks. For example, on the Family Resources Scale items reported by families at consistently lower scores, indicating only "sometimes adequate", included items dealing with time (e.g., time to socialize, time to be by myself, time to get enough rest/sleep, etc.) and items dealing with having extra money (e.g., money for family entertainment, money to save, travel/vacation, etc.). Although there were two to three families who rated the basic necessities like food, clothing, housing, and medical care as not at all to seldom adequate, overall for most families, the basic necessities were adequate. Similarly, few families reported stressful life events (e.g., divorce, job loss, death of a family member) at the level indicating significant stress. Only 9 families reported stressful events above the critical cutoff score of 17 for this scale, although scores for additional families approaches this cutoff.

Surprisingly, the majority of families (all respondents were mothers, except for two fathers) also reported relatively low levels of overall parenting stress, with only 17 (36.2%) falling in the high or clinical cutoff ranges for the total scale score. Fifteen families (31.9%) scored in the high or clinical range for Parent-Child Dysfunctional Interaction subscale, and 14 (29.7%) scored in the high or clinical range for Parental Distress subscale. Observational assessment using the HOME scale also revealed that families whose children were at risk of behavioral issues had considerable strengths. The scale creates cutoff scores for the lowest quartile, the middle 50%, and the highest quartile of scores. Overall, 65.6% of families in our sample scored in the highest quartile for acceptance of the child (and not using harsh punishment), and close to half (46.9%) for warmth and affection, and modeling appropriate behavior (43.8%). Only 21.9% scored in the overall lowest quartile for the total scale, although close to half (46.9%) scored in the lowest quartile for academic stimulation in the home, and 31.3% scored in the lowest quartile for both language stimulation and variety of experience.

Finally, on the Parenting Skills questionnaire, the target families scored in ranges that were more similar to families in clinical settings than a normal population. The scales indicate that parents in our sample were more lax in their attention to behavior, and more overreactive than a normal population.

B. What factors relate to child behavioral problems at baseline?

1. *Child Characteristics related to child behavior at baseline.*

Correlations were conducted to explore the relation between child behavior and chronological age, gender, developmental skill levels, and child temperament at baseline. Results showed that chronological age was not related to aggressive, maladaptive, or adaptive behavior. However boys were found to be more aggressive ($r=-.402$, $p=.005$), more maladaptive ($r=-.326$, $p=.025$) and less adaptive ($r=.446$, $p=.002$) than girls in their behavior as rated by teachers.

In terms of the relation between behavior and developmental levels, there were several significant correlations, with the child's level of social development related to all three behavioral measures. Specifically, more aggressive behavior ($r=-.306$, $p=.037$), and more maladaptive behavior ($r=-.425$, $p=.003$) were associated with poorer Social Development skills, while better adaptive behavior was indicative of better Social Development skills ($r=.366$, $p=.011$). Better adaptive behavior was also related to the child's Physical Age development ($r=.292$, $p=.047$), and better Self-Help skills ($r=.404$, $p=.005$). Maladaptive behavior, in addition to being associated with poorer Social Development skills, was associated with poorer Self-Help skills ($r=-.288$, $p=.05$).

Finally, analysis of child temperament as rated by parents on the Difficult Child subscale of the Parenting Stress Index was not found to be related to any of the child behavior measures. This could be because the behavioral measures were teacher ratings, and the temperament rating was by parents. It has been found that parent and teacher ratings are not typically strongly correlated as the child does behave differently and has different expectations between the school and home.

2. *Family characteristics related to child behavior at baseline.*

Correlations were conducted to look at the relation between child behavior and several family characteristics, including parent age, education, household income, number of hours worked per week, mean family resources, marital status, number of adults in the home, number of children in the home, how many moves the child has made, number of stressful life events, parental distress, parent-child dysfunctional interaction, total parenting stress, total parenting skills, laxness, overreactivity, and the home environment total and each subscale. Because of the number of correlations conducted for this

analysis, a p-value was set at .01. Surprisingly, none of these family characteristics were related to teacher rated aggressive, maladaptive, or adaptive behavior. This means that these family factors do not have much predictive value in determining which children may need targeting to receive behavioral assistance.

3. Teacher characteristics related to child behavior at baseline.

For this analysis, mean teacher education level, years of experience working in childcare, years of working in that center, and the mean emotional exhaustion subscale from the Maslach Burnout Inventory were correlated to teacher-rated child behavior. Because these are means for all teachers in a center over the three years of the study, they provide only a very approximate measure of the teacher characteristics in each preschool. Therefore, findings should be viewed as suggestive. Results showed only one significant correlation between Aggressive Behavior and Emotional Exhaustion ($r=-.359$, $p=.013$). That is, in those classrooms where teachers rated lower rates of child aggression, teachers also self-reported higher emotional exhaustion. The negative direction of this finding is difficult to interpret, but suggests that centers where teachers report higher emotional exhaustion rate students lower in aggressive behavior. One interpretation is that emotional exhaustion blunts teachers awareness of the behavioral needs of their students. Another possibility is that teachers in these centers are working harder to keep levels of aggressive behavior low and that while successful, it is taking a toll in terms of teacher burnout.

C. What effect did the TFK model have on children and families? Were there long-term benefits?

Before addressing the question of change in children and families, we analyzed the differences between those who dropped out vs. those who had complete baseline and follow-up assessments. Thirty-eight (79%) had complete baseline and follow-up child behavioral assessments, and 28 (58%) had complete baseline and follow-up parent data. T-tests were conducted to compare baseline characteristics of children and families who failed to complete follow-up assessments to those who completed follow-up. Results showed that there were no statistically significant differences between completers and non-completers on family income, parent age, education, minority status, single parenthood, parenting stress, parenting skills, family resources, or stressful life events. There were also no significant differences between completers and non-completers in terms of child's age, developmental profile scores, aggressive behavior, maladaptive behavior, or adaptive behavior. Thus, our findings based on those children and families with complete data, are likely to be representative of the remainder of the families who did not complete all data collection

1. Changes in child behavior ratings.

Separate 2 (Time) by 2 (Target vs. Control) Repeated Measures ANOVA's were conducted to examine change in aggressive, maladaptive, and adaptive behavior as rated by the teacher. In terms of aggressive behavior, there was a significant main effect for Time ($F[1,84]=32.43$, $p<.001$) and for Target ($F[1,84]=5.62$, $p=.02$), as well as a significant Time X Target interaction effect ($F[1,84]=14.47$, $p<.001$). These results showed that Target children overall were more aggressive than waitlist Control children at baseline, but Target children significantly decreased in aggressive behavior (Means=30.6 and 23.5 at baseline and follow-up respectively), while waitlist Control children did not show significant changes in aggressiveness baseline to follow-up (means=24.5 and 23.1 respectively).

In terms of maladaptive behavior, there was a significant main effect for Time ($F[1,85]=22.925$, $p<.001$), but not Target ($F[1,85]=.50$, $p<.n.s.$), and a significant Time by Target interaction ($F[1,85]=20.02$, $p<.001$). Similar to aggressive behavior, Target children showed significant decreases in

maladaptive behavior (Means=34.3 and 27.05 at baseline and follow-up respectively) while waitlist Control children did not show significant changes in maladaptive behavior baseline to follow-up (means=30.0 and 29.8 respectively).

Finally, in terms of adaptive behavior, there was a significant main effect for Time ($F[1,85]=14.58$, $p<.001$), but not Target ($F[1,85]=.50$, p<.n.s.), and a non-significant trend for the Time by Target interaction ($F[1,85]=3.64$, $p<.06$). Overall, adaptive behavior increased across time (Means=21.6 and 24.6 at baseline and follow-up respectively), but Target children tended to show greater increases (means=20.9 and 25.4 at baseline and follow-up, respectively), than waitlist Controls (means=22.3 and 23.85 at baseline and follow-up, respectively).

2. Changes in parenting skills and parenting stress.

While the above analyses revealed that children targeted for intervention demonstrated significant improvements in behavior, there were no overall effects found in analyzing change in Parenting Stress or Parenting Skills, including any subscales.

3. Long-term benefits.

We did not systematically follow up with all children enrolled in intervention services over the three year period. However, in order to gather some pilot data on whether children's improved behavior continued after services ended, particularly when the child entered kindergarten and first grade, we conducted a brief telephone interview with 7 families we could locate. In total, we attempted to reach 31 families 1 to 3 years after services. We found that the telephone numbers were no longer accurate in 18 of these cases, leaving 13 families we could actually contact. Of these families, however, only 7 followed through in completing the interview. Two of these children still remained in preschool. Of the remainder, three children were in kindergarten and two were in first grade. We asked parents to reflect back on their TFK services and describe if their children's behavior continued to improve, remained the same, or got worse since termination of services. We also asked about how well the child was currently behaving at home and at school, whether they were receiving any special education services, and to what extent TFK assisted their child in making the transition to school.

Overall, these children were doing quite well. None of the children had an Individual Education Plan (IEP) and none were receiving special services for behavioral issues, although one child was receiving occupational therapy and one some counseling. Four of the five families whose children had moved to public school agreed that the CDA was helpful in the transition, including two reporting the CDA helped arrange meetings with the new teacher, and four noting the CDA was helpful in communicating the child's needs. Four of the five families also indicated that TFK helped them be a better advocate for their child. In looking back on the time they were receiving services, all respondents indicated some improvement in the child's behavior at school, and all but one family indicated that TFK helped improve the child's behavior at home.

In monitoring current behavior, families reported that only one child was aggressive toward peers frequently, but all reported this behavior was the same or better since terminating TFK services. All families also reported that their child was sometimes, frequently or always positive in his/her interactions with peers, and five indicated this had improved since terminating TFK services. Reports from school were also largely positive, with only 1 parent receiving frequent school reports about behavior problems, however 3 indicated the number of poor school reports was worse since terminating TFK services. On the other hand, when asked about the frequency of receiving reports about good behavior at school, 4 families indicated they frequently or always received such reports, and 5 indicated the number of good reports

increased since terminating TFK services. This suggests that while children may continue to struggle with negative behaviors, they have learned compensating positive behavioral skills and have more behavioral assets for success subsequent to TFK intervention.

In terms of behavior at home, only one child was reported to frequently disobey parents, but 4 of the 7 families said home behavior had improved since terminating TFK services, and 5 of the 7 said they saw improvements in positive interactions with their child (e.g. more days when the parent found their child to be pleasant and cooperative instead of whining, clinging or throwing tantrums). Five families also reported they had better skills at managing or preventing negative behavior, and four indicated these skills had increased since terminating TFK services. Five indicated that they frequently or always encouraged good behavior and five indicated that their ability to encourage good behavior had increased. Finally in rating their child's current overall progress, all respondents reported their child was doing very well or pretty well, and none were doing poorly.

In sum, this small follow up study suggests that positive outcomes from TFK services appear to be maintained for both children and parents up to 3 years after enrollment. We need to be cautious about drawing strong conclusions about these data, however, since so few families were contacted. For this reason a more formal follow up study is being initiated in Year 4 of the evaluation.

D. What factors are related to positive behavioral outcomes?

We analyzed the role of individual child factors (age, gender, developmental status at baseline, and child temperament), family factors (e.g., parental marital status, maternal education, income, stressful life events, parenting skills and parenting stress at baseline), preschool factors (mean teacher education, mean teacher experience, mean teacher emotional exhaustion), and intervention factors (intensity of services, parent satisfaction, parent's relationship to the CDA) on child behavioral change for those who received targeted services. Dichotomous or categorical variables (e.g., gender, service intensity) were analyzed using repeated measures analysis of variance. To analyze continuous variables (e.g., age, developmental status), a change score was calculated for the dependent measure (calculated so that positive scores for each measure indicated positive behavioral change from baseline to follow-up), and these change scores were entered into correlational analyses.

1. Child Factors.

In terms of child factors, correlation analysis showed no significant relation between child age and behavioral change, or child temperament and behavioral change. However, Repeated Measures ANOVAs showed gender effects for change in adaptive behavior, and non-significant trend effects for maladaptive behavior. Specifically, there was a significant Gender X Time interaction for adaptive behavior $F(1, 36)=8.43$, $p=.006$. Examination of the means show that boys increase significantly in their adaptive behavior baseline to follow-up (means = 18.6 and 25.8, respectively), while girls did not change (mean=24.7 at baseline and 24.6 at follow-up). Maladaptive behavior showed a similar trend $F(1,36)=3.34$, $p=.076$, with boys showing more change than girls (boys mean baseline= 35.5 and follow-up=26.5; girls mean baseline= 32.2 and follow-up =28.0). Gender did not play a role in change in aggressive behavior. This suggests that the intervention is particularly helpful for boys.

Finally, correlational analyses showed several significant relationships between child behavioral change and developmental status at baseline. Specifically, more change in adaptive behavior was related to poorer baseline Social Skills ($r=-.33$, $p=.041$), Communication Skills ($r=-.374$, $p=.021$), and Self-Help Skills ($r=-.386$, $p=.017$). More improvement in maladaptive behavior was related to poorer baseline Social Skills ($r=-.468$, $p=.003$), Communication Skills ($r=-.353$, $p=.03$), Self-Help Skills ($r=-.412$, $p=.01$),

and Academic Skills (r=-.402, p=.012). There were no significant correlations between developmental level at baseline and change in aggressive behavior. These results indicate that at least for adaptive and maladaptive behaviors, greater behavioral improvements are associated with greater developmental delays at baseline.

2. *Family Factors.*

There were no significant correlations between the child behavioral change scores and any of the baseline family factors including parent age, education, household income, number of hours worked per week, mean family resources, marital status, number of adults in the home, number of children in the home, how many moves the child has made, number of stressful life events, parental distress, parent-child dysfunctional interaction, total parenting stress, total parenting skills, laxness, overreactivity, the home environment total or any of the subscales.

3. *Site Factors.*

There was only one significant correlation between the behavioral change scores and the site variables of mean teacher education, years working in childcare, years working at that specific center, or mean emotional exhaustion. Specifically, there was a significant positive correlation between maladaptive behavior change and mean years working at the present center (r=..328, p=.047), indicating centers whose teachers had greater longevity at the center had children who showed greater decreases in maladaptive behaviors.

4. Intervention Factors.

We investigated the effects of treatment intensity by comparing high versus low intensity recipients. Since this was a highly individualized consultation approach, families received varying amounts of services (range=7 to 85, eliminating one early drop out case). Half of the group received 24 hours of service or more, the other half received less than 24 hours of service. Repeated measures analysis of variance revealed significant Time X Treatment Intensity effects for child behavior in terms of aggressive F(1,31)=6.085, p=.019, and maladaptive behavior F(1,31)=9.21, p=.005, but not adaptive behavior. In terms of aggressive behavior, children in the high intensity group showed greater reductions in aggressive behavior (means = 32.33 and 22.19 at baseline and follow-up, respectively) than the low intensity group (means = 30.20 and 26.13 at baseline and follow-up, respectively). Similarly, children in the high intensity group showed greater reductions in maladaptive behavior (means = 36.00 and 25.74 at baseline and follow-up, respectively) than the low intensity group (means = 32.25 and 30.00 at baseline and follow-up, respectively).

We also conducted correlations between the behavioral change scores and parent's satisfaction with services, their ratings of their CDA's skill level, and their ratings of their relationship with their CDA. Results showed that reductions in maladaptive behavior were significantly related to parent's ratings of their personal relationship to their CDA (r=.529, p=.005) and their ratings of their CDA's professional skills (r=.574, p=.002). Parent's ratings of their CDA's professional skills were also related to decreases in aggressive behavior (r=.397, p=.049) and increases in adaptive behavior (r=.390, p=.049). Parent's overall satisfaction with services was not related to child behavioral change. These results suggest that when parents are able to develop a closer relationship with the CDA who provided services to their child, there may be better communication and more consistent home-school behavioral guidelines resulting in better child outcomes.

E. What effect did the TFK model have on preschool centers? Was the Family Liaison component effective?

1. Change from Year 1 to Year 3 in teacher reports of resources, training, knowledge in how to deal with challenging behavior, and teacher burnout.

Chi-square analyses were used to investigate change from Year 1 prior to the piloting of TFK services (baseline n=37), to the end of Year 3 (when all centers had the intervention for at least two years, n=42) in the percentage of teacher responses to survey items regarding their specialized training, knowledge, and access to resources for children with behavioral problems. Chi-square analyses also investigated change in teacher burnout levels. Results showed no differences in reported knowledge, but significant differences in resources and training, as well as a negative finding for teacher burnout. Specifically, the following significant results were found: More teachers at the end of Year 3 (68% in Year 3 vs. 32% in Year 1) reported access to consultation services for individual children with behavior problems in their classrooms (Π^2=14.25, df=1, p<.001), and more used this resource to a greater extent in Year 3 than Year 1 (Π^2=11.84, df=3, p=.008). Although there were no differences in reported access to referrals for individual treatment for children with behavior problems from Year 1 to Year 3, teachers reported using this resource more often in Year 3 than Year 1 (Π^2=9.59.25, df=3, p=.022). More teachers also reported access to classroom observation services in Year 3 than Year 1 ((Π^2=9.94, df=1, p=.002). Further, more teachers rated center resources as helpful in Year 3 (100%) than in Year 1 (74%) (Π^2=10.23, df=1, p<.001). In terms of the adequacy of resources, more teachers in Year 3 than in Year 1 stated they had more adequate resources in two areas: help from specialist (Π^2=16.99, df=3, p=.001), and training regarding children's behavior problems (Π^2=13.00, df=3, p=.005). Finally, one negative finding emerged. More teachers in Year 3 had higher emotional exhaustion scores than teachers in Year 1 (Π^2=6.07, df=2, p=.048). This is a puzzling finding and may be a simple statistical artifact, or indicative of the fact that some of the centers had experienced difficult site relocations, financial strains, and leadership issues during the previous year.

2. *Preschool-wide effects on level of behavior problems and suspension rates.*

To examine changes in overall behavior problems in the preschool, Analysis of Variance (ANOVA) was used to examine differences in baseline behavioral measures across the three years. Because two centers did not receive services until Year 2, these centers were examined separately from the sites that had 3 years of services. To simplify analyses, a composite adjustment score was created by reversing the adaptive behavior subscale and summing it with the other three subscales that make up the ESP. A higher composite score indicates greater behavior problems. A two (original or new intervention sites) by three (Year 1, 2 or 3) ANOVA showed there were significant effects for year F(2,131)=10.89, p<.001), demonstrating that behavior problems decreased over time (Means=95.75, 78.43, and 75.47 in Years 1 through 3 respectively). Further there was a significant center by year interaction effect F(1,131)=7.06, p=.009. Follow-up analyses were conducted showing that the original sites had significantly lower baseline behavior problem scores in Years 2 and 3 as compared to Year 1 F(2,88)=9.04, p<.001 (Means=95.75, 74.19, and 76.77 in Years 1, 2, & 3 respectively). New intervention sites had significantly lower scores in Year 3 than in Year 2, F(1, 43)=7.69, p=.008 (Means=86.41 and 73.29 in Years 2 & 3 respectively). Further, original sites and new intervention sites did not differ significantly in their scores during the first year in which each began receiving TFK services F(1, 27)=1.78, p=n.s., nor did they differ in Year 3 when both had had TFK services for at least one year F(1, 73)=.94, p=n.s. These results suggest that overall classroom behavior problems decrease after one year of TFK services and that these gains are maintained after two years. These findings would be supported more strongly if we had data in the first year from the new intervention sites and that showed that there

was no difference Year 1 to Year 2 for those sites receiving no TFK services. For instance, it is plausible, although we believe unlikely, that the effects are due to teachers repeatedly filling out the ESP questionnaires. However, it is impractical and unethical to gather that type of control data (identifying children in need of services) and not offer services to those children identified as at risk.

Yet another way to investigate center or classroom-wide changes is to look at changes in suspension and termination rates of children due to behavior problems. Table 1 below shows the changes that occurred from Year 1 to Year 3 in the numbers of suspensions and terminations across sites.

Table 1. Suspensions and Terminations across centers.

	Number of Suspensions				Number of Terminations*		
Year	Pilot Sites	South County Sites*	New Intervention Sites**	**Total**	Pilot Sites	New Intervention Sites**	**Total**
Baseline	8	0	2	10	9	4	13
1st follow-up	1	1	1	3	1	1	2
2nd follow-up	3	0	3 (only for 1/2 day each)	6	1	1	2
3rd follow-up	0	1		1	0		0

* South County Head Start sites have a no termination policy. However, they will put a child with behavioral problems on a "modified plan" limiting the amount of time the child is able to come to the center. The number of children on modified plans are indicated under suspensions.
** New Intervention Sites only had 2 follow-ups as they only began receiving TFK services in Year 2.

Thus, overall, it appears that TFK has had a positive impact on both the number of children presenting with severe behavioral problems (suspensions and terminations), as well as the overall level of severity of behavior problems in the classroom.

3. *Change from Year 1 to Year 3 in parent reports of communication and connection to the preschool.*

Chi-square analyses were used to assess change from Year 1 (n=178) to Year 3 (n=133) in parent's responses to the NAEYC questionnaire that was distributed anonymously to parents in the fall of each year. There were no significant differences in parent responses from baseline to Year 3 on any of the items. While this suggests that there were no changes in family perceptions of, and satisfaction with the preschool centers, it must be noted that responses to this questionnaire across years was generally highly favorable, so there is little room for change due to ceiling effects. Further, responses to the questions are in a "yes," "no," or "don't know" format, which offers no opportunity for measuring gradations of response.

4. Family liaison effectiveness.

To evaluate this part of the TFK project, both the Family Liaisons in each center, and their supervisors (usually center directors) were interviewed in the summer of 2005. In addition, parents were surveyed using the NAEYC questionnaire both in the fall of 2004 before family liaison activities began, and in the spring of 2005 after activities were implemented.

Family Liaison Interviews. Interviews with the Family Liaisons (FL) and supervisors focused on their views of the goals of this role, the activities used to achieve those goals, the success of the role within the center, the challenges that were encountered, and recommendations for improvement.

Across centers, there was general agreement about the goals that the Family Liaison role. These entailed:

- creating more of a connection between the center and families,
- increasing family participation and involvement,
- making families feel more comfortable and welcome, being a backup for the teachers and letting them know when issues arise with parents, and
- helping to direct parent concerns to the right person for resolution.

The activities used to achieve these goals included: "Parent Coffees" or "Parent Committees" and other center-wide events (potluck suppers, field trips, etc.) organized by the Family Liaison; having the Family Liaison be present during drop off and pick up to chat with families; the creation of a newsletter; help with surveys; and organizing workshops with speakers on topics of interest.

In one center, the Family Liaison role seemed to have worked very well. This person seemed to have a vision for what she wanted to accomplish, was outgoing and persistent in her attempts to connect with parents, and was successful in gaining their trust. She also developed strong ties with center staff at all levels, and seemed to fit seamlessly into the classroom.

However, several problems were noted across the other three centers. Most notably, finding the right person was very challenging, and some of the centers had difficulty keeping a consistent person in that role. It was difficult to find parents who had the time, and particularly could be there during-drop off and pick-up. Commitment and follow-through was a problem. Finding the right person also meant finding someone who could relate to diverse parents, while also relating to and supporting teachers in their connection with parents. Problems arose in handling and communicating parent concerns, which at times created more of a divide and a good deal of friction between the Family Liaison and teachers. Another problem noted by some of the Family Liaisons was the lack of structure to the role, and the need for them to take initiative with little guidance. Below are more specific summaries of how well this component worked in each center.

Site A: In this center there was turnover in the FL role and difficulty identifying and keeping a consistent person to fulfill the role. The Center Director, 2 staff who directly supervised the FL, and the FL who worked the longest in this position were interviewed. Across respondents, there was general agreement on the goals of the FL role, however, there was also some confusion about how the goals could be achieved most usefully, how the role should be structured, and who best could fulfill it. The FL also felt that she was unclear about what she should do and stated that she lacked self-initiative to make it work. However, despite some of these concerns, several activities were conducted including: writing a newsletter, conducting parent surveys and getting ideas from parents, representing the center at the TFK Steering Committee and the Family Subcommittee meetings, arranging activities for "Week of the Young Child" that encouraged parents to come in and do an activity with their child during drop-off and pick-up, and having a potluck for "International Night", all of which were described as relatively successful. The FL also had "Parent Committee Meetings" which were described as not very successful. The FL felt that the most positive aspect was the connection with parents, while the direct supervisors felt that the role didn't function as well as expected. The center director felt that the activities that were accomplished were positive.

Site B: This center had a consistent person in the FL role. Both the FL and the FL supervisor were interviewed. There was agreement between respondents on the goals for the FL (to increase communication between parents and the center, and to make parents feel more comfortable and supported). Overall, it was felt that the goals were met 100% with the families that had been reached. The supervisor stated that there was increased family communication, and increased feelings of comfort and support—although as the FL stated, some families were very challenging to connect with. It was reported that the FL was able to establish a presence, was always around, talking to parents, giving friendly greetings, and reaching out, even when parents seemed closed at first. Because the FL was also a staff person in the center's after school program, she had the time to connect with families that the teachers didn't have, and was able to develop trust. She also had the opportunity to get to know the children and the teachers and could answer parent questions about their child. Activities included helping with parent surveys and organizing workshops with speakers on discipline, money management, and nutrition, while providing supper and childcare for the parents to obtain good attendance. There was also a field trip to the zoo, and the FL provided "coffees" in the morning with donuts for parents to come and chat. When asked about the positive aspects of the role, the FL stated she loves her role, and was very enthusiastic ("it's awesome!"). She also stated that she felt she's really part of the center and offers support to the parents, teachers, and the director ("sometimes if [the director] is having a bad day, I'll go in and give her a hug."). The supervisor was also very positive and stated that she felt that the FL has made family involvement possible where it wouldn't be otherwise, and that it's "very important." The challenge identified was in reaching some of the very hard to reach families ("especially those children who are bused and those unwilling to try"). Another challenge identified by the FL was that at times it was difficult to have the teachers see the parent's point of view when there was a parent conflict or concern. Finally, the FL stated that at first didn't she know what to do, but after taking a couple of workshops she felt more comfortable in the role and more prepared.

Site C: In this center, the FL who had left about a month prior to the interviews could not be reached, and did not return phone calls. This person had not been replaced at the time of the interviews. The FL supervisor's goals for the FL were: send letters to parents to get them involved; create a newsletter; be a backup for teachers by alerting them to issues; and plan family events. The supervisor stated "We do a lot already, but we just wanted someone else as a backup." When asked if these goals were reached, the supervisor was positive. She indicated that the newsletter was sent out, family events were conducted, and that the FL. was helpful with collecting more parent surveys than would have been completed without the FL. These tasks also helped relieve the supervisor's work load to attend to other issues. The supervisor added that the FL went to meetings and had coffee hours for parents in the morning and afternoon (although she stated that they weren't "anything really big"). Her biggest challenge has been finding someone to replace the FL. She felt it was a good idea to have a FL, but it was difficult to find people to do it.

Site D: This center had a consistent person in the FL role, and both the FL and her two supervisors were interviewed. There was general agreement on the goals of the FL: to bridge the gap between parents and the center, to support parents and make them feel welcome, and to increase parent involvement. Other specific goals mentioned were to create a PAC group (which had not yet been actively worked on); provide information to parents; help with the parent surveys; plan workshops and other family events; and help to direct parents who have concerns to the right person for resolution. There also seemed to be general agreement that the goals and expectations had mostly been met, although problems and conflicts, particularly between the FL and teachers, were very high. Activities that were conducted included: writing a monthly newsletter (although the FL reported it was difficult to get cooperation from teachers about classroom activities to include), conducting parent surveys, holding two parent appreciation days, organizing 4 parent and teacher workshops, and being available for drop off and pick up. The FL also stated that she encouraged parents to talk to the teachers, helped parents,

particularly of new children, when their child cried and didn't want to be left at the center (stating she was able to keep a child in the center when the parent was going to withdraw him/her from the program), and talked privately with parents who had concerns. The FL stated that the most positive aspect of the role were the hugs from the kids and interacting with them during a story time. The supervisors stated that it was helpful to have another person there to greet parents, listen to them, and help organize activities. In talking about the challenges of the role, it was clear that for this center the challenge was mostly one of boundaries and expectations, particularly between the FL and the teachers. While there appeared to be consensus on the overall goals for the role, there seemed to be a lack of consensus regarding how the role should be carried out, how it interfaced with the rest of center staff, and how to develop trust between all participants.

Recommendations across centers to improve the Family Liaison role were:

1) working harder to keep lines of communication open;
2) clarifying the role, expectations and boundaries (particularly in terms of dealing with parent concerns);
3) increase training and have meetings across centers so that Family Liaisons can share ideas of what works, activities to try, etc.;
4) possibly hiring someone outside of the center (neither a parent or staff member) for the role with set hours and set expectations;
5) have a better monitoring system for trouble shooting and follow-through; and
6) more money to increase the Family Liaison time and provide incentives to families.

Overall, there appeared to be varying degrees of success with the implementation of this component with only one center where the Family Liaison appeared to work consistently well (Site B). Two centers (Sites A and C), saw turnover in the role. One center, while having a consistent person in the role had difficulty with conflicts between the FL and teachers. Because of these differences, centers were not combined in the analysis of the center-wide parent surveys.

Center-wide parent surveys. Because the parent surveys are conducted anonymously, pre-post surveys could not be matched for paired T-test analyses. Further, a spring administration of the surveys may yield different results than a fall administration simply because parents are more familiar with the center by the spring. Directly comparing the fall response with the spring responses may falsely show change that could be attributed to time of year, rather than the intervention. Therefore, analyses of the parent survey responses were conducted by looking at differences among centers at baseline (fall 2004) and again at follow-up (summer 2005) using chi-square analyses. If centers do not show differences at baseline, but do show differences at follow-up, we may be able to interpret these differences based on what we know about the variability in the success with which the family liaison role was implemented across centers. Thus, we can examine whether differences in patterns of responses between centers at follow-up, if evident, reflect the differences in implementation of the family liaison role within centers.

A chi-square analysis was conducted on the pre-test questionnaire (Fall 2004) to examine center differences at "baseline." There were a total of 103 questionnaires (Site A=51, 61%; Site B=20, 80%; Site C=19, 51%; and Site D=13, 27%). Thus, all sites had good return rates, except for Site D. Chi-square analyses revealed no significant differences on any of the NAEYC items. This indicated that prior to the implementation of the Family Liaison component, centers were similar in terms of parent communication and connection.

Chi-square analyses were repeated for the post-test survey responses given in the summer of 2005. There were a total of 107 questionnaires for this time period (Site A=64, 66%; Site B=17, 57%; Site C=18, 64%; and Site D=8, 17%). All sites had similar response rates at post-test as they did at pre-test,

except for Site D. Because this site only had 17% of parents responding, the representativeness of the data from this site must be considered questionable. Results of the post-test surveys showed several significant differences between sites (See Table 2 below).

Table 2. Chi-Square analyses of the percent of parents responding "yes" to items on the NAEYC questionnaire at post-test, after Family Liaison component was implemented.

Item	Site A	Site B	Site C	Site D
Teachers work with parents on 2-way communication (Π^2=9.52, df=3, p=.023)	100%	100%	94.4%	83.3%
Teachers and families work together on childrearing issues (Π^2=14.09, df=3, p=.003)	100%	100%	83.3%	100%
Teachers and parents work together to decide how to help the child (Π^2=19.49, df=3, p<.001)	98.3%	100%	70.6%	100%
Personally, I feel communication between parents and staff show trust/respect (Π^2=9.65, df=3, p=.022)	100%	100%	88.2%	87.5%
I feel teachers are accepting of my family (Π^2=8.52, df=3, p=.036)	100%	100%	88.9%	100%
Teachers seek parent's ideas for dealing with their child (Π^2=8.30, df=3, p=.04)	94.6%	100%	75%	83.3%
The program has an effective way of negotiating difficulties (Π^2=10.10, df=3, p=.018)	100%	100%	85.7%	100%

Although most parents respond favorably across each of these items within each center, only in Site B where the parent liaison component was fully implemented and successful, was there 100% positive responses for each item. Sites C and D, where there was either a long period of not having a FL, or where that role engendered significant conflict with teachers, have fewer positive responses. Site A showed generally positive results, despite some of the challenges that the FL role had in that center. These results provide suggestive evidence that a Family Liaison, when implemented successfully, can have positive effects on parent's view of their communication and connection to the preschool center.

F. How satisfied were families, teachers, and CDA's with the intervention model?

1. *Parent Satisfaction.*

Parent satisfaction with TFK services was assessed using a 16-item questionnaire. We combined responses across all three years to summarize parental views. Almost all parents (except 1) responded positively (indicating they agreed or strongly agreed), that TFK services helped their child behave better at school. Most parents also agreed, or strongly agreed, the TFK helped their child behave better at home

(88%), taught them better ways to handle child behaviors (92%), helped them feel more comfortable talking with teachers (80%), helped them feel more comfortable at the child care center (76%), and helped make the classroom a better place for all children (88%). Forty-six percent of families stated that TFK helped them obtain other needed services for their child, or their family (25%). None of the parents felt that TFK services took too much time or expected too much from them. Eighty-eight percent of parents agreed or strongly agreed that TFK services helped improve their child's skills (learning colors, listening, etc.), and 60% agreed or strongly agreed that TFK helped them get to know the childcare staff and other families better. In terms of the two items asking about the amount of services the child and family received, 88% reported that the amount was "about right," while three parents said it was "less than what was needed." Finally, parents were asked about their overall satisfaction with TFK services for their child and for themselves. Satisfaction with TFK services for their child was rated as, 38.5% "very satisfied," 46.2% "satisfied," and 15.4% "neutral." Results were similar in relation to services for themselves, with 38.5% reporting to be "very satisfied," 50% were "satisfied" and 11.5% were "neutral." Thus, most parents appear to be satisfied with the services they received, and were very positive about their child's behavioral improvements.

2. Teacher satisfaction.

Teachers were surveyed anonymously regarding the overall helpfulness of TFK services, how successful they felt the project was, and whether or not it was beneficial to their center. Teachers rated each question on a 4 point scale (e.g., 1=not helpful to 4=very helpful; 1=not successful to 4=very successful; 1=not at all to 4=very much of benefit). Sixty-seven percent of teachers in Year 3 reported that TFK was "helpful" or "very helpful" in learning how to handle child behavior problems in the classroom, while 17% reported it to be "somewhat helpful." When asked how helpful the teacher training classes were, 48% rated them as "helpful" or "very helpful" while 38% rated them as "somewhat helpful." Similarly, 48% percent thought that the in-class modeling was "helpful" or "very helpful" while an additional 41% rated it as "somewhat helpful." Overall, 82.6% of teachers rated TFK as "somewhat to very successful", and 72% said TFK was "somewhat to very much beneficial" to their child care center (16.7% said "a little)." These results suggest that teachers had a range of experience with the positive benefits of TFK, with about half seeing strong benefits and others were less convinced of its helpfulness. In part this could be because of some difficult relationships with CDAs over the years, or that fact that some teachers (e.g. head teachers) tended to be more involved with TFK than part time teachers or aides. However, because sites differed in the length of time they have been involved in the project (and therefore, differed in their time to fully integrate the model and work out problems that might arise), we conducted chi-square analyses to examine site differences. We compared the original Pilot sites with the South County sites, and the New Intervention sites. We found that there were significant differences between sites in their satisfaction ratings (see Table 3 below).

These results show that Pilot site teachers are significantly more satisfied with the TFK model than the New Intervention sites, while the South County sites fell in between. The Pilot sites have been involved with the intervention the longest, with the South County sites coming on a few months later, and the New Intervention sites not until Year 2. Further, the South County sites are geographically dispersed across a rural setting which meant that CDA services were necessarily less intense and consistent within any one center. Therefore it would appear that it takes a few years and sufficient levels of CDA time for teachers to feel that the model is helpful and beneficial to the center.

Table 3. Chi-square analyses of teacher's satisfaction with TFK by site.

Item	response	Pilot	South County	New Intervention
How helpful was TFK in learning how to handle child behavior? (Π^2=19.99, df=6, p=.003)	Very	6	1	0
	Helpful	5	7	4
	Somewhat	0	3	3
	Not	0	1	5
How helpful were the teacher training classes? (Π^2=20.31, df=6, p=.002)	Very	3	0	0
	Helpful	3	4	0
	Somewhat	0	3	5
	Not	0	0	3
How helpful was the in class modeling? (Π^2=13.19 df=6, p=.04)	Very	4	2	0
	Helpful	3	2	2
	Somewhat	1	5	6
	Not	0	0	3
Overall, how successful was TFK in helping children and families? (Π^2=20.41, df=6, p=.002)	Very	5	1	0
	Successful	4	5	1
	Somewhat	1	5	6
	Not	0	1	5
Overall, do you feel TFK was a benefit to your center? (Π^2=28.36, df=6, p<.001)	Very much	9	4	0
	Somewhat	2	7	3
	A little	0	0	6
	Not at all	0	1	3

Although the above questions addressed teacher overall satisfaction with the TFK model, we also asked specifically about helpfulness with regard to target children. In particular, we asked about one aspect of the model—the team meeting between the parent, teacher and CDA to plan assistance for the target child and family. First, teachers were asked if they participated in any of these team meetings. We found that 55.6% indicated that they had participated. Follow-up questions asked how helpful these meetings were in better managing the child's behavior, and in developing a better relationship with the family. Further, teachers were asked how helpful the CDA's assistance was in managing classroom issues for target children. Again, teachers responded to a 4-point scale where 1=not helpful, 2=somewhat helpful, 3=helpful, and 4=very helpful. Again, about half the teachers were strongly positive about this process: for example, 50% felt that parent-teacher meetings were "helpful" or "very helpful" in better managing the child's behavior, 50% felt that they were "helpful" or "very helpful" in developing a better relationship with the child's family, and 60% felt that the CDA's assistance was "helpful" or "very helpful" in managing classroom issues for target children (see Table 4). We also analyzed these questions for site differences.

Similar to general satisfaction with the TFK model, sites differed in their feelings of satisfaction regarding services for targeted children. Again, Pilot sites indicated a high degree of satisfaction while New Intervention sites indicated the least.

Table 4. Chi-square analyses of teacher's satisfaction with TFK Parent-Teacher team meetings by site.

Item	response	Pilot	South County	New Intervention
How helpful was the meeting in better managing the child's behavior? (Π^2=9.72, df=6, p=n.s.)	Very	3	2	0
	Helpful	3	2	1
	Somewhat	0	2	3
	Not	0	3	2
How helpful was meeting in developing a better relationship with the family? (Π^2=24.08, df=6, p=.001)	Very	5	1	0
	Helpful	1	3	0
	Somewhat	0	1	5
	Not	0	3	0
How helpful was the CDA's assistance in managing classroom issues for the target child? (Π^2=23.04 df=6, p=.001)	Very	5	1	0
	Helpful	4	8	1
	Somewhat	0	3	6
	Not	0	1	3

3. Satisfaction with Year 3 center-wide trainings.

Four types of training were provided in Year 3 to 114 participants across the four Worcester centers. Topics included: "Working with Culturally Different Populations" attended by 6 staff at one center; "Building Trust between Teachers and Families" attended by 62 staff and parents across the four preschool sites; "Managing Stress" attended by 20 staff and parents in three centers; and "Effective Discipline" attended by 26 staff and parents in two centers.

After each workshop, attendees were asked to fill out a brief satisfaction survey rating the workshop on content (interest level, matching expectations, relevance to work/life, and increased understanding of or ability to deal with children's mental health issues), on the skills of the presenter (knowledge, clarity, response to questions, etc.) and on the presentation of material (organization, handouts, etc). Ratings were based on a 5-point scale (1=very poor; 2=poor; 3=neither good nor poor; 4=good; and 5=excellent). All training topics received high scores for content, presenter, and presentation, with fewer than 10% of respondents rating any of the items for any of the trainings as less than "good." In fact, the majority of ratings across all items for all workshops were "excellent." Thus, most of the trainings in Year 3 were both fairly well attended and highly rated.

G. What were the challenges to implementation?

Each year, focus groups and interviews were conducted with CDA's, teachers, and administrators to identify successes and challenges in the implementation of the model. In this way, changes could be made to improve implementation. In Years 1 & 2, some of the challenges identified and elaborated on in the Year 1 and Year 2 reports included:

- Finding a good "fit" between the skills and personality of the CDA and the needs and "personality" of the preschool center, allowing for the development of a true collaborative relationship between the CDA and the center staff.
- CDA time and flexibility of scheduling to meet the needs of families and children. CDA's spent approximately 16 hours/week in centers and for some centers where the need was

high, this did not seem like enough time, particularly during the start-up year. After centers had consistent CDA services for more than a year, this issue seemed less pressing.

- CDA turnover also presented problems since CDA's left for medical or other reasons and finding replacements was a challenge.
- Adequate coverage and release time for teachers to participate in TFK activities were ongoing issues. Although the floater teacher was intended to meet this need, finding the right person and scheduling issues were barriers.
- Time frames for working with children and their families were thought to be too short in some cases and it often took time to gain buy-in and follow-through from families. To meet this challenge, the opportunity to extend services was offered in Year 3.
- Enrollment of families often took a long time in terms of contacting families, setting up meetings and getting consent from families. Therefore, as noted above, the enrollment procedures were changed in Year 3 to allow all families to be notified and enrolled on a first-come, first-served basis.

In Year 3, there were difficulties that arose regarding the recruitment of families for targeted TFK services. In particular, there were a high number of families who either declined to participate in TFK services or dropped out shortly after. For instance:

- 38+ families were invited to participate.
- 22 families enrolled, and received some services
- Of these, 14 withdrew early, resulting in only 8 completed cases.

A CDA focus group was used to provide information about the enrollment process and what might have contributed to the enrollment problems that TFK experienced in Year 3. CDA's identified the change in the enrollment process that was made in Year 3 as problematic. As noted above, in Year 3 letters were sent to all families of children who screened in, instead of the top 4 or 5. In the past, a phone call from the director or teacher was followed up with a letter to selected families. The change was made in Year 3 in order to reach more families whose children required assistance, rather than prioritizing families and then having to wait until families higher on the priority list made a decision to enroll in services.

Issues that were discussed as to why this may have discouraged enrollment included:

- Sometimes the letter is the first time parents are informed their child is having difficulty; this makes it less personal and makes it harder for families to collaborate with the center and TFK/CDA;
- Some letters were given out by teachers at drop off who did not know very much about TFK or its services and were unable to provide the level of explanation needed;
- Some letters were put on the 'pick up' clipboard and late pick up staff were not able to explain TFK to the parents receiving the letter ;
- The person picking up the child or receiving the letter may not be the child's parent and may not communicate the information to the parent ;
- Some new teachers weren't as aware of TFK and so couldn't explain the services to parents;
- Some centers have many services and it is confusing to sort out TFK from other services; and
- Some centers are dealing with many organizational stresses resulting in less attention to TFK than when the project started.

The result was that parents sometimes were shocked by the letter and unprepared for its contents. It was suggested that perhaps notification should go back to the phone call approach, with a follow up letter. Other suggestions included: providing more training/retraining for teachers regarding TFK and it's

services, and how to talk to parents about it; increasing parent orientation efforts and advertisement about TFK and its services center-wide; and having a small budget to give teachers food or small gifts to show appreciation for their efforts. Some CDA's also reported that having a "meet and greet" with CDA's provides a non- threatening way of having parents get to know them and feel more comfortable with the project. Overall, it was felt that CDA's need to be flexible and present in the centers so that parents see them as part of the center, see them interact with children, and get to know them better.

As a result of this feedback, changes were made to this process. Specifically, phone calls were once again instituted prior to letters being sent. Further, more effort was made to advertise TFK services and screenings to parents center-wide, and teachers were better informed regarding the process and services available to parents. Finally, in Year 4, for sustainability, families will not have to fill out the lengthy research consent forms. The new focus of the evaluation going forward will be on generalizability issues, service delivery documentation, and quality assurance, rather than testing or evaluating the model.

H. What were the most positive aspects of TFK?

Interviews were conducted with center administrators (both Executive Directors and Center Directors), and focus groups were conducted with teachers in Year 2. Questions were asked about the positive aspects of TFK. Results of these qualitative assessments were as follows:

Interviews with Center Administrators. Administrators emphasized the following as the most positive aspects of having TFK in their centers:

- Support and training received by staff. One mentioned specifically that teachers were developing skills;
- Bringing issues of challenging behavior to the "forefront" and validating staff concerns: helping the staff understand, talk about, and address the issues. One administrator stated that it helped teachers see that mental health issues were integral to working with the children, and "acknowledges it and offers concrete day-to-day solutions;"
- The positive relationship between teachers and CDAs and fostering a sense of collaboration between the teachers and family. One felt that child improvements came as a result of the parent-teacher collaboration;
- The impact on children "has been tremendous. You can really see the difference in the child and the impact on the classroom is so evident;" and
- Two also mentioned the positive impact of the family involvement component, one from the point of view of getting families help that they needed from mental health agencies and another mentioned and the ability to work with parents as a team.

Focus Groups with Teachers. The teachers from the different centers gave a range of answers, but the most mentioned were:

- Working with parents (3 centers). Two groups mentioned that some parents follow through, while some do not, but that the process opens communication with parents, and in some cases finally motivates parents to seek and receive help. Parent meetings involving the CDA were considered helpful to reinforce the teacher's perspective, and the CDA helps to communicate and make things clear to the parents;
- Training, particularly the Second Step curriculum was considered very helpful because it was organized and assisted them to use things "right out of the box," even though they knew the underlying principles. Another group did not refer to this curriculum but noted

the positive impact of earlier teacher training delivered by TFK, and felt it needed to be repeated;
- One set of teachers thought the floater teacher was helpful after adjusting that person's role;
- One group mentioned benefits to the child;
- Two groups emphasized that the most positive aspect of the program was to give them "new ideas about how to deal with children's behavior," "showing different stages of children's behavior, how they change, and the helpfulness of the ESP in understanding the children;" and
- Validation and support. One mentioned, "to have someone else to talk to who is outside…they see the problems we deal with on a day to day basis."

Interviews with CDA's. Interviews were conducted with the CDA's in both Years 1 and 2. Several common themes were mentioned in reference to the positive aspects of TFK and their role. They included:

- Collaboration with the teachers and working together on the child's issue in the classroom--in the natural setting where the behaviors occur. One especially emphasized consultation to teachers about non-targeted children was important and helpful. Another CDA reported a similar theme about teacher changes, i.e. that teachers began to think more broadly about what is going on with the children, rather than labeling them as 'bad';
- Building partnerships between parents and teachers. One emphasized the team meetings between parents and teachers that reviewed children's progress, and helped teachers become better able to talk with parents about behavioral issues;
- Working with the families and assisting them with education, awareness and to have a more positive link to their child care teacher and center. In this regard, one also mentioned the power of the home visit together with the teacher to get the family engaged, and to reinforce for the child and family how much the center cares for the child;
- Two CDA's emphasized how useful the in-depth child assessments were in getting a comprehensive look at the children, especially the Developmental Profile; and
- Assisting the child to build skills, identifying children who would otherwise 'fall through the cracks,' and providing individual speech and language therapy and other services they would not have received without TFK. One CDA mentioned the relationship she was able to develop with the SPED department in one of the school districts that enabled her to obtain summer and public school services for some of the children with whom she was working.

Parent feedback. Open-ended responses on questionnaires given to the families who received TFK services emphasized the importance of the relationship with the CDA and open communication and constructive feedback. Some of the statements made included:

"[Name of CDA] has been extremely supportive. I always have her undivided attention which made me believe that when she worked with my daughter, she received the same thing. She has shown me that there is always room for change when disciplining your child. Patience was the one thing I learned most from [CDA]. You are really lucky to have her working with families like mine."

"Every day I am so thankful that my son was selected for the TFK project. My CDA was a gift. She has helped me to be the parent I've always wanted to be. Although I'm not quite where I want to be, she has urged me to better my mental health, which eventually will make a tremendous difference in all of my future relationships. My son is my world, and the way we interact now is much healthier for both of us."

"[Name of CDA] was always very professional and respected us. She was able to give me some great ideas to use at home, and including my other children in the home suggestions."

"I appreciated my CDA's input and honesty with their observations of my child. I was pleased with my CDA's support at the additional needs of my child and my CDA's ability to work with other agencies to provide well rounded care for my child. I believe this initiative has helped my child's classroom and child care center. I believe these services are needed and addressing things early on greatly helps."

VII. Summary and Conclusions

This three-year integrated summary report of the TFK project provides increased sample size (as compared to previous yearly reports) and the opportunity to address not only questions regarding the effectiveness of the TFK model on children, their families, and the child care center, but also an exploration of the correlates of behavioral problems and of positive behavioral change. In this way, we can provide some suggestive evidence for the original "problem model" in understanding behavioral problems in children, as well as a general test of the effectiveness of the intervention model.

A. Understanding behavioral problems in children: Characteristics of the children, families and preschools involved in TFK.

Over the three years, TFK services were implemented in four preschool sites in Worcester and one Head Start Program in southern Worcester County, touching approximately 285 preschool age children in 17 classrooms. At the start of the project, about half of the teachers in these classrooms reported having college degrees, and many had several years of child care experience. While slightly over half (56%) also reported a "medium" level of knowledge and experience in managing challenging behaviors, most felt that they did not have adequate training or resources to deal with behavioral problems. Despite identifying an average of 6 children in their classroom who had such behavioral issues, teachers all reported high levels of personal accomplishment on the job, and most did not report high levels of job burnout. Anonymous surveys of parents in these preschools showed 90% reporting that they liked the center "a lot." However, a sizable minority (14% to 25%) reported feeling a lack of sensitivity toward, and acceptance of their families, and a lack of communication regarding handling child behavior, and program changes that affect the child. Parent participation in individual child feedback sessions and in other center activities (open houses, social gatherings, etc.) varied widely across centers with some centers reporting almost no participation, and others reporting 80-100% participation. Thus overall, while preschools had many strengths (college educated and experienced teachers with low burnout, and high overall satisfaction ratings from parents), problem areas were also evident. In particular, teachers reported high numbers of children with behavior problems in their classroom and a lack of specific training and resources to deal with them, and some preschools also evidenced a problem with family participation and connection.

Teacher's perceptions of the high number of students with behavior problems in their classrooms were born out by a standardized screening process. A total of 208 children were identified as "at risk" through the behavioral screening process over three years, representing approximately 34% per year of all enrolled preschool children at these centers during this time period. Thus an astounding 1/3 of all children enrolled over the three years of this evaluation were rated by teachers as having social-emotional behavioral problems at some level of risk. The majority of children identified (66%) exhibited externalizing behavioral issues, and in fact, most of children enrolled in TFK intervention services (84%) had behavioral problems of this type. While a few children were served who exhibited other social emotional issues (e.g. withdrawn, depressed), the emphasis on serving children with acting out behaviors

reflects the priority child care centers placed on addressing those children who were likely most disruptive of the entire classroom.

Surprisingly, children and families enrolled in services came from very diverse backgrounds and did not necessarily have the traditional risk factors in terms of lower income, education, or high levels of stress. They also showed both strengths and weaknesses in providing a developmentally appropriate home environment. Areas of strength included providing high acceptance, warmth and affection, and modeling of appropriate behavior, while families more often failed to offer adequate social/cultural experiences, academic, or language stimulation. One area where targeted families seemed to more consistently perform poorly was in parent discipline skills. They tended to be more lax in their attention to behavior, and more over-reactive in their emotional response to misbehavior than general parent populations.

Although these children came from fairly normative family backgrounds, their behavioral scores indicated high levels of need, with clinical cut off levels typically falling into the extreme risk category for aggressive and maladaptive behavior. Further, among those children provided individual services, most showed substantial developmental delays in both social and communication skills. These delays were often previously unidentified by pediatricians or child care workers, and likely represent an important factor in the children's social/emotional deficits. At the same, time however, only half of the children in the service group were rated by parents as having difficult temperaments

From the Problem Model, based on the literature in this area, we expected that child behavior problems would be related to multiple factors, including child characteristics, family characteristics and preschool characteristics. The exploration of factors related to child behavioral problems at baseline showed that boys, and children with developmental delays in social skills and self help skills had more difficulties. Child age and temperament did not appear to play a role. As mentioned previously, these children came from a range of family backgrounds. When we looked at the relationships between child behavior and family characteristics (family demographics, parent stress, parent discipline skills, home environment), none of the family characteristics that have been shown to be related to child behavioral problems in the literature showed a significant relationship to behavioral problems in this sample. This may be due to our sample size or the measures used, but in our analyses, child characteristics were more related to behavior problems than family characteristics. Similarly, we found little relationship between child behavior and preschool/teacher characteristics, although our measure of these characteristics was fairly imprecise (an average of all preschool teachers in a center over the three years).

B. Effectiveness of TFK intervention model.

Analysis of all three years of TFK data showed strong support for the effectiveness of the TFK model on child behavior. Across all three years, target children showed significant improvements in teacher rated aggressive behavior, maladaptive behavior and adaptive behavior, while children who were waiting for services showed no change. Parents, almost without exception, agreed that TFK services helped their child behave better at school. Most also felt that it helped their child behave better at home and that it helped improve their child's learning skills. Further, results of follow-up interviews with families whose children made the transition into kindergarten suggest that these gains were maintained. None of the seven children we were able to follow up with were on Special Education plans in the public schools or were receiving special services for behavioral problems. While some children still struggled with their behavior at times, all parents reported that they felt their child's behavior was either the same or improved since graduating from TFK services. While these results are encouraging, the number of families we were able to reach was small. A larger study of the long-term effects of TFK and the transition into kindergarten is planned for Year 4.

While there were strong gains shown in children's behavior pre- to post-enrollment in TFK services, and some evidence for maintenance of those gains, results in terms of benefits to parents was less clear. Findings of pre-post improvement in parenting stress and parenting skills, were weak and inconsistent from year to year, and when combined across years, did not show significant change. However, over 90% of parents felt that TFK services had taught them better ways to handle their child's behavior. Further, most parents felt that TFK services helped them feel more comfortable talking to teachers, and helped them feel more comfortable at the child care center. Finally, follow-up interviews of parents whose children graduated from services reported gains in their positive interactions with and ability to deal with their child's behavior, and most felt that TFK helped them in advocating for their child after the transition into public school. Taken together, these findings indicate that parenting behavior and stress may be more difficult to impact than child behavior. Nevertheless surveys and interviews with families suggest that TFK services may have taught parents some specific strategies to use with their child, and may have some positive long-term benefits to the parent child relationship. Further, through TFK, parents felt more comfortable with the center and in talking with their child's teacher. Perhaps, this increased comfort and partnership with teachers at the preschool level helped to increase parent's comfort in advocating for their child in public school.

The TFK intervention model also appeared to have positive effects on preschool centers in terms of increasing training and access to and use of resources by teachers. In particular, compared to baseline, teachers in Year 3 felt they had more adequate training regarding children's behavior problems and more adequate help from specialists. They also reported more access to and use of consultation services for individual children, and made more referrals for individual treatment when needed. Overall, teachers rated center resources more helpful in Year 3 than in Year 1. Consistent with this, the majority of participants (both teachers and parents) rated the TFK workshops as "excellent." When asked specifically about the helpfulness of TFK services, almost 70% of teachers felt that TFK was helpful in learning how to handle child behavior problems, with close to 50% indicating that teacher training classes and the in-class modeling were helpful or very helpful in this regard. Finally, about half of teachers thought that the team meetings for target children (between parent, teacher & CDA) were helpful in developing a better relationship with the parent and managing the child's behavior in the classroom.

Center-wide benefits also appeared to accrue in terms of overall levels of behavioral problems in the classroom and number children suspended or terminated due to behavior. Overall levels of baseline behavior problems dropped significantly after one year of TFK services and this lower level was sustained the following year. Further, suspension rates dropped drastically, and termination of children was all but eliminated. Most parents whose children received the targeted intervention also felt that TFK made the preschool a better place for all children.

Center-wide ratings of parent connection and satisfaction with the preschool did not show differences from Year 1 to Year 3. However, implementation of the Family Liaison component in Year 3, showed some positive benefits, particularly in those centers that had success with finding and keeping an active Family Liaison. Specifically, in centers where the Family Liaison component was most fully and successfully implemented, parents reported better parent-teacher communication and feelings of acceptance than those where this component was less successfully implemented.

Overall satisfaction with the TFK model seemed to be higher among parents, CDA's, and center administrators, than among teachers. For instance, approximately 85% of parents were "satisfied," or "very satisfied," with the services they and their child received, while only 49% of teachers rated TFK as "successful" or "very successful," and 39% said "very" beneficial to their center (33% rated it as somewhat beneficial). Teachers also reported greater job burnout (in terms of emotional exhaustion) in

Year 3 than in Year 1. It's difficult to know to what to attribute this change. It could be that TFK places more demands on teachers, but other changes have occurred across preschools that may account for this change. In particular, centers had to deal with preschool staffing shortages, having to move to other buildings, and budget constraints. In addition, the numbers of children identified with behavioral problems also increased steadily across the three years, so any one of these factors could increase teacher stress and burnout.

C. Factors related to positive behavioral outcomes.

When we looked at the factors that were most related to positive behavioral change, we found that factors related to the child (gender, developmental delay) and TFK services (intensity, and parent-CDA relationship), as well as low teacher turnover, were related to positive behavioral change, but family factors were not. Specifically, for adaptive and maladaptive behaviors, greater behavioral improvements were associated with greater developmental delays at baseline and with being male. It may be noted that both developmental delays and being male were associated with higher behavioral problems at baseline. Therefore, perhaps these children had the most to gain from receiving services, and it appears that indeed, TFK services are effective with the children who need it most, not just those with mild problems. Further, it appears that treatment intensity, specifically receiving 24 hours of service or more, is most beneficial, leading to greater decreases in both aggressive and maladaptive behavior. Finally, positive behavioral change was also associated with the parent's ratings of their personal relationship with the CDA and their ratings of their CDA's skill level, suggesting that the child may benefit most when the CDA is successful in developing a positive relationship with the parent, and earning their respect and trust in terms of their skills.

D. Challenges to implementation, and recommendations for the future.

Overall TFK appears to be a highly effective model of intervention. However, over the three years, we have learned that several factors can produce challenges to its implementation. For instance, the CDA role is a difficult one to fill, requiring not only a solid understanding of early childhood behavior and development, but honed clinical skills, and the ability to adapt those skills to an early childhood educational setting (as opposed to a clinical setting). Gaining teacher buy-in and support is crucial, as resistance and defensiveness can be high. This requires the ability to work effectively with teachers in a collaborative model. CDAs must recognize and support teacher skills and ideas, while helping them to develop greater knowledge and skill in preventing behavioral problems in the classroom and dealing effectively with those that do arise. It also requires skill in fostering communication and collaboration between the parent and the teacher. Finding the right match between the personality and style of the CDA, and the personality, needs, and style of the center can be a challenge. Two key strategies used by TFK to address these issues are: 1) to increase training and credentialing for early childhood mental health specialists; and 2) to change policy at the state level to include social-emotional development in the curriculum for all preschool teachers. TFK in Year 4 has begun to offer pilot courses to address the needs of both of teachers and clinicians, as well as successfully advocating for policy changes at the state level.

Adequate coverage and release time for teachers can also be a barrier to successful implementation of the TFK model. While the floater teacher did not work well in most centers, funding needs to be provided to allow teachers to participate in collaborative meetings with CDA's and parents, and to attend trainings and other skill development workshops. In addition, regular updated communication with teachers as to the goals of TFK, the necessity of their collaboration, and how to talk to parents about the project are needed. Teachers too, need to get positive feedback and recognition of their efforts in making TFK a success. While TFK appears to be beneficial for teachers and the center, much of the burden falls on teachers in terms of screening children, filling out surveys, and additional time for meetings and

trainings; this on top of generally low salaries and staffing shortages. Therefore, teachers need to fully understand and see the benefits of their efforts. In this regard, it may be useful to more regularly communicate or report on the successes of the project in terms of children's behavioral improvements and center-wide benefits. Sometimes it is hard to see the forest for the trees--hard to see the incremental successes when you are in the thick of it.

Finally, gaining parent participation and buy-in can also be a major challenge. We learned in Year 3, that while opening enrollment up to all families who screen in may be a way to reach more families, it must be done with the same level of care and sensitivity as when approaching a selected few families. Sending a letter as a first means of contact is too impersonal and can create fear, suspicion and defensiveness in families. A first contact regarding the sensitive issue of a child's behavioral problems requires personal contact with the family by the teacher, administrator, or the CDA if that person is well known by parents in the center. By the same token, the more families feel a part of the center, and the more collaboration there is between teachers and parents, the easier and less shocking or threatening this conversation should be. The Family Liaison component was intended to create greater connection between parents and the preschool center and teachers. We found that when this role works well, it can achieve this goal. However, similar to the CDA, the role requires a good fit between the personality and style of the Family Liaison and the center staff. It also requires a good deal of time, flexibility in scheduling, self-direction, and initiative. Few parents have the time or initiative to take on and follow through with this type of commitment. In the center where this role worked best, the Family Liaison was a parent that was already well integrated into the center and worked as an after school person. Clearly to make this role work effectively across centers, it will take creative solutions to address these barriers, and probably additional funding to attract parents to the role.

In sum, the TFK model has demonstrated that early childhood behavioral issues are highly prevalent, yet a modest level of preschool center-based intervention services can significantly improve children's behavior and social-emotional development. Such early intervention also appears to sustain itself into kindergarten and first grade, suggesting that this model has long-term benefits for children and families, schools and the service system. At the same time our work has demonstrated it takes thoughtful and careful implementation activities with each child care center to successfully manage the multiple complex systems that affect children and families. It takes the commitment of preschool centers and teachers to change their practices, an adequate workforce to supply quality early childhood mental health consultants, and a commitment by the Commonwealth of Massachusetts to establish new policies and resources that make this model sustainable. The increasing numbers of children with behavioral problems, and the long-term consequences for society, make the outcomes of the TFK project extremely valuable and cost-effective. We have successfully demonstrated that publicly-supported child care centers are an essential venue to screen and provide social-emotional and developmental services to at risk young children; that such services need be of only modest intensity and cost; and that such services can significantly improve behavioral and functional skills for children who would otherwise continue to demonstrate difficult classroom behaviors, lack of school readiness, and require more extensive mental health and other support services as they enter elementary school and adolescence.

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