Executive Summary

On-site consultation has become a widely implemented professional development approach to quality improvement for early childhood programs, but the way in which it is delivered is often quite variable. Even the label used to describe the process varies—consultation, coaching, mentoring, or TA (technical assistance). Few studies of the effectiveness of consultation have been conducted and little is known about the type or amount of intervention that is needed to obtain quality growth, whether teachers and family child care providers can benefit equally, or whether there are particular characteristics of caregivers who might benefit more from consultation.

This project was funded in 2004 by the Child Care Bureau of the US Department of Health and Human Services, led by researchers at the University of North Carolina, and colleagues in four other states. The evaluation was called QUINCE (Quality Interventions for Early Care and Education). The study tested the Partnerships for Children (PFI) model of assessment-based, individualized, on-site consultation (Palsha & Wesley, 1998; Wesley, 1994). PFI consists of two main components, both developed at the FPG Child Development Institute—the assessment tools used to index quality (the *Infant/Toddler Environment Rating Scale-Revised,* (ITERS), 2003, the *Early Childhood Environment Rating Scale--Revised,* (ECERS), 1998, and *Family Day Care Rating Scale* (FDCRS), 1989, measures developed by Harms, Clifford & Cryer) and the theory-based, collaborative, problem-solving model of consultation developed by Pat Wesley. The model builds on the literature that suggests greater change is possible when individuals are involved in assessing their own needs, receive individualized support over an extended period of time, and have opportunities to apply new knowledge and skills in their own work setting.

Twenty-four agencies in five states (California, Iowa, Minnesota, Nebraska, and North Carolina) participated in the study. Random assignment was used at two levels: 101 consultants were assigned to PFI or control groups, and 108 child care classrooms and 263 family child care (FCC) homes were assigned to PFI or control consultants. Teachers and FCC providers were assessed using questionnaires and observations before and after the PFI or control intervention and 6 months later. In the year after the intervention, 710 children in these classrooms and FCC homes were assessed at two time points with measures of cognitive, language and socio-emotional development.

The objectives of the research were to test the efficacy of the PFI model of on-site consultation compared to the typical quality enhancement programs delivered by the 24 participating agencies, to investigate the conditions under which PFI might work, and to assess whether children in FCC homes and classrooms served by a PFI-trained consultant had better outcomes than those in classes that received the typical consultation.

Description of Study Participants

The partner agencies that participated in QUINCE were very similar to typical community-based resource and referral agencies. The characteristics of our 24 sites and their typical consultation services mirror the characteristics and services of NACCRRA's 2006 national random sample of 250 local CCR&Rs. The control group in QUINCE received a variety of typical quality enhancement consultation interventions. In our study, PFI on-site consultation was compared to "business as usual."

The consultants were all women and had considerable experience in early childhood education. They had been consultants for an average of 4-5 years. Mean education was between 15-16 years (16 = BA degree), although there was a distribution ranging from high school to MA. Of the consultants with AA or BA degrees, somewhat less than 1/3 of the degrees were in early childhood education. In addition, 24% screened positive for depression.

FCC providers averaged 37 years of age, had over 10 years of early childhood experience, and 70% had less than an AA degree. The majority were White, with 12% African-American and 8% Other. Mean family income was $50,000. They cared for an average of 7 children and 24% had a paid assistant. FCC homes served about 25% children on subsidy.

Teachers averaged 37 years of age, had almost 11 years of early childhood experience, and 75% had less than an AA degree. Almost half the teacher sample was White with 43% African-American and 8% Other. Mean family income was $38,000. Their classrooms served an average of 13 children with an average child:adult ratio of 7:1. Almost 50% of the children in these classrooms received subsidy.

Families of study children were married (~70%), with 2 children on average, annual family income of about $57,000, and over 40% of mothers with a BA degree or more. Child care subsidies were received by 15%.

Children in the study were generally 3-4 years old when first assessed and slightly more boys than girls. Although about 13% of families identified as Hispanic/Latino, Spanish was the primary home language of only 24 of over 700 study children so their Spanish assessments were not analyzed.

Findings

Family Child Care Quality

1. The PFI group made significant gains in quality from the beginning to end of consultation and they were significantly higher than the control group which made no gains. The PFI group improved on observations of teaching and interactions, provisions for learning, and literacy/numeracy; they did not improve on tone/discipline or sensitivity. The treatment effect sizes were moderate.
2. The gains made by the PFI group during intervention were maintained at 6 months after the intervention ended.

3. The average number of on-site consultation visits was 11.6 for the PFI group and 5.8 for the control group, but dosage was not a mediator of the treatment effect on quality.
4. More experienced FCC providers had more significant gains in quality over time than less experienced providers.
5. Attitudes and beliefs were not likely the mediators of the observed changes in quality. At the end of intervention, PFI and control groups did not differ on any of several measures of professional motivation, childrearing beliefs, teaching confidence, or job stress.

Classroom Quality

6. Classrooms in both PFI and control groups improved over time on three of the four measures of quality—teaching and interactions, provisions for learning, and literacy/numeracy. No group differences were observed on the sensitivity measure. (See Figures A, B, and C)
7. Quality gains continued to be made after the intervention. In fact, the slope of change was greater during the post-intervention period than during intervention.
8. The average number of on-site consultation visits was 19.3 for the PFI group and 6.7 for the control group. Dosage was a significant mediator of the treatment effect on quality for the PFI group.
9. In the PFI group, more experienced teachers made more significant gains in quality over time than less experienced teachers.
10. Compared to control teachers, PFI teachers showed gains on the measure of childrearing beliefs (modernity) and higher professional motivation scores; the two groups did not differ in their beliefs about developmentally appropriate activities or confidence in their teaching abilities.

Figure A. Teaching and Interactions Factor from the ECERS-R & FDCRS

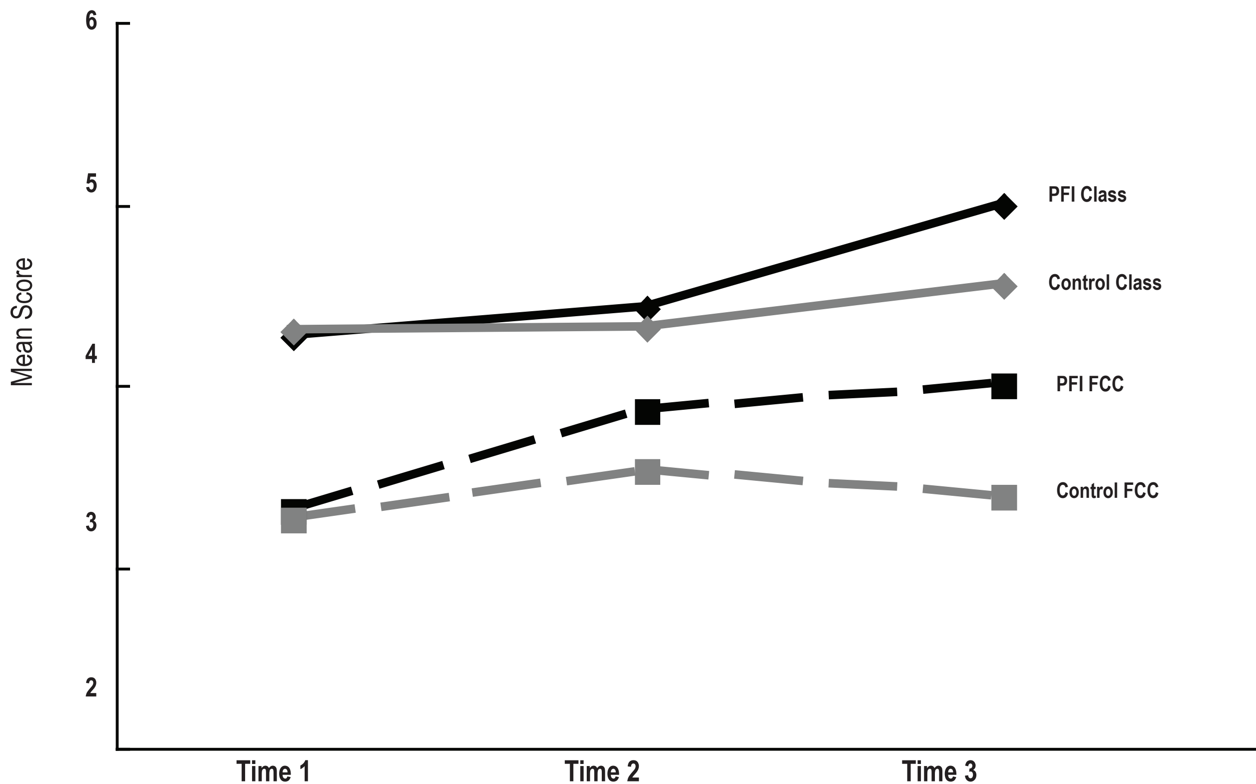
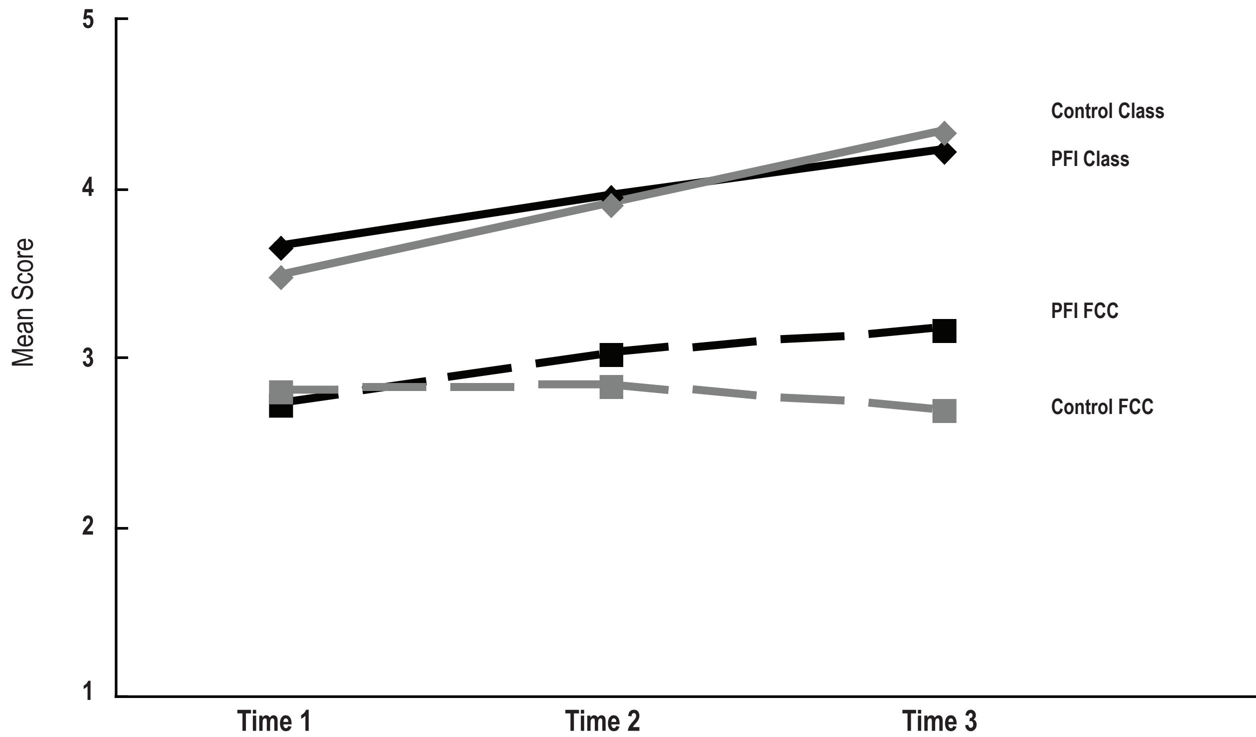
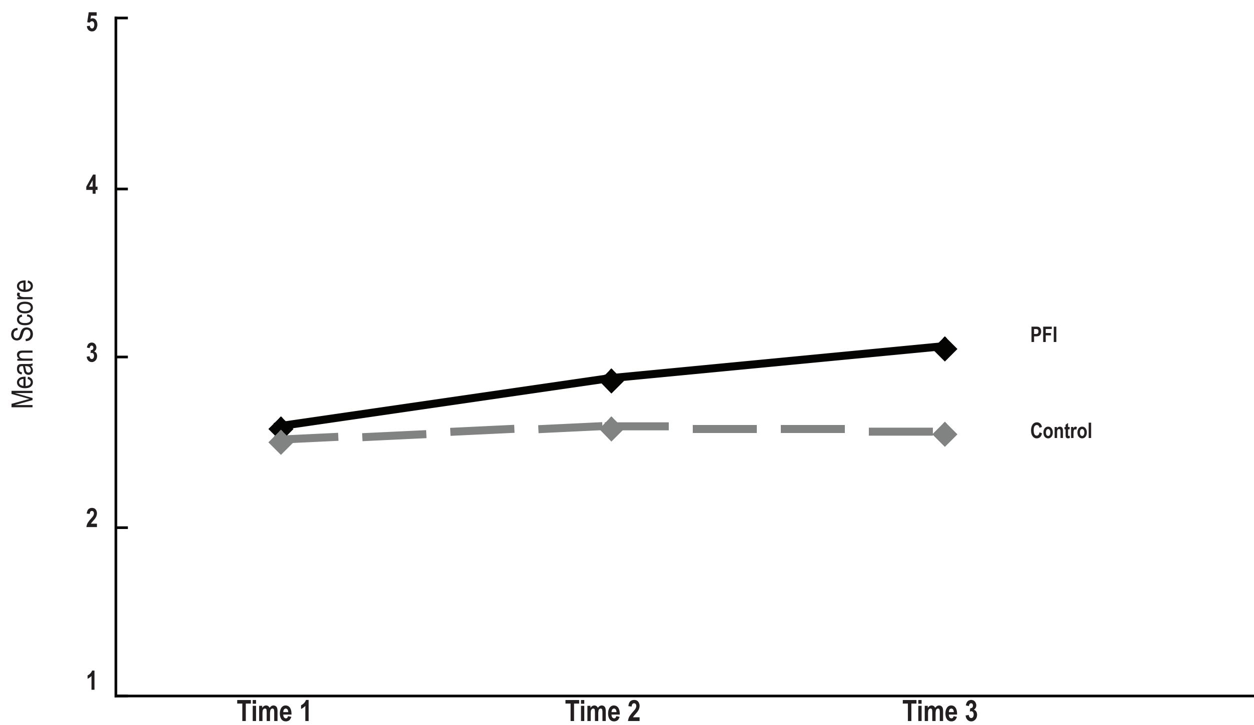


Figure B. Provisions for Learning Factor from the ECERS-R & FDCRS*



*This factor score contains some health and safety items for the FCC providers whereas for classrooms, the factor is mainly composed of learning materials.

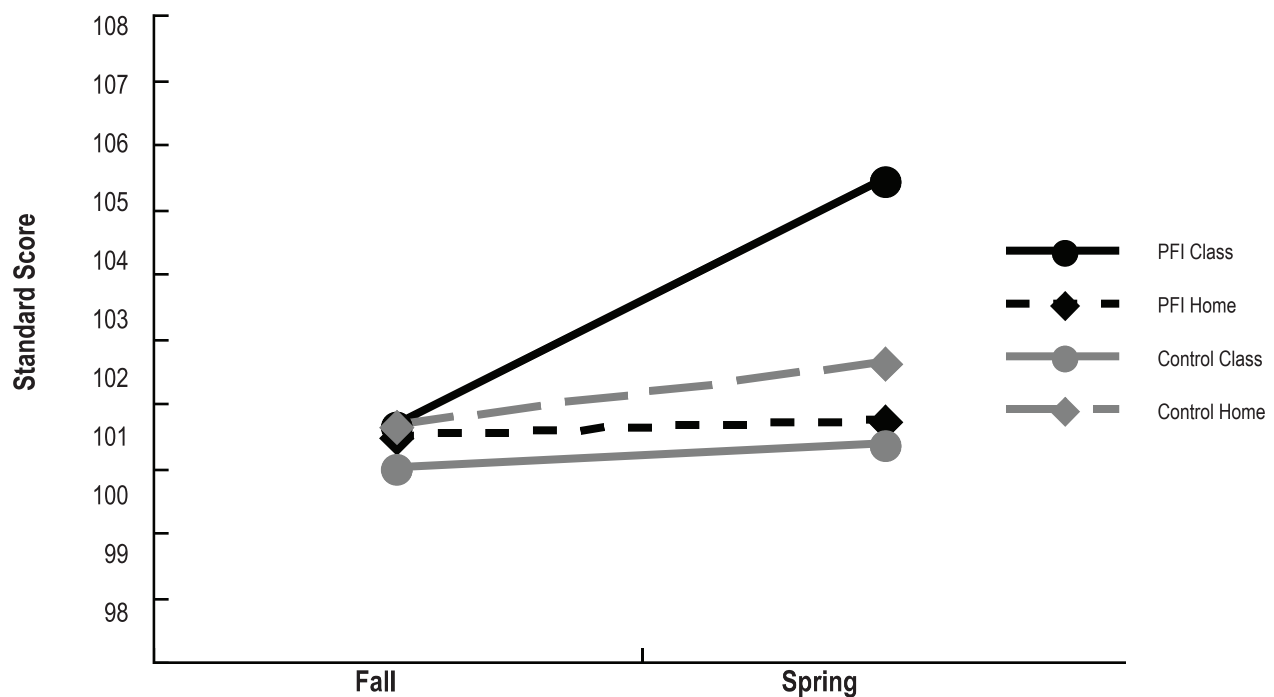
Figure C. ECERS-E Composite Score for Teachers and FCC Providers Combined



Child Outcomes

11. Several child characteristics were related to child language, readiness and social outcomes, as one would expect: girls scored better than boys on all measures; minority children scored less well on the language assessment and higher on anxiety/depression; subsidized children scored lower on the language and school readiness measures and were rated lower in social competence.
12. After accounting for child characteristics, we found main effects for quality, that is, children in higher quality classrooms or FCC homes scored higher on the language, school readiness measures and social competence measures, and lower on conduct problems and anxiety/depression.
13. After accounting for child characteristics, there were no main effects of treatment (PFI), however, analyses indicate that children in PFI classrooms showed significantly greater improvement over time on the language measure than children in control classrooms with a moderate effect size (.44). (See Figure D)
14. Being in a PFI classroom was also significantly related to children's anxiety/depression although in a negative direction: children in PFI classrooms were rated by their teachers as significantly higher on anxiety/depression in the spring compared to fall.

Figure D. PLS Receptive Language Over Time by Treatment Group (adjusted means)



Fidelity

15. Both control and PFI consultants reported on frequency and duration of their phone and on-site contacts with their clients. Controls reported on the general content of their visits, but PFI consultants reported more extensively. We created a fidelity index for PFI that reflected the dimensions of exposure, implementation of the model's key components, and quality of service delivery, although quality was difficult to assess.
16. Scores ranged widely on the fidelity measure, with only 8% of PFI consultants rated at a level that model developers consider to be "high-level" implementation and less than half implementing at an "average" level or above. PFI consultants generally made an appropriate number of visits and created opportunities for their consultees to make decisions, but making regular visits (twice per month) was challenging, as was scoring the rating scales accurately and tying action plans to assessment results.

17. Using several consultant characteristics to predict fidelity, we could not identify which consultants would be the ones who would implement PFI with strong fidelity. Believing that an agency's typical practices might conflict with and be a barrier to faithful implementation, we also used agency characteristics to attempt to predict consultant fidelity and found no evidence to suggest these measurable characteristics stood in the way. Other factors such as supervision and leadership are likely more important.

Conclusions and Suggestions for Future Research

18. The QUINCE study provides evidence that on-site consultation can significantly improve child care quality. The specific intervention studied, the Partnerships for Inclusion model, was more effective with FCC homes than the typical consultation being offered in many communities. Among child care classrooms, however, quality improved whether the teacher received PFI or one of the control group interventions.
19. The use of an observational assessment of quality at or near the beginning of a consultation process can provide an objective and concrete basis for entering into a supportive and helpful relationship with a teacher or FCC provider. All PFI consultants used the ECERS or FDCRS and the ECERS-E; some of the control consultants used these tools also, or another measure they developed or adopted. However, accuracy of observations is a concern with all consultants. Programs should provide good initial training on measurement tools and periodic retraining.
20. The consultation approach implemented by many agencies is, at best, not well specified, and at worst, haphazard. Following a standard, theory-based approach is important; adequate training and supervision cannot be underestimated. Fidelity of implementing the PFI on-site consultation intervention was lower than the research team desired and we believe that greater fidelity may have led to greater effect sizes.
21. The rate of turnover among quality enhancement consultants in this study was higher even than the turnover rate among providers. Study demands may have led to a few consultants dropping from the study, but not their jobs; however, this was not true for the majority of those who left. Being a quality consultant is challenging and these individuals are typically not highly paid (average salary in 24 partner agencies was $18/hour, but 12 agencies paid from $10-15/hour). Twenty-four percent screened positive for depression. Child care resource agencies need to support their consultant staff with good preparation and training, a manageable caseload, and frequent supervision and encouragement.
22. Given the focus on quality and the movement across the nation toward rated child care licensure, it is critical that more studies be conducted on methods of enhancing child care quality. Such studies should include a range of technical assistance services such as training, coaching, and consultation and distinguish among these terms and other professional development approaches such as mentoring and supervision. Different models may be more effective for different types of providers, in different regions, or for different purposes. For example, the high rate of consultant turnover is a consideration in matching technical assistance with program need. Perhaps brief, focused interventions should be the initial domain of newly hired consultants with opportunity to learn and practice more intensive models such as PFI for those who demonstrate their continuing commitment to their work. Likewise, tiered technical assistance services that vary in scope and intensity should be considered for providers based on their needs and initial levels of participation.

23. The QUINCE study provides a model for addressing multiple dimensions of fidelity. One lesson learned by the QUINCE study team was the need for earlier, more frequent, and more specific communication with community agencies and the consultants themselves about these fidelity dimensions and the types of supports required to implement an intensive model of consultation such as PFI. Closer ongoing contact with consultants' supervisors would have provided opportunities to reinforce the dimensions of adherence, exposure, and quality of service. In future studies it will be important to address the challenge of establishing close communication with supervisors without undermining the randomness of the experimental designs, or develop new research designs that will enable more communication between the research team and the study groups. Random assignment of entire agencies to treatment or control groups would have allowed for thorough discussion of the PFI model with all consultants and supervisors in a particular agency, although a large number of agencies would be required for such a study.
24. Given the movement in early childhood towards more evidence-based practice and the increasing focus on accountability, future studies of consultation should focus on measuring the intervention delivery process and the receipt and enactment of the intervention by providers. In our study, an independent observer assessed quality changes over time in the participating FCC homes and classrooms, but no one independently assessed the consultants' on-site delivery of either PFI or control interventions. More frequent monitoring would be helpful.
25. Consultation is an increasingly utilized method of quality enhancement in both early childhood classrooms and family child care homes. Agencies have begun to understand that it is important to implement models of consultation that have proven effective, but beyond that, we need to conduct the research that helps agencies and supervisors know how to train, support, and measure the fidelity with which consultants deliver their services.