Supplement file

Statistical Analyses

In addition to conducting analyses using a multiple imputation (MI) approach with the MCMC algorithm (see manuscript file for results), a full information maximum likelihood (FIML) estimation and complete case (CC) analyses were performed to test for the robustness of the findings. In this section, we only repeated the analyses of the main findings for which we have found significant results in our manuscript. With the MI procedure we found that:

#1. The PCA-AVI group showed greater increases in parent-child interaction quality at post-test in comparison to the PCA-PI group;
#2. Regardless of the type of PCA, parents rated as capable of care were more likely than those rated as not capable of care to show increases in parent-child interaction quality at post-test;
#3. Regardless of the type of PCA, the court’s decisions at PCA completion were more likely to be in favor of the child staying at home for parents rated as capable of care than for those rated as not capable;
#4. Regardless of the type of PCA, parents rated as capable of care were more likely than those rated not capable of care to have kept their child at home one year after the PCA;
#5. Re-reports of maltreatment were less likely to occur only for children of PCA-AVI parents who were rated as capable of care.

Because there was no missing data in children’s CPS files at post-test, the analyses with the court’s decision at PCA completion variable were not repeated here. Therefore, only analyses pertaining to results #1, #2, #4, and #5 are presented in the following section.
**FIML analyses**

To replicate analyses of results #1, a linear regression model was performed to test the association between PCA groups and parent-child interaction quality at post-test. As covariates, we also included the parent-child interaction quality scores at pre-test and parental age. To replicate analyses of results #2, we added to this linear regression the interaction term Capacity to care groups X PCA groups. To replicate analyses of results #4 and #5, logistic regression models examined the association between ratings of capacity to care and study outcomes (i.e. child placement and re-reports of maltreatment one year after the PCA), and whether these associations varied across the two PCA groups. The proportion of data used to estimate each model ranged from 70% to 100%. Fit of unsaturated models was assessed by a nonsignificant \( \chi^2 \) statistic, a root mean square error approximation (RMSEA) < .08, and a comparative fit index (CFI) > .90.

**CC analyses**

For analyses on the parent-child interaction quality variable, complete case analyses were conducted on 48 participants. For analyses on the child placement and re-reports of maltreatment one year after PCA, data on 65 participants were available. An ANCOVA on the parent-child interaction quality at post-test, with parental age and interaction quality at pre-test as covariates was performed to replicate analyses of results #1. To replicate analyses of results #2, we performed a 2X2 ANCOVA on quality of parent-child interaction at post-test, with pre-test values of interaction quality and parental age as covariates, and with PCA groups and evaluators’ ratings about the parental capacity to care as the between factors. Finally, three-way chi-squares
were conducted to replicate analyses of results #3 and #4. Descriptive statistics are presented in Supplement Table 1.

Results

Parent and Child Benefits:

Quality of Parent-Child Interaction

*FIML analyses.* Adequate fit was found for this model ($\chi^2 = 0.38, p = .85$; RMSEA = 0.001; CFI = 1.00). While controlling for baseline values of parent-child interaction quality and parental age, results revealed a significant effect of the group variable, with the PCA-AVI group showing a greater increase in interaction quality at post-test than the PCA-PI group ($\beta = 0.64$, S.E. = 0.29, $p = 0.03$; $d = .53$, CI 0.04 – 1.02).

*CC analyses.* ANCOVA results revealed a significant group effect, with the PCA-AVI group showing a greater increase in interaction quality at post-test than the PCA-PI group ($F(1, 47) = 4.33, p = .43, d = 0.62$, CI 0.03 – 1.22).

Case Orientation Benefits

Quality of Parent-Child Interaction

*FIML analyses.* Adequate fit was found for this model ($\chi^2 = 4.55, p = .60$; RMSEA = 0.001; CFI = 1.00). While controlling for baseline values of parent-child interaction quality and parental age, results revealed a significant effect of the capacity to care group variable ($\beta = 0.32$, S.E. = 0.14, $p = 0.02$; $d = .70$, CI 0.20 – 1.20). The PCA groups X Capacity to care groups interaction effect was not significant ($\beta = 0.03$, S.E. = 0.14, $p = 0.83$; $d = .05$, CI -0.43 – 0.54). Hence, regardless of the PCA groups, parents rated as capable of care were more likely than those rated as not capable of care to show increases in parent-child interaction quality at post-test.
CC analyses. ANCOVA results revealed a significant effect of the capacity to care group, with parents rated as capable of care showing a greater increase in interaction quality at post-test than parents rated as not capable of care ($F(1, 47) = 4.61, p = 0.04, d = 0.63, (CI 0.04 – 1.23)$. The PCA groups X Capacity to care groups interaction effect was not significant ($F(1, 47) = 0.41, p = 0.84, d = 0.19, CI -0.39 – 0.77$). Thus, regardless of the PCA groups, parents rated as capable of care were more likely than those rated as not capable of care to show increases in parent-child interaction quality at post-test.

Child Placement One Year after PCA

FIML analyses. A saturated model was found. For both the PCA-AVI and PCA-PI groups, results revealed that parental capacity to care predicted child placement one year after PCA ($\beta = -1.07, S.E. = 0.28, p = .001; d = 1.24, CI 0.70 – 1.78$; and $\beta = -1.54, S.E. = 0.11, p = .001; d = 2.33, CI 1.69 – 2.97$, respectively).

CC analyses. Results showed a significant two-way chi-square ($\chi^2(1, N = 65) = 12.92, p = .001, d = 1.00, CI 0.45 – 1.54$). Partial tables were significant for the PCA-AVI ($\chi^2(1, N = 40) = 7.93, p = .005, d = 0.99, CI 0.30 – 1.69$) and PCA-PI ($\chi^2(1, N = 25) = 5.47, p = .02, d = 1.28, CI 0.17 – 1.95$). Hence, for both groups, parents rated as capable of care were more likely than those rated not capable of care to have kept their child at home one year after the PCA.

Child Re-reports of Maltreatment One Year after PCA

FIML analyses. A saturated model was found. For the PCA-PI group, there was no significant association between parental capacity to care and re-reports of maltreatment ($\beta = -0.09, S.E. = 0.58, p = .88; d = 0.09, CI -0.41 – 0.59$), but this association was significant for the PCA-AVI group ($\beta = -1.18, S.E. = 0.30, p = .001; d = 1.42, CI 0.86 – 1.98$). While ratings of
parental capacity to care by AVI evaluators predicted re-reports of maltreatment one year following the end of the PCA, those of PCA-PI evaluators did not.

*CC analyses.* Results showed a significant two-way chi-square ($\chi^2(1, N = 65) = 5.30, p = .02, d = 0.60, CI 0.09 – 1.10$). The partial table for the PCA-PI group was not significant ($\chi^2(1, N = 25) = 0.02, p = .88, d = 0.06, CI -0.73 – 0.84$), but it was significant for the PCA-AVI group ($\chi^2(1, N =40) = 7.30, p = .007, d = 0.94, CI 0.26 – 1.63$). Hence, re-reports of maltreatment were less likely to occur only for children of PCA-AVI parents who were rated as capable of care.
### Supplement Table 1

Statistics for Complete Case Analyses: Indicators of Parental Capacity at Pre- and Post-tests as a Function of PCA Groups and Parental Capacity to Care

| Parenting Capacity Assessment (PCA) Groups | Attachment Video-feedback Intervention PCA-AVI | Psychoeducational Intervention PCA-PI | Comparisons |
|-------------------------------------------|-----------------------------------------------|--------------------------------------|--------------|
|                                            | $n = 29$                                      | $n = 19$                             |              |
| Parental capacity indicators               | $M$ (SE)                                      | $M$ (SE)                             | $d$          |
| Pre-test                                   | 3.24 (.15)                                   | 3.42 (.26)                           | -0.19 (CI -0.77 – 0.39) |
| Post-test*                                 | 4.00 (.19)                                   | 3.37 (.24)                           | 0.62* (CI 0.03 – 1.22) |
| Parent-child interaction (n = 48)          |                                              |                                     |              |
| Parents rated as not capable               |                                              |                                     |              |
| Parents rated as Capable                   |                                              |                                     |              |
| $n = 27$                                   | $n = 13$                                     | $n = 16$                             | $n = 9$      |
| $M$ (SE)                                   | $M$ (SE)                                     | $M$ (SE)                             |              |
| Parent-child interaction at post-test (n = 48) | 3.69 (.25)                                   | 4.39 (.28)                           | 3.13 (.30)   |
|                                             |                                              |                                     | 3.70 (.35)   | 0.19 (CI -0.39 – 0.77) |
| Placement 1 year after PCA (n = 65)        |                                              |                                     |              |
| Child is with biological parent            | 8 20%                                        | 9 36%                                | 9 36%        |
| Child is in foster care                    | 19 47%                                       | 7 28%                                | 0 0%         |
| Partial table AVI $d = 0.99**$ (CI 0.30 – 1.69) |                     | Partial table PI $d = 1.28*$ (CI 0.17 – 1.95) |
| Re-reports 1 year after PCA (n = 65)       |                                              |                                     |              |
| No re-reports of maltreatment              | 13 34%                                       | 12 63%                               | 7 28%        |
| Re-reports of maltreatment                 | 14 35%                                       | 4 16%                                | 2 1%         |
| Partial table AVI $d = 0.94**$ (CI 0.26 – 1.63) |                     | Partial table PI $d = 0.06$ (CI -0.73 – 0.84) |

*Note.* *Means at post-test are adjusted for parent-child interaction quality values at pre-test and parental age.

**p < .01; *p < .05