

ECELS Infant Toddler Program Quality Improvement Project (ITQIP)

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ABSTRACT

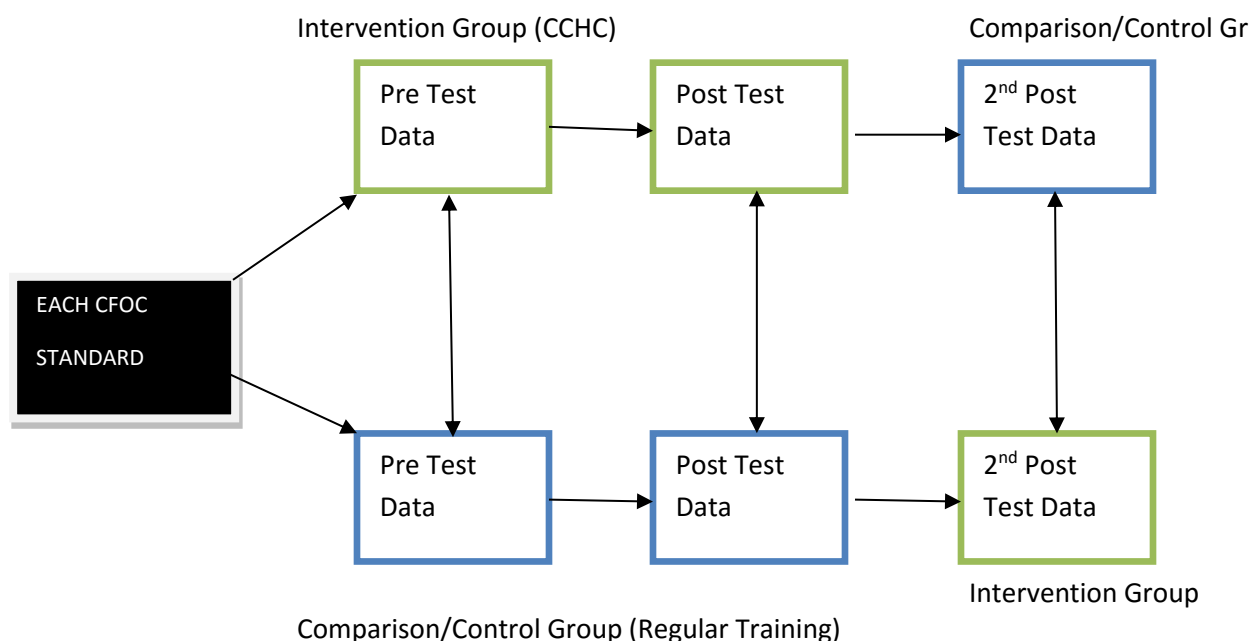
This brief report provides an analysis of the sites selected as part of the Early Childhood Education Linkage System (ECELS) Infant Toddler Program Quality Improvement Project (ITQIP) in comparing data from the pre-test to two post-tests for both the Intervention and Control Groups. It is clearly demonstrated in the results that the Intervention Group was very effective in producing change in selected health and safety standards from *Caring for Our Children*, such as: making sure children were being immunized; received training on proper medication administration; received and reviewed safe sleep policies and have been trained; were provided the necessary education, policies, and procedures for child abuse and prevention; followed proper adult hygiene and proper diapering protocols; and ensured infants and toddlers had adequate activities and outdoor play. This result occurred in both interventions with one of them staggered while the other was delayed in time.

INTRODUCTION

This report compares pre-test and two post-test scores between the 13 intervention sites and 13 control sites of the Infant Toddler Program Quality Improvement Project. This will be a descriptive report demonstrating the similarities and differences between the two groups.

The evaluation plan (see Figure 1 for the Logic Model Display) is a classic randomly assigned clinical trial in which a group of child care programs were randomly assigned to the intervention group in receiving the specific training and technical assistance specific to the selected *Caring for Our Children (3rd Edition) CFOC3* standards. A comparison group also randomly assigned received the typical training and technical assistance that is available through the state training system in Pennsylvania. These two groups were compared on the pre-test for equivalency and then one year later in a post-test format. At that point the intervention group was switched to a cross-over comparison format and the comparison group was switched to the intervention group. The second post-test showed a significant change with the previous control group which became the intervention group for this phase and latent effects of the training/technical assistance were found for the original intervention group.

Figure 1: EVALUATION PLAN LOGIC MODEL



RESULTS of Pre-Test to the two Post-Tests

Intervention Group

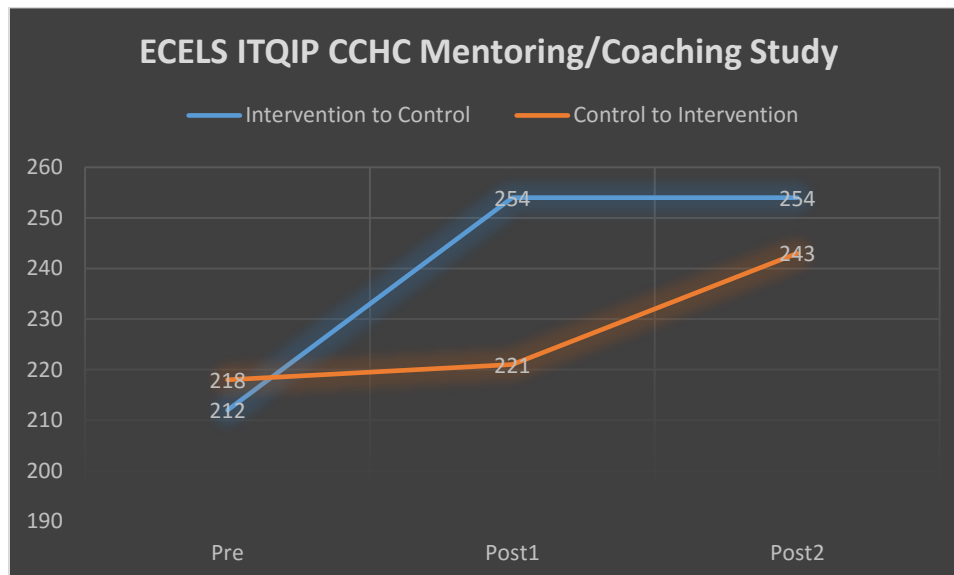
The range in scores was 175 to 267 with an average score of 212 out of a possible 322 points (66%) on the pre-test. The range in scores was 213 to 297 with an average score of 254 out of a possible 322 points (79%) on the post-test. This change from pre-test to post-test was statistically significant ($t = -4.62$; $p < .0001$). The second post-test did not show any significant change but the initial results from the intervention were maintained (254 to 254).

Control/Comparison Group

The range in scores was 164 to 271 with an average score of 218 out of a possible 322 points (68%) on the pre-Test. The range in scores was 149 to 257 with an average score of 221 out of a possible 322 points (69%) on the post-test. All these changes from pre- to post-test were non-significant. The second post test showed significant change from the previous initial post-test to the second post-test (221 to 243)($t = -1.80$; $p < .08$) when this group became the intervention.

Intervention – Control/Comparison Groups

The average scores between the Intervention (212) and Control (218) groups on the pre-test were non-significant. The average scores between the Intervention (254) and Control (221) groups on the post-test were statistically significant ($t = -3.46$; $p < .002$). The second post test showed no significant change (254 vs 243).



The above graph depicts the relationship between the Intervention and the Control groups in a Crossover design. It clearly demonstrates how effective the original intervention (Pre to Post1) was along with latent effects (Post1 to Post2) as well as switching the control group to the intervention group in a delayed fashion (Post1 to Post2).

DISCUSSION

It is clear from the results that the intervention of the Child Care Health Consultants (CCHC) was very effective in the pre to post-test scores in helping to improve the overall quality of health standards, such as: making sure children were being immunized; received training on proper medication administration; received and reviewed safe sleep policies and have been trained; were provided the necessary education, policies, and procedures for child abuse and prevention; followed proper adult hygiene and proper diapering protocols; and ensured infants and toddlers had adequate activities and outdoor play. This occurred in both the original intervention and when the control group was switched to a delayed intervention group. This is a very significant finding because it clearly demonstrates the strength of this intervention (CCHC coaching/mentoring) and its lasting value when the original intervention group sustained its original quality gains.

This specific intervention utilizing CCHCs is a viable coaching/mentoring intervention that needs additional exploration in replication studies. At least when it comes to *Caring for Our Children* standards this is a first demonstration of an effective training/technical assistance/coaching/mentoring intervention. See the details in the following appendices.

Appendix A

Group A (Intervention crossover to Control) – Post1 to Post2 Comparisons

Item	Post1	Post2	Differences
PR21 OBS	2.92	2.85	ns
PR22	2.85	3.00	ns
PR23	3.00	2.85	ns
PR24	3.00	3.00	ns
PR25	2.77	3.00	ns
LA26	2.85	2.75	ns
LA27	2.85	3.00	ns
LA28	2.92	2.62	ns
AO29	2.67	2.57	ns
AO210	2.75	1.85	ns
AO211	1.91	1.85	ns
AO212	1.64	2.08	ns
AO213	2.00	1.50	ns
AO214	2.77	2.77	ns
AO215	2.75	2.77	ns
AO216	2.85	2.92	ns
AO217	2.73	2.60	ns
AO218	2.77	2.77	ns
AO219	1.91	1.62	ns
AO220	2.58	2.75	ns
AO221	2.18	2.75	ns
AO222	3.00	2.75	ns
AO223	3.00	2.73	ns
AO224	2.54	2.92	ns
AO225	3.00	3.00	ns
AO226	2.54	2.50	ns
SS227	2.69	2.62	ns
SS228	2.92	3.00	ns
SS229	3.00	3.00	ns
SS230	2.31	2.46	ns
SS231	2.85	3.00	ns
SS232	3.00	3.00	ns
SS233	2.13	2.30	ns
SS234	3.00	3.00	ns
SS235	3.00	2.77	ns
SS236	3.00	3.00	ns
SS237	3.00	3.00	ns

SS238	1.77	1.92	ns
SS239	3.00	3.00	ns
SS240	2.11	2.23	ns
DC241	2.73	1.54	.05
DC242	2.92	3.00	ns
DC243	2.67	2.85	ns
DC244	2.39	2.62	ns
DC245	2.92	2.62	ns
DC246	3.00	2.69	ns
DC247	3.00	3.00	ns
DC248	3.00	2.69	ns
DC249	2.31	2.31	ns
DC250	3.00	3.00	ns
DC251	3.00	3.00	ns
DC252	2.69	2.39	ns
DC253	3.00	3.00	ns
DC254	3.00	2.46	ns
DC255	3.00	2.92	ns
DC256	3.00	2.92	ns
HH257	2.46	2.39	ns
HH258	1.62	2.54	ns
HH259	2.23	1.69	ns
HH260	1.54	2.23	ns
HH261	2.77	2.39	ns
HH262	1.77	2.23	ns
HH263	2.69	2.31	ns
HH264	1.69	2.62	ns
CA31 INTER	3.00	3.00	ns
CA32	3.00	2.67	ns
CA33	3.00	3.00	ns
PR34	3.00	2.77	ns
PR35	2.54	2.54	ns
AO36	1.62	1.39	ns
AO37	2.31	2.08	ns
SN38	0.15	0.31	ns
SN39	0.00	0.00	ns
CA310	2.77	2.77	ns
CA311	2.54	2.77	ns
CA312	2.92	2.77	ns
PR313	3.00	2.77	ns
PR314	2.84	2.85	ns
AO315	1.85	1.62	ns
AO316	2.75	2.54	ns
SN317	0.31	1.08	ns

SN318	1.00	1.40	ns
CA319	2.77	2.77	ns
CA320	2.54	2.77	ns
CA321	2.92	2.77	ns
MA322	3.00	3.00	ns
MA323	2.54	2.92	ns
MA324	3.00	3.00	ns
MA325	3.00	3.00	ns
MA326	2.31	3.00	ns
MA327	2.77	3.00	ns
MA328	2.46	2.67	ns
CA41 DOCS	3.00	2.85	ns
CA42	1.33	1.85	ns
CA43	2.75	3.00	ns
CA44	2.92	2.92	ns
SS45	1.92	2.08	ns
SS46	2.08	2.31	ns
SS47	2.31	2.23	ns
SS48	1.62	2.23	ns
SS49	2.77	2.75	ns
MA410	2.54	2.25	ns
IM411	2.62	2.67	ns
IM412	1.23	0.85	ns
IM413	1.54	1.31	ns
SN414	1.14	1.43	ns

ns = not significant.

Appendix B

Group B (Control Crossover to Intervention) – Post1 to Post2 Comparisons

Item	Post1	Post2	Differences
PR21 OBS	2.81	3.00	ns
PR22	2.75	2.92	ns
PR23	2.81	2.85	ns
PR24	2.94	2.92	ns
PR25	2.81	3.00	ns
LA26	2.31	2.46	ns
LA27	2.56	2.92	ns
LA28	2.75	2.69	ns
AO29	2.40	2.40	ns
AO210	3.00	2.77	ns
AO211	0.56	0.50	ns
AO212	0.60	1.62	ns
AO213	0.82	1.88	ns
AO214	3.00	2.77	ns
AO215	3.00	2.77	ns
AO216	2.94	2.92	ns
AO217	2.62	2.67	ns
AO218	3.00	3.00	ns
AO219	1.31	2.00	ns
AO220	2.13	2.75	ns
AO221	2.31	2.92	ns
AO222	3.00	2.77	ns
AO223	2.60	2.77	ns
AO224	2.25	2.77	ns
AO225	2.81	2.69	ns
AO226	2.06	2.50	ns
SS227	1.88	2.46	ns
SS228	2.75	2.92	ns
SS229	3.00	3.00	ns
SS230	1.94	2.77	.05
SS231	3.00	3.00	ns
SS232	2.63	2.77	ns
SS233	2.69	2.50	ns
SS234	2.94	3.00	ns
SS235	2.80	2.36	ns
SS236	2.90	3.00	ns

SS237	1.87	2.85	ns
SS238	1.27	2.25	.05
SS239	2.81	3.00	ns
SS240	2.21	2.50	ns
DC241	1.27	1.31	ns
DC242	2.93	2.92	ns
DC243	2.00	2.91	.05
DC244	2.50	2.62	ns
DC245	2.63	2.54	ns
DC246	2.88	2.92	ns
DC247	1.20	1.80	ns
DC248	2.62	2.60	ns
DC249	1.56	1.77	ns
DC250	3.00	2.62	ns
DC251	3.00	3.00	ns
DC252	2.50	2.23	ns
DC253	3.00	3.00	ns
DC254	2.44	2.62	ns
DC255	2.75	2.69	ns
DC256	2.63	2.46	ns
HH257	2.06	2.31	ns
HH258	1.38	1.54	ns
HH259	2.25	2.46	ns
HH260	1.63	1.62	ns
HH261	2.33	2.08	ns
HH262	1.63	1.77	ns
HH263	2.06	2.08	ns
HH264	1.27	1.69	ns
CA31 INTER	2.62	2.57	ns
CA32	3.00	3.00	ns
CA33	3.00	3.00	ns
PR34	2.44	3.00	ns
PR35	2.06	2.54	ns
AO36	0.19	0.23	ns
AO37	0.94	0.92	ns
SN38	0.36	0.39	ns
SN39	0.60	0.00	ns
CA310	2.75	2.92	ns
CA311	2.81	3.00	ns
CA312	2.94	2.92	ns
PR313	2.63	3.00	ns
PR314	2.69	2.62	ns
AO315	0.75	1.39	ns
AO316	2.63	2.77	ns

SN317	0.71	1.39	ns
SN318	0.00	1.38	ns
CA319	2.81	2.85	ns
CA320	2.44	3.00	ns
CA321	2.81	2.92	ns
MA322	2.80	2.72	ns
MA323	2.33	3.00	ns
MA324	2.87	3.00	ns
MA325	3.00	3.00	ns
MA326	2.67	3.00	ns
MA327	2.13	2.91	.05
MA328	2.40	2.58	ns
CA41 DOCS	2.62	3.00	ns
CA42	0.92	1.39	ns
CA43	2.62	1.62	ns
CA44	2.75	2.92	ns
SS45	0.62	0.77	.05
SS46	0.92	1.46	ns
SS47	1.15	1.23	ns
SS48	0.54	1.62	.05
SS49	2.31	3.00	ns
MA410	0.92	1.75	ns
IM411	2.67	2.85	ns
IM412	1.00	1.54	ns
IM413	1.00	1.15	ns
SN414	0.08	0.70	.05

ns = not significant.

Appendix C

Post2 – Group A (Control) versus Group B (Intervention) Comparisons

Item	Group A	Group B	Differences
PR21 OBS	2.85	3.00	ns
PR22	3.00	2.92	ns
PR23	2.85	2.85	ns
PR24	3.00	2.92	ns
PR25	3.00	3.00	ns
LA26	2.75	2.46	ns
LA27	3.00	2.92	ns
LA28	2.62	2.69	ns
AO29	2.57	2.40	ns
AO210	1.85	2.77	ns
AO211	1.85	0.50	.05
AO212	2.08	1.62	ns
AO213	1.50	1.88	ns
AO214	2.77	2.77	ns
AO215	2.77	2.77	ns
AO216	2.92	2.92	ns
AO217	2.60	2.67	ns
AO218	2.77	3.00	ns
AO219	1.62	2.00	ns
AO220	2.75	2.75	ns
AO221	2.75	2.92	ns
AO222	2.75	2.77	ns
AO223	2.73	2.77	ns
AO224	2.92	2.77	ns
AO225	3.00	2.69	ns
AO226	2.50	2.50	ns
SS227	2.62	2.46	ns
SS228	3.00	2.92	ns
SS229	3.00	3.00	ns
SS230	2.46	2.77	ns
SS231	3.00	3.00	ns
SS232	3.00	2.77	ns
SS233	2.30	2.50	ns
SS234	3.00	3.00	ns
SS235	2.77	2.36	ns

SS236	3.00	3.00	ns
SS237	3.00	2.85	ns
SS238	1.92	2.25	ns
SS239	3.00	3.00	ns
SS240	2.23	2.50	.05
DC241	1.54	1.31	ns
DC242	3.00	2.92	ns
DC243	2.85	2.91	ns
DC244	2.62	2.62	ns
DC245	2.62	2.54	ns
DC246	2.69	2.92	ns
DC247	3.00	1.80	ns
DC248	2.69	2.60	ns
DC249	2.31	1.77	ns
DC250	3.00	2.62	ns
DC251	3.00	3.00	ns
DC252	2.39	2.23	ns
DC253	3.00	3.00	ns
DC254	2.46	2.62	ns
DC255	2.92	2.69	ns
DC256	2.92	2.46	ns
HH257	2.39	2.31	ns
HH258	2.54	1.54	ns
HH259	1.69	2.46	.05
HH260	2.23	1.62	ns
HH261	2.39	2.08	ns
HH262	2.23	1.77	ns
HH263	2.31	2.08	ns
HH264	2.62	1.69	ns
CA31 INTER	3.00	2.57	ns
CA32	2.67	3.00	ns
CA33	3.00	3.00	ns
PR34	2.77	3.00	ns
PR35	2.54	2.54	ns
AO36	1.39	0.23	.05
AO37	2.08	0.92	.05
SN38	0.31	0.39	ns
SN39	0.00	0.00	ns
CA310	2.77	2.92	ns
CA311	2.77	3.00	ns
CA312	2.77	2.92	ns
PR313	2.77	3.00	ns
PR314	2.85	2.62	ns
AO315	1.62	1.39	ns

AO316	2.54	2.77	ns
SN317	1.08	1.39	ns
SN318	1.40	1.38	ns
CA319	2.77	2.85	ns
CA320	2.77	3.00	ns
CA321	2.77	2.92	ns
MA322	3.00	2.72	ns
MA323	2.92	3.00	ns
MA324	3.00	3.00	ns
MA325	3.00	3.00	ns
MA326	3.00	3.00	ns
MA327	3.00	2.91	ns
MA328	2.67	2.58	ns
CA41 DOCS	2.85	3.00	ns
CA42	1.85	1.39	ns
CA43	3.00	1.62	ns
CA44	2.92	2.92	ns
SS45	2.08	0.77	ns
SS46	2.31	1.46	ns
SS47	2.23	1.23	ns
SS48	2.23	1.62	ns
SS49	2.75	3.00	ns
MA410	2.25	1.75	ns
IM411	2.67	2.85	ns
IM412	0.85	1.54	.001
IM413	1.31	1.15	ns
SN414	1.43	0.70	ns

ns = not significant.