Improving Outcomes for Children Exposed to Violence

Safe Start Promising Approaches

Appendix G. Spokane, Washington: Attachment, Self-Regulation, and Competency Intervention; Study; and Results

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Appendix G. Spokane, Washington: Attachment, Self-Regulation, and Competency Intervention; Study; and Results

Introduction

The Spokane Safe Start program was a partnership between Washington State University and the Community Colleges of Spokane Head Start Program. The university conducted the research project and provided training and ongoing support, whereas Head Start provided the intervention services and collected data.

The Spokane Safe Start program served families in Spokane County, Washington. According to the U.S. Census Bureau's 2014 American Community Survey (U.S. Census Bureau, 2016), Spokane County had a population of 476,950 residents, 23 percent of whom were younger than age 18 and 6 percent of whom were younger than age 5. Approximately 86 percent of the population were white, 2 percent were black, 5 percent were Hispanic, and 7 percent were Native American, Asian, or other. The 2014 median household income was $50,432, which was slightly below the national average of $53,482, and about 10 percent of the population were living at or below the poverty threshold. Of families with children under the age of 18, 17 percent were living at or below the poverty threshold. In 2014, the violent crime rate in the city of Spokane was 307.9 per 100,000 residents, compared with the national average of 202.6 per 100,000 (City-Data.com).

The Spokane Safe Start program intervention was designed as a practice innovation to assess novel practices to address children's exposure to violence in early-education settings. Spokane's Safe Start project involved universal staff development activities for all Head Start staff in social–emotional learning, trauma awareness and management, and crisis response; and an overview of the ARC intervention or the COS intervention. Head Start staff who were selected to provide intervention services received a more in-depth training in the specific intervention they would deliver. These interventions are based on developmental theory with some emerging evidence on their effectiveness in improving child-level outcomes. In this three-armed study, families were randomized to the ARC intervention, the COS intervention, or the comparison condition. This program description focuses on the ARC framework for intervention with children and families designed to address trauma in children and adolescents (Blaustein and Kinniburgh, 2010). Spokane planned to expand on the regular Head Start services by offering ARC to caregivers in weekly individual sessions at the Head Start centers or in the family home, in addition to regular Head Start programming.

The outcome evaluation reported here presents data relevant to the question of whether the Spokane Safe Start ARC program, as implemented within this project, improves outcomes for CEV over and above Head Start classroom instruction and social service supports alone.

Spokane ARC Safe Start

- **Intervention components:** Parent therapy sessions (ARC) and standard Head Start programming
- **Intervention length:** 12 weekly 60-minute sessions
- **Intervention Setting:** Head Start centers or family home
- **Target population:** Head Start children who have experienced violence
- **Age range, in years:** 3–5
- **Primary referral sources:** Head Start centers

Intervention Summary

Referrals

Because the Spokane Safe Start program was conducted entirely within the Head Start system, all 198 referrals to the ARC intervention came from Head Start. Head Start conducted an eligibility screening using modified adverse childhood experiences (ACEs) screening tools completed for the primary caregivers on their own experiences in childhood and then the experiences of the Head Start–enrolled child. Eligible children were those who had ACE scores of 2 or higher or had experienced DV in the home, had experienced community violence, or had child protective services involvement because of maltreatment (neglect, physical abuse, or sexual abuse). Initially, the screening completion rate was lower than expected, in part because of Head Start staff apprehension about the project. Spokane Safe Start conducted several training programs focused on education, awareness building, and inclusion with Head Start leadership and staff, including 16 hours of trauma-specific professional development. Head Start parents also received training twice a year. As a result, a majority of enrolled Head Start children were screened within the first few months of the start of the Head Start year.

Intervention Components

The Spokane Safe Start program offered the ARC intervention (Blaustein and Kinniburgh, 2010) to Head Start families. ARC is a flexible psychotherapeutic treatment framework addressing trauma in children and adolescents. The three principal domains of ARC reflect the research-based dimensions of development principally threatened by trauma: attachment, self-regulation, and competency. The intent of the program is to integrate individual, family, and social-system efforts to mitigate trauma's effects. As a result, ARC includes both caregiver and child treatment dimensions in a unified system. Educational and support activities emphasize information about parenting and trauma, skill-building in identifying and responding to trauma responses for the caregiver and the child, stabilizing trauma distress symptoms, and increasing mindfulness and self-awareness in the caregiver and child (for older children). Strategies include psychoeducation, relationship strengthening, social skills, and caregiver-education training, as well as psychodynamic, cognitive, behavioral, relaxation, art or expressive, and movement techniques, with a focus on building or establishing safe relational environments for the child

and the caregiver. There has been some empirical support in pre/post quasi-experimental designs for the ARC model indicating effectiveness in reducing PTSD symptoms and behavioral problems in trauma-exposed children and youths (Arvidson et al., 2011; Hodgdon, Kinniburgh, et al., 2013; Hodgdon, Blaustein, et al., 2016) but no controlled trials of effectiveness. ARC was designed to be delivered during individual home visits. For Safe Start, ARC facilitators delivered the intervention over the course of 12 weekly 60-minute individual sessions conducted at Head Start centers or in the caregiver's home, in addition to usual Head Start classroom instruction and social service supports. The ARC intervention was supported by a published manual but was implemented as flexible education, and content varied based on parent needs.

Design Overview

The design of this study was an RCT, with randomization occurring at the family level and eligible children recruited after families were referred to the program. As noted above, Spokane's study tested two interventions, with families assigned to the ARC intervention group, the COS intervention group, or the comparison group. The ARC treatment group received weekly 60-minute sessions for 12 weeks. Families in the comparison group received enhanced usual care, which meant that Head Start staff used their training in trauma-informed care while providing regular classroom instruction or Head Start social service supports. For both groups, we assessed child outcomes and contextual information at baseline, six, and 12 months. Chapter Two summarizes and Appendix A fully describes the measures used in this study. The measures were uniform across the national evaluation but prioritized within each site as to the relevance to the intervention under study. Given the nature of the Spokane ARC Safe Start intervention, the outcomes were prioritized as shown in Table G.1.

Table G.1. Spokane Attachment, Self-Regulation, and Competency Prioritized Outcomes

Domain	Source or Measure	Child's Age, in Years	Respondent
Primary outcome measures			
Social and emotional competence	SSIS (cooperation, assertion, and self-control)	3–5	Caregiver
Secondary outcome measures			
Child PTSD symptoms	TSCYC PTSD scale	3–5	Caregiver
Behavior and conduct problems	BITSEA problem scale	3	Caregiver
	Child behavior problems (BPI Total Scores and BPI Externalizing subscale)	3–5	Caregiver
Child depression	BPI Internalizing subscale	3–5	Caregiver
Family functioning	BERS-2 Family Involvement subscale	5	Caregiver
	APQ positive involvement, negative or ineffective discipline, and deficient monitoring	5	Caregiver
	FES Conflict scale	3–5	Caregiver
Violence exposure	JVQ child victimization experiences (total, child maltreatment, child assault, child sexual abuse, and child witnessing violence)	3–5	Caregiver
Caregiver mental health	PHQ-8 depression scale	3–5	Caregiver
Tertiary outcome measures			
Background and contextual	Attitudinal Barriers to Care	3–5	Caregiver
	ESI total stressors, resource problems, and personal problems	3–5	Caregiver
Violence exposure	Caregiver victimization (total, DV, and non-DV)	3–5	Caregiver
Caregiver mental health	PC-PTSD	3–5	Caregiver

Study enrollment took place between July 2012 and June 2015, with follow-up assessments completed at six and 12 months after enrollment on a rolling basis.

Analysis Plan and Power Calculations

We conducted descriptive analyses to summarize the sample baseline characteristics: age, gender, race or ethnicity, family income level, child's violence exposure, and the outcome variables. The randomized controlled design makes it unlikely that there were differences between intervention and comparison groups, but we tested for differences in child and caregiver characteristics between intervention and comparison group children using *t*-tests and chi-squared tests to ensure that this was the case. We also examined whether those that were lost to follow-up differed in any systematic way from those who were retained, using *t*-tests and chi-squared tests.

To assess the effect of the Safe Start intervention, we examined differences between children in the intervention and comparison groups at six months postbaseline. It is important to consider the power this study has for such an analysis. One way to describe power is by using the effect size difference between the two groups being compared. The effect size is a standardized measure of the strength of association between an intervention and an outcome and is defined as the average difference in an outcome between the intervention and comparison groups divided by the common SE. The effect size measure is commonly classified as small if it is about 0.2, medium if it is about 0.5, and large if it is about 0.8 (Jacob Cohen, 1988).

Although there were some studies of the ARC model when Safe Start started, ARC had not been rigorously evaluated in controlled trials, so its evidence base was considered emerging. Given the enhancement of the comparison group and unknown efficacy of the ARC intervention, we expected that the interventions might have a small effect. Table G.2 shows the enrollment by group, comparing the actual enrollment with the target enrollment needed for power, assuming an 80-percent retention rate. With total enrollment of 198, Spokane ARC enrolled 31 percent of the sample size required to detect a small intervention effect. Spokane ARC's overall six-month retention rate of 78 percent for the intervention group and 88 percent for the comparison group meant that it retained a total of 165 families in the study at six months, representing 32 percent of the retained sample required to have an 80-percent chance of detecting a small intervention effect. At 12 months, Spokane ARC retained a total of 146 families in the study, representing 29 percent of the retained sample required to have an 80-percent chance of detecting a small intervention effect. Given the sample size here, there was sufficient power to detect a medium intervention effect of size 0.44 at six months and 0.47 at 12 months, according to Cohen's 1988 effect size classification.

Table G.2. Spokane Attachment, Self-Regulation, and Competency Required Versus Actual Enrollment for a Small Effect Size

Requirement	Intervention Group	Comparison Group	Total
Enrolled sample needed for power	319	319	638
Total enrollment	94	104	198
Percentage of needed enrollment	29	33	31
Retained sample needed for power	255	255	510
Retained sample, six months	73	92	165
Percentage of needed retention, six months	29	36	32
Retained sample, 12 months	68	78	146
Percentage of needed retention, 12 months	27	31	29

Several factors other than overall sample size dampened statistical power. The range of children's ages meant that the full data were not available for some measures because not all

children were in the age range eligible to complete that measure. Further, the corrections for the multiple statistical tests being conducted also reduced power. The low power in this study must be kept in mind in interpreting results.

We examined differences between the intervention and comparison groups using an intent-to-treat approach, which includes in analyses all assigned to the intervention group, regardless of the amount of services received. As discussed in Chapter Two, comparisons between a comparison group and only those who complete services (or receive a predetermined amount of services) are likely to provide biased results given that those who do not engage in services or drop out prior to completion might differ systematically from those who remain. Ideally, analyses would take into account the type and amount of services received to account for dosage variability. We explore this issue of dose of intervention as described below.

To examine differences between the intervention and comparison groups using the intent-to-treat approach described above, we present baseline, six-month, and 12-month follow-up estimates of primary, secondary, and tertiary outcomes for both groups when the sample size is greater than or equal to five. We compare groups via chi-squared or *t*-tests at each time point, compare means within groups across time, and examine difference in differences to compare the two groups on changes over time between the baseline and the six- and 12-month assessments (when the sample size is at least ten per group). At both the six- and 12-month follow-ups, we conducted multiple linear regressions on the continuous outcomes and linear probability regressions on the dichotomous outcomes to test for the difference in differences via main effects and the interaction between intervention status and time after controlling for baseline characteristics (child age, child gender, child race and ethnicity, and child's exposure to violence). We selected these baseline characteristics to correct for any potential imbalance in the groups by relevant demographic characteristics. We do not present the adjusted models when the sample size is less than 20 per group.

To examine outcomes related to the as-treated sample, those families who took part in the intervention services offered, we examined the outcome means for families who took part in the intervention services offered, broken down into groups that received a low dose of the intervention (zero to one session), a medium dose (two to nine sessions), and a high dose (ten or more sessions) at six months and again at 12 months. Because children with more need are likely to receive more services, we would expect this selection scheme to possibly present an unforeseeable bias, with families more in need receiving more services. To account for this selection bias related to service dosage, we used the propensity score matching method to pair families in each dosage group with families with similar needs in the comparison group. The matching paired families based on similar baseline scores on the outcome measure of interest. The analyses then examined the difference in differences between the intervention and comparison groups for each dosage group at follow-up. Note that, in this analysis, the full comparison group is used in the matching of each of the dosage levels. We examine only primary outcomes with this method, in recognition that it is exploratory and preliminary. Further,

the power for the dosage analyses is reduced because of the smallness of the samples for the different dosage groups.

When conducting large numbers of simultaneous hypothesis tests, as we did in this study, it is important to account for the possibility that some results will achieve statistical significance simply by chance. The use of a traditional 95-percent confidence interval, for example, will result in one out of 20 comparisons achieving statistical significance as a result of random error. We therefore adjusted for false positives using the FDR method (Benjamini and Hochberg, 1995). We based our assessments of statistical significance on applying the FDR procedure separately to the primary, secondary, and tertiary outcome tests in this report (as reported in Tables G.8 and G.9) using an FDR of 0.05. In the discussion of results, we have also identified significant trends in the data, defined as those tests with *p*-values of less than 0.05 without adjusting for multiple significance tests. Although these results might suggest a practical difference that would be statistically significant with a larger sample, they must be interpreted with caution because we cannot rule out that the difference was due to chance because of the multiple significance tests being conducted.

Study Results

Enrollment and Retention

As noted above, Spokane ARC enrolled a total of 198 families in the study, with 94 in the intervention group and 104 in the comparison group. In Table G.3, we present the number and percentage of all enrollees who were eligible for participation at each data collection time point. As shown, 78 percent of families enrolled in the intervention group were retained for the six-month caregiver assessment, with 88 percent retained in the comparison group. At 12 months, 72 percent of intervention group and 75 percent of comparison group families were retained for the caregiver assessment.

Table G.3. Retention of Enrollees Eligible to Participate in the Caregiver Assessment at Six Months

Requirement	Six Months	12 Months
Intervention		
Received	73	68
Expected	94	94
Retention rate, as a percentage	78	72
Comparison		
Received	92	78
Expected	104	104
Retention rate, as a percentage	88	75

Baseline Descriptive Statistics

For the descriptive statistics, we provide the characteristics for the full sample enrolled at baseline. As shown in Table G.4, children who participated in the study were, on average, 4.5 years old (range 3–6), with 46 percent males and 54 percent females. The racial and ethnic background of families was majority white (65 percent) with 14 percent Hispanic, 1 percent black, and 21 percent identifying the child as other race or ethnicity. Families reported a range of family incomes, with 82 percent having incomes below $30,000, and an average exposure for the child to one type of violence in the past six months. We observed no statistically significant differences between the intervention and comparison groups at baseline.

Table G.4. Spokane Attachment, Self-Regulation, and Competency Safe Start Baseline Sample Characteristics

	Combined		Intervention		Comparison		
Characteristic	***N***	**Mean (SD)**	***N***	**Mean (SD)**	***N***	**Mean (SD)**	**Test for Comparison *p*-Value**
Child							
Age	198	4.5 (0.7)	94	4.4 (0.7)	104	4.6 (0.7)	0.10
CR of violence exposure	195	1.0 (1.23)	94	1.1 (1.4)	104	0.9 (1.1)	0.42
		Percentage		**Percentage**		**Percentage**	
Child							
Gender							0.22
Male	92	46	48	51	44	42	
Female	106	54	46	49	60	58	
Race and ethnicity							—
Hispanic	28	14	10	11	18	17	
White	128	65	64	68	64	62	
Black	1	1	1	1	0	0	
Other	41	21	19	20	22	21	
Caregiver							
Family income level							0.35
Less than $10,000	60	31	24	27	36	35	
$10,001–20,000	60	31	33	38	27	26	
$20,001–30,000	37	19	15	17	22	21	
More than $30,000	35	18	16	18	19	18	
Relationship to child							0.90
Parent or guardian	192	97	91	97	101	97	
Other relationship	6	3	3	3	3	3	

NOTE: — = Cell is too small to show. Because of missing data, some numbers might not sum as shown.

In the sample of families that were retained in the study at six and 12 months, these characteristics were similar with no significant differences between groups (data not shown). Comparison of those who were lost to follow-up and those who were retained at six and 12 months also revealed no statistically significant differences between the two groups (data not shown).

We also examined the Spokane ARC sample at baseline on two outcomes (PTSD symptoms and caregiver depressive symptoms) to describe the level of severity on these indexes among families entering the project (Table G.5). At baseline, more than one-third of caregivers (35 percent) reported symptoms of PTSD in the significant range for their children (24 percent

for boys and 45 percent for girls). Ten percent of caregivers reported their own depressive symptoms in the moderately severe or severe range.

Table G.5. Baseline Assessment Estimates for Spokane Attachment, Self-Regulation, and Competency Families

	Combined		Boys		Girls	
Assessment	***N***	**Percentage**	***N***	**Percentage**	***N***	**Percentage**
CR of child PTSD symptoms (ages 3–5)						
Normal	109	58	62	69	47	48
Borderline	13	7	6	7	7	7
Significant	66	35	22	24	44	45
Caregiver depression						
None or minimal	70	35	36	39	34	32
Mild	69	35	30	33	39	37
Moderate	40	20	17	18	23	22
Moderately severe	13	7	8	9	5	5
Severe	6	3	1	1	5	5

Finally, we examined differences between the intervention and comparison groups at baseline for Spokane ARC's primary, secondary, and tertiary outcomes (see Table G.12). At baseline, there were no differences between groups for the primary, secondary, or tertiary child outcomes after adjusting for multiple comparisons, indicating that the randomization resulted in balanced groups.

Table G.12 summarizes cross-sectional differences between the intervention and comparison groups at the six- and 12-month follow-up time points for Spokane ARC's primary, secondary, and tertiary outcomes. Again, the two groups did not differ from each other in terms of child outcomes at six and 12 months.

Uptake, Dosage, and Process of Care

The program recorded family-level service data on the follow-up service survey and submitted the data at six and 12 months after the baseline assessment. Table G.6 shows the type and amount of services received for all families who were initially enrolled in the intervention group, regardless of whether they continued to participate in the ongoing research assessment. The data displayed in Table G.6 include services received by summing data from both time points that the program reported.

Table G.6. Services That Spokane Attachment, Self-Regulation, and Competency Safe Start Intervention Families Received

	With Service		Number of Sessions		
Service	**Number**	**Percentage**	**Range**	**Mean**	**Median**
Baseline sample (*n* = 94)					
Individual sessions	77	82	0–12	6.6	8
Six-month analysis sample (*n* = 73)					
Individual sessions	66	90	0–12	7.9	9
12-month analysis sample (*n* = 68)					
Individual sessions	61	90	0–12	8.1	10

As shown in the top portion of Table G.6, 82 percent of the families in the intervention group received individual ARC sessions, with an average of 6.6 sessions. Among only the 77 families who received at least one individual session, the average number of sessions was 8.1. The middle portion of Table G.6 shows the services received during the six months between baseline and the six-month assessment for the subgroup of intervention group families who participated in the six-month follow-up research assessment. These are the 73 families included in the intervention group in the outcome analysis sample for the Spokane ARC program. As shown in Table G.6, the vast majority (90 percent) of the families assessed at six months received individual sessions, with an average of 7.9 sessions. Among only the 66 families who received at least one individual session, the average number of sessions was 8.8. The bottom portion of Table G.6 shows the services received during the 12 months between baseline and the 12-month assessment for the subgroup of 68 intervention group families who participated in the 12-month follow-up research assessment. As shown in Table G.6, the vast majority (90 percent) of the families assessed at 12 months received individual sessions, with an average of 8.1 sessions. Among only the 61 families who received at least one individual session, the average number of sessions was 9.0. We did not collect service information on usual Head Start programming in the intervention or comparison group.

On the caregiver follow-up assessment, we asked caregivers in the intervention group about their satisfaction with Safe Start services (Table G.7). The eight-item measure focused on the level of satisfaction with services received using a four-point Likert scale, with a higher score indicating greater level of satisfaction with services. Overall, caregivers who received Safe Start services were satisfied with different aspects of Safe Start services, with ratings ranging from a low of 3.1 (program met needs) to a high of 3.8 (quality of service and would recommend program to a friend).

Table G.7. Satisfaction with Services That Spokane Attachment, Self-Regulation, and Competency Safe Start Intervention Families Received: Six Months

Satisfaction	*N*	Mean	SD
Rate quality of service	64	3.8	0.46
Got the kind of service wanted	63	3.5	0.64
Program met needs	64	3.1	0.86
Would recommend to a friend	64	3.8	0.49
Satisfied with help received	64	3.5	0.73
Helped deal more effectively with problems	64	3.6	0.62
Satisfied with service	64	3.7	0.62
Would come back to program	63	3.6	0.71

Key Outcome Findings

We began by analyzing changes in mean scores over time both within the intervention and comparison groups and between the groups. For these analyses, we used an intent-to-treat approach that included all families allocated to the intervention, regardless of the level of service they received. The first set of columns of numbers in Table G.8 describes differences within groups between the baseline and the six-month assessment, with paired *t*-tests comparing each person's score at each follow-up wave with his or her own score at the baseline assessment and adjusting for multiple testing. At six months, for Spokane ARC's primary outcomes measuring different aspects of the child's social–emotional competence, there was a statistically significant increase in the primary outcome variable of CR of child self-control for the comparison group only. For the 12 secondary outcomes with adequate sample size, no significant differences remain after adjusting for multiple comparisons. Among the eight tertiary outcomes, only the comparison group reported significantly fewer attitudinal barriers to care and caregiver PTSD symptoms. Caregivers in only the intervention group reported significantly fewer total stressors at six months. Caregivers in both groups reported significantly fewer resource problems at six months.

Table G.8. Changes in Means for Outcome Variables Between Baseline and Six-Month Assessment and Group-Level Comparison of Mean Changes

Outcome		Within-Family Mean Change[a]				Group-Level Comparison of Mean Changes					
						Unadjusted Model[b]			Adjusted Model[c]		
		N	Estimate	SE	*p*-Value	Estimate	SE	*p*-Value	Estimate	SE	*p*-Value
Primary											
CR of child cooperation (ages 3–5)	Intervention	73	0.45	0.27	0.09	0.44	0.67	0.51	0.43	0.65	0.51
	Comparison	92	0.01	0.21	0.96						
CR of child assertion (ages 3–5)	Intervention	68	0.26	0.29	0.37	0.15	0.71	0.83	0.17	0.72	0.81
	Comparison	88	0.11	0.28	0.69						
CR of child self-control (ages 3–5)	Intervention	68	0.21	0.44	0.64	–0.67	0.90	0.46	–0.72	0.86	0.40
	Comparison	86	0.87	0.32	0.01[d]*						
Secondary											
CR of child PTSD symptoms (ages 3–5)	Intervention	67	–0.94	0.83	0.26	0.18	2.26	0.94	0.22	2.16	0.92
	Comparison	85	–1.12	0.88	0.21						
CR of child behavior problems (age 3)	Intervention	16	–2.69	1.18	0.04[d]	–0.85	4.35	0.85	–0.86	3.24	0.79
	Comparison	12	–1.83	1.56	0.26						
CR of child total behavior problems (ages 3–5)	Intervention	72	–0.97	0.56	0.09	–0.22	1.43	0.88	–0.23	1.33	0.86
	Comparison	92	–0.75	0.49	0.13						
CR of child externalizing behavior problems (ages 3–5)	Intervention	72	–0.43	0.39	0.28	–0.13	1.02	0.90	–0.11	0.95	0.91
	Comparison	92	–0.30	0.32	0.35						
CR of child internalizing problems (ages 3–5)	Intervention	72	–0.54	0.25	0.03[d]	–0.10	0.54	0.86	–0.13	0.52	0.81
	Comparison	92	–0.45	0.24	0.07						
CR of family involvement (age 5)	Intervention	2	—	—	—	—	—	—	—	—	—
	Comparison	4	—	—	—						
CR of positive involvement (age 5)	Intervention	2	—	—	—	—	—	—	—	—	—
	Comparison	4	—	—	—						
CR of negative or ineffective discipline (age 5)	Intervention	2	—	—	—	—	—	—	—	—	—
	Comparison	4	—	—	—						
CR of deficient monitoring (age 5)	Intervention	2	—	—	—	—	—	—	—	—	—
	Comparison	4	—	—	—						

Outcome		N	Within-Family Mean Change[a] Estimate	SE	p-Value	Group-Level Comparison of Mean Changes: Unadjusted Model[b] Estimate	SE	p-Value	Adjusted Model[c] Estimate	SE	p-Value
CR of family conflict (ages 3–5)	Intervention	72	–0.71	0.27	0.01[d]	–0.58	0.48	0.23	–0.57	0.47	0.22
	Comparison	92	–0.13	0.22	0.57						
CR of total child victimization experiences (ages 3–5)	Intervention	72	–0.32	0.15	0.04[d]	–0.28	0.26	0.29	–0.31	0.25	0.21
	Comparison	92	–0.04	0.13	0.73						
CR of child maltreatment (ages 3–5)	Intervention	73	–0.18	0.08	0.03[d]	–0.16	0.10	0.12	–0.16	0.10	0.11
	Comparison	92	–0.02	0.05	0.66						
CR of child assault (ages 3–5)	Intervention	73	0.03	0.08	0.72	0.01	0.12	0.96	0.00	0.12	0.97
	Comparison	92	0.02	0.06	0.73						
CR of child sexual abuse (ages 3–5)	Intervention	73	–0.05	0.03	0.04[d]	–0.05	0.04	0.15	–0.06	0.04	0.12
	Comparison	92	0.00	0.02	1.00						
CR of child witnessing violence (ages 3–5)	Intervention	73	–0.10	0.07	0.16	–0.06	0.12	0.58	–0.07	0.11	0.56
	Comparison	92	–0.03	0.08	0.68						
CR of caregiver depression	Intervention	73	–1.49	0.65	0.03[d]	–1.19	1.13	0.29	–1.09	1.02	0.29
	Comparison	92	–0.30	0.44	0.50						
Tertiary											
CR of attitudinal barriers to care	Intervention	73	–0.26	0.15	0.08	0.47	0.30	0.12	0.50	0.30	0.10
	Comparison	92	–0.73	0.16	<0.01[d]*						
CR of total stressors	Intervention	72	–3.07	0.76	<0.01[d]*	–1.21	1.98	0.54	–1.41	1.81	0.44
	Comparison	92	–1.86	0.76	0.02[d]						
CR of resource problems	Intervention	72	–1.81	0.40	<0.01[d]*	–0.69	0.96	0.48	–0.71	0.88	0.42
	Comparison	92	–1.12	0.37	<0.01[d]*						
CR of personal problems	Intervention	72	–1.26	0.58	0.03[d]	–0.52	1.27	0.68	–0.70	1.19	0.56
	Comparison	92	–0.74	0.54	0.17						
CR of caregiver total number of traumatic experiences	Intervention	72	–0.13	0.10	0.22	0.07	0.15	0.64	0.05	0.15	0.74
	Comparison	92	–0.20	0.09	0.03[d]						
CR of caregiver experience of any non-DV trauma	Intervention	72	–0.07	0.04	0.06	0.00	0.07	0.95	0.01	0.07	0.92
	Comparison	92	–0.07	0.05	0.18						
CR of caregiver experience of any DV	Intervention	72	–0.01	0.04	0.74	0.08	0.06	0.19	0.07	0.06	0.28
	Comparison	92	–0.10	0.04	0.03[d]						

Outcome		N	Within-Family Mean Change[a] Estimate	SE	p-Value	Group-Level Comparison of Mean Changes: Unadjusted Model[b] Estimate	SE	p-Value	Adjusted Model[c] Estimate	SE	p-Value
CR of caregiver PTSD	Intervention	73	–0.26	0.16	0.11	0.19	0.33	0.58	0.19	0.32	0.56
	Comparison	92	–0.45	0.14	<0.01[d]*						

NOTE: * = the significant difference over time remains after adjustment for multiple comparisons. — = Cell is too small to show. Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group. Adjusted model results are not shown when the group size is fewer than 20 for either group.

[a] Within-family mean changes between the baseline and six-month scores for each group separately.

[b] Group-level comparison of within-family mean changes from baseline to six months.

[c] Estimate of the difference between the two groups' within-family mean changes from baseline to six months, controlling for child age, gender, race and ethnicity, and violence exposure (baseline exposure plus exposure between baseline and six months).

[d] A significant paired *t*-test of differences over time ($p < 0.05$).

Table G.8 also shows intervention effects over time using an intent-to-treat approach in which all families in the intervention are compared with all those in the comparison group, regardless of the actual amount of intervention received in the intervention group. Because any change in outcomes observed can potentially be the result of a time trend observed in all children in the study, we used a difference-in-differences method to assess the unadjusted impact of the program. In the difference-in-differences models presented in the second set of data columns, there was no evidence of intervention effects associated with any of the primary, secondary, or tertiary outcomes. For the adjusted models that control for child age, child gender, child race and ethnicity, and parent report of child's violence exposure, there was also no evidence of intervention effects associated with any of the primary, secondary, or tertiary outcomes. The results in Table G.8 can also be discussed in terms of effect sizes for Spokane ARC's primary outcomes. Within-group changes were small to very small for the ARC intervention for child cooperation (0.20 [–0.13 – 0.53]), assertion (0.11 [–0.23 – 0.45]), and self-control (0.06 [–0.28 – 0.39]). The adjusted between-group effect size was also small to very small for child cooperation (0.06 [–0.12 – 0.24]), assertion (0.23 [–0.16 – 0.21]), and self-control (–0.08 [–0.26 – 0.11]), indicating again that the two groups did not differ much in terms of their improvement.

Table G.9 shows some significant within-group changes in primary, secondary, and tertiary outcomes from baseline to 12 months. Among the primary outcomes measuring different aspects of the child's social–emotional competence, there was a significant increase from baseline to 12 months in the primary outcome variable of CR of child self-control for the comparison group only. Among the 11 secondary outcomes with adequate sample size, there was a significant improvement from baseline to 12 months for only the intervention group for CR of family conflict. Among the eight tertiary outcomes, there were significant improvements for both groups in caregiver total stressors, resource problems, and personal problems, as well as CR of PTSD symptoms. From baseline to 12 months, only the comparison group improved on CR of

attitudinal barriers to care and total number of caregiver traumatic experiences. Only the intervention group improved in caregiver experiences of non-DV trauma from baseline to 12 months. The difference-in-differences models (unadjusted and adjusted) showed no evidence of intervention effects on any of the primary, secondary, or tertiary outcomes at 12 months (aside from two tertiary outcomes in the unadjusted and adjusted models that did not withstand the correction for multiple comparisons).

Table G.9. Changes in Means for Outcome Variables Between Baseline and 12-Month Assessment and Group-Level Comparison of Mean Changes

		Within-Family Mean Change[a]				Group-Level Comparison of Mean Changes					
						Unadjusted Model[b]			Adjusted Model[c]		
Outcome		*N*	Estimate	SE	*p*-Value	Estimate	SE	*p*-Value	Estimate	SE	*p*-Value
Primary											
CR of child cooperation (ages 3–5)	Intervention	68	0.50	0.29	0.09	0.35	0.69	0.62	0.42	0.67	0.54
	Comparison	78	0.15	0.26	0.55						
CR of child assertion (ages 3–5)	Intervention	64	0.38	0.35	0.29	–0.19	0.78	0.81	–0.02	0.78	0.98
	Comparison	73	0.56	0.33	0.09						
CR of child self-control (ages 3–5)	Intervention	64	0.48	0.39	0.21	–0.63	0.90	0.48	–0.69	0.87	0.43
	Comparison	71	1.11	0.35	<0.01[d]*						
Secondary											
CR of child PTSD symptoms (ages 3–5)	Intervention	64	–1.11	0.92	0.23	0.49	2.41	0.84	0.49	2.33	0.83
	Comparison	73	–1.60	1.21	0.19						
CR of child behavior problems (age 3)	Intervention	0	—	—	—	—	—	—	—	—	—
	Comparison	0	—	—	—						
CR of child total behavior problems (ages 3–5)	Intervention	67	–0.25	0.54	0.64	0.03	1.53	0.99	–0.03	1.45	0.98
	Comparison	78	–0.28	0.53	0.60						
CR of child externalizing behavior problems (ages 3–5)	Intervention	67	–0.06	0.40	0.88	0.18	1.07	0.86	0.18	1.01	0.86
	Comparison	78	–0.24	0.39	0.54						
CR of child internalizing problems (ages 3–5)	Intervention	67	–0.19	0.26	0.45	–0.16	0.61	0.80	–0.21	0.59	0.72
	Comparison	78	–0.04	0.27	0.89						
CR of family involvement (age 5)	Intervention	3	—	—	—	—	—	—	—	—	—
	Comparison	3	—	—	—						

Outcome		Within-Family Mean Change[a]				Group-Level Comparison of Mean Changes					
						Unadjusted Model[b]			Adjusted Model[c]		
		N	Estimate	SE	*p*-Value	Estimate	SE	*p*-Value	Estimate	SE	*p*-Value
CR of positive involvement (age 5)	Intervention	3	—	—	—	—	—	—	—	—	—
	Comparison	3	—	—	—						
CR of negative or ineffective discipline (age 5)	Intervention	3	—	—	—	—	—	—	—	—	—
	Comparison	3	—	—	—						
CR of deficient monitoring (age 5)	Intervention	2	—	—	—	—	—	—	—	—	—
	Comparison	3	—	—	—						
CR of family conflict (ages 3–5)	Intervention	68	–1.00	0.25	<0.01[d]	–0.80	0.47	0.09	–0.79	0.45	0.08
	Comparison	78	–0.20	0.21	0.34						
CR of total child victimization experiences (ages 3–5)	Intervention	68	–0.28	0.16	0.09	–0.05	0.28	0.86	–0.09	0.28	0.74
	Comparison	78	–0.23	0.14	0.09						
CR of child maltreatment (ages 3–5)	Intervention	68	–0.16	0.09	0.06	–0.08	0.10	0.41	–0.11	0.11	0.31
	Comparison	78	–0.08	0.05	0.11						
CR of child assault (ages 3–5)	Intervention	68	0.03	0.06	0.62	0.08	0.12	0.49	0.07	0.12	0.57
	Comparison	78	–0.05	0.07	0.44						
CR of child sexual abuse (ages 3–5)	Intervention	68	–0.04	0.03	0.18	–0.03	0.04	0.42	–0.03	0.04	0.40
	Comparison	78	–0.01	0.02	0.57						
CR of child witnessing violence (ages 3–5)	Intervention	68	–0.12	0.09	0.17	–0.08	0.13	0.55	–0.08	0.13	0.53
	Comparison	78	–0.04	0.08	0.62						
CR of caregiver depression	Intervention	68	–1.63	0.67	0.02[d]	–0.48	1.19	0.69	–0.29	1.15	0.80
	Comparison	78	–1.15	0.51	0.03[d]						
Tertiary											
CR of attitudinal barriers to care	Intervention	68	–0.09	0.15	0.56	0.81	0.29	0.01[d]	0.81	0.29	0.01[d]
	Comparison	78	–0.90	0.19	<0.01[d]*						
CR of total stressors	Intervention	68	–4.26	0.84	<0.01[d]*	–1.48	2.04	0.47	–1.53	1.90	0.42
	Comparison	78	–2.78	0.89	<0.01[d]*						
CR of resource problems	Intervention	68	–1.82	0.41	<0.01[d]*	–0.68	0.98	0.49	–0.66	0.91	0.47
	Comparison	78	–1.14	0.44	0.01[d]*						
CR of personal problems	Intervention	68	–2.44	0.63	<0.01*	–0.80	1.31	0.54	–0.87	1.25	0.49
	Comparison	78	–1.64	0.61	0.01[d]*						

Outcome		N	Within-Family Mean Change[a] Estimate	SE	p-Value	Group-Level Comparison of Mean Changes: Unadjusted Model[b] Estimate	SE	p-Value	Adjusted Model[c] Estimate	SE	p-Value
CR of caregiver total number of traumatic experiences	Intervention	68	–0.15	0.10	0.14	0.10	0.15	0.52	0.11	0.15	0.49
	Comparison	78	–0.24	0.10	0.01[d]*						
CR of caregiver experience of any non-DV trauma	Intervention	68	–0.12	0.04	<0.01[d]*	–0.03	0.06	0.62	–0.02	0.05	0.74
	Comparison	78	–0.09	0.04	0.03[d]						
CR of caregiver experience of any DV	Intervention	68	0.06	0.04	0.16	0.15	0.07	0.05[d]	0.15	0.08	0.05[d]
	Comparison	78	–0.09	0.05	0.07						
CR of caregiver PTSD	Intervention	68	–0.56	0.20	0.01[d]*	0.08	0.34	0.81	0.06	0.33	0.86
	Comparison	78	–0.64	0.16	<0.01[d]*						

NOTE: * = the significant difference over time remains after adjustment for multiple comparisons. — = Cell is too small to show. Mean change estimates are not shown when the group size is fewer than ten, and comparisons are not shown when the group size is fewer than ten for either group. Adjusted model results are not shown when the group size is fewer than 20 for either group.

[a] Within-family mean changes between the baseline and 12-month scores for each group separately.

[b] Group-level comparison of within-family mean changes from baseline to 12 months.

[c] Estimate of the difference between the two groups' within-family mean change from baseline to 12 months, controlling for child age, gender, race and ethnicity, and violence exposure (baseline exposure plus the average of exposure at 6 and 12 months).

[d] A significant paired *t*-test of differences over time ($p < 0.05$). In cells containing *0.05*, we have rounded the value to 0.05, but it is still less than 0.05.

Safe Start Service Dosage and Changes in Primary Outcomes

To examine any intervention effects that Safe Start service dosage has on outcomes, we divided the intervention families into three dosage groups because families tend to receive different amounts of services. Divided into three levels, the variable defines a low dosage as zero to one ARC session, a medium dosage as two to nine ARC sessions, and a high dosage as ten or more ARC sessions.

Because children and families with more need are likely to receive more services, we would expect a selection bias, with higher-need families receiving more services. To account for this selection bias, we used the propensity score matching method to pair families in each dosage group with families with similar needs in the comparison group. The matching paired families based on baseline scores on the outcome measure of interest. The analyses examined the difference in mean score changes between the intervention and comparison groups for each dosage group, after controlling for the number of case management contacts. Note that, in this analysis, the full comparison group is used in the matching of each of the dosage levels.

At six months, the propensity score matching analyses for the primary outcomes measuring difference aspects of child social–emotional competences (cooperation, assertion, and self-

control) comparing the three groups on changes in mean score between baseline and six months revealed no statistically significant difference between the intervention and comparison groups in any of the dosage categories (Table G.10).

Table G.10. Changes in Means, by Dosage Group, for Primary Outcome Variables Between Baseline and Six-Month Assessment

				Baseline		Six Months		Difference in
Primary Outcome	Dosage	Group	*N*	Mean	SD	Mean	SD	Differences
CR of child cooperation (ages 3–5)	Low	Intervention	10	10.40	2.32	10.50	3.24	–0.30
		Comparison	10	11.80	1.40	12.20	1.99	
	Medium	Intervention	24	11.04	2.77	11.25	2.85	0.75
		Comparison	24	10.75	2.89	10.21	2.72	
	High	Intervention	24	10.00	3.31	11.21	3.01	0.92
		Comparison	24	10.21	2.47	10.50	3.20	
CR of child assertion (ages 3–5)	Low	Intervention	9	14.89	2.71	15.44	2.70	—
		Comparison	9	15.22	2.82	16.11	3.37	
	Medium	Intervention	19	14.74	2.84	15.11	2.56	0.84
		Comparison	19	14.95	2.25	14.47	2.67	
	High	Intervention	23	13.61	2.54	14.22	3.03	0.35
		Comparison	23	13.61	2.08	13.87	2.51	
CR of child self-control (ages 3–5)	Low	Intervention	11	9.55	3.01	8.64	4.61	–1.82
		Comparison	11	10.18	3.60	11.09	2.84	
	Medium	Intervention	22	9.95	3.84	10.41	3.59	0.55
		Comparison	22	9.68	3.60	9.59	4.62	
	High	Intervention	24	8.96	4.21	9.71	4.70	0.67
		Comparison	24	10.00	3.48	10.08	3.80	

NOTE: Data are not shown for outcomes when cell size is less than 5 for the group. Comparisons were not tested when the group size is less than ten for either group.

At 12 months, the propensity score matching analyses for the primary outcomes measuring the caregiver's report of child cooperation, assertion, and self-control revealed one statistically significant difference between the intervention and comparison groups in the high-dosage group (Table G.11). Children in the intervention group who received ten or more ARC sessions had significantly higher cooperation scores than the matched comparisons.

Table G.11. Changes in Means, by Dosage Group, for Primary Outcome Variables Between Baseline and 12-Month Assessment

Primary Outcome	Dosage	Group	*N*	Baseline		12 Months		Difference in Differences
				Mean	SD	Mean	SD	
CR of child cooperation (ages 3–5)	Low	Intervention	6	9.83	2.64	10.00	3.03	—
		Comparison	6	10.50	2.35	12.00	3.22	
	Medium	Intervention	19	11.42	2.19	11.74	1.82	0.26
		Comparison	19	11.53	2.14	11.58	2.27	
	High	Intervention	24	10.13	3.23	11.63	2.52	1.58*
		Comparison	24	10.50	2.60	10.42	2.48	
CR of child assertion (ages 3–5)	Low	Intervention	6	13.67	4.08	14.67	2.50	—
		Comparison	6	15.83	2.14	15.17	2.64	
	Medium	Intervention	12	14.42	2.35	14.83	1.85	–0.17
		Comparison	12	14.50	2.61	15.08	1.73	
	High	Intervention	27	13.63	2.69	14.44	3.63	0.70
		Comparison	27	14.11	3.00	14.22	2.91	
CR of child self-control (ages 3–5)	Low	Intervention	6	9.83	2.71	10.17	2.64	—
		Comparison	6	9.17	2.56	8.83	4.17	
	Medium	Intervention	16	10.56	2.90	10.50	3.12	–0.63
		Comparison	16	10.63	2.96	11.19	3.21	
	High	Intervention	27	8.85	3.97	9.67	4.37	0.52
		Comparison	27	9.19	2.45	9.48	3.00	

NOTE: Data are not shown for outcomes when cell size is less than five for the group. Comparisons were not tested when the group size is less than ten for either group. * = Statistically significant (p-value < 0.05). — = Cell is too small to show.

Conclusions

Spokane's Safe Start program added the ARC intervention to usual Head Start services and was evaluated in an RCT comparing the ARC individual therapy sessions plus Head Start services with a comparison group that received Head Start services only. In the study, the Safe Start program recruited 198 families and retained 165 of them at six months, representing an 83-percent retention rate. The families in the study were largely white (65 percent) and impoverished (72 percent with family incomes less than $30,000), with more than one-third (35 percent) of children scoring in the clinical range for PTSD symptoms and about one-third (30 percent) of caregivers reporting moderate to severe depressive symptoms. For service uptake, 82 percent of the intervention group families received the ARC individual therapy sessions, with the vast majority (90 percent) of those retained in the six- and 12-month samples taking part in the ARC individual sessions. Satisfaction with the intervention services was high.

In this trial, we expected a small effect size because of the robust services offered within the usual Head Start services that both groups received. Despite very strong retention, the Head Start program had limited capacity to recruit the large sample needed to detect a small effect. In addition, Spokane tested two interventions, which further reduced the program's ability to recruit adequately large samples to detect a small effect. Given the final enrollment and retention, there was power to detect only a medium effect of around 0.44 at six and 0.47 at 12 months. Intent-to-treat analyses showed that mean scores in the intervention and comparison groups were in the expected direction across all outcome measures, but, overall, there was no evidence of intervention effects at six or 12 months for any of the outcomes because the comparison group experienced similar improvements over time, with small between-group effects. Examination of families who received low, medium, and high doses of the ARC intervention revealed one statistically significant difference at 12 months between families in the intervention group and comparable families in the comparison group. Children in the intervention group who received ten or more ARC sessions had significantly higher cooperation scores than the matched comparisons.

In sum, the study was not powered to detect the small differences that might be expected with this set of intervention activities, so the study cannot determine whether there is such an effect. More research would be needed to determine whether these activities can produce small improvements in child and family outcomes over and above the usual services that Head Start offers.

Table G.12. Comparison of Means for Spokane Attachment, Self-Regulation, and Competency Outcome Variables

		Baseline				Six Months				12 Months			
Outcome		***N***	**Mean**	**SD**	**Difference**	***N***	**Mean**	**SD**	**Difference**	***N***	**Mean**	**SD**	**Difference**
Primary													
CR of child cooperation (ages 3–5)	Intervention	94	10.93	3.25	0.24	73	11.19	3.20	0.49	68	11.16	2.77	0.29
	Comparison	104	10.68	2.78		92	10.71	2.85		78	10.87	2.96	
CR of child assertion (ages 3–5)	Intervention	89	14.09	3.14	–0.01	71	14.37	3.20	0.18	67	14.36	3.20	–0.27
	Comparison	100	14.10	3.27		91	14.19	2.96		76	14.63	3.02	
CR of child self-control (ages 3–5)	Intervention	90	9.26	4.08	0.26	71	9.73	4.48	–0.08	65	9.95	3.91	0.05
	Comparison	99	9.00	3.25		91	9.81	3.70		75	9.91	3.51	
Secondary													
CR of child PTSD symptoms (ages 3–5)	Intervention	89	39.80	9.56	—	69	38.39	8.41	—	67	38.64	9.71	0.13
	Comparison	99	39.36	10.39		90	38.81	10.19		78	38.51	8.90	
CR of child behavior problems (age 3)	Intervention	19	15	10.31	4.33	16	11.38	9.48	2.54	0	—	—	—
	Comparison	12	10.67	6.44		12	8.83	5.61		0	—	—	
CR of child total behavior problems (ages 3–5)	Intervention	94	12.74	6.59	0.35	72	11.68	6.30	–0.03	67	12.52	6.32	0.48
	Comparison	104	12.39	6.37		92	11.71	6.27		78	12.04	6.55	
CR of child externalizing behavior problems (ages 3–5)	Intervention	94	9.52	4.56	0.51	72	9.10	4.70	0.35	67	9.49	4.46	0.74
	Comparison	104	9.01	4.39		92	8.75	4.39		78	8.76	4.63	
CR of child internalizing problems (ages 3–5)	Intervention	94	3.22	2.58	–0.16	72	2.58	2.11	–0.37	67	3.03	2.48	–0.25
	Comparison	104	3.38	2.55		92	2.96	2.57		78	3.28	2.69	
CR of family involvement (age 5)	Intervention	3	—	—	—	72	0.00	0.00	–2.25	68	0.01	0.12	1.47
	Comparison	4	—	—		92	0.03	0.18		78	0.01	0.11	
CR of positive involvement (age 5)	Intervention	3	—	—	—	73	0.19	0.43	–1.25	68	0.18	0.49	2.50
	Comparison	4	—	—		92	0.22	0.49		78	0.22	0.57	
CR of negative or ineffective discipline (age 5)	Intervention	3	—	—	—	73	6.04	4.62	–3.00	68	5.93	5.18	–1.57
	Comparison	4	—	—		92	6.36	5.23		78	5.40	5.02	

Outcome		Baseline				Six Months				12 Months			
		N	Mean	SD	Difference	*N*	Mean	SD	Difference	*N*	Mean	SD	Difference
CR of deficient monitoring (age 5)	Intervention	2	—	—	—	2	—	—	—	25	9.44	2.20	0.64
	Comparison	4	—	—		4	—	—		41	8.80	1.40	
CR of family conflict (ages 3–5)	Intervention	94	3.38	2.42	0.52	72	2.68	2.00	0.17	68	2.44	1.93	0.30
	Comparison	104	2.86	2.25		92	2.51	2.14		78	2.14	1.87	
CR of total child victimization experiences (ages 3–5)	Intervention	94	1.07	1.38	0.14	72	0.74	0.99	–0.12	68	0.76	1.12	0.10
	Comparison	104	0.93	1.08		92	0.86	1.16		78	0.67	1.21	
CR of child maltreatment (ages 3–5)	Intervention	94	0.23	0.61	0.08	73	0.05	0.23	–0.08	68	0.07	0.26	–0.02
	Comparison	104	0.15	0.39		92	0.13	0.42		78	0.09	0.33	
CR of child assault (ages 3–5)	Intervention	94	0.28	0.54	0.03	73	0.32	0.52	0.03	68	0.29	0.49	0.09
	Comparison	104	0.25	0.46		92	0.28	0.60		78	0.21	0.49	
CR of child sexual abuse (ages 3–5)	Intervention	94	0.04	0.20	0.01	73	0.00	0.00	–0.03	68	0.01	0.12	0.00
	Comparison	104	0.03	0.17		92	0.03	0.18		78	0.01	0.11	
CR of child witnessing violence (ages 3–5)	Intervention	94	0.35	0.74	0.05	73	0.19	0.43	–0.03	68	0.18	0.49	–0.04
	Comparison	104	0.30	0.62		92	0.22	0.49		78	0.22	0.57	
CR of caregiver depression	Intervention	94	7.88	5.70	1.17	73	6.04	4.62	–0.32	68	5.93	5.18	0.53
	Comparison	104	6.70	4.75		92	6.36	5.23		78	5.40	5.02	
Tertiary													
CR of attitudinal barriers to care	Intervention	94	0.97	1.39	–0.47[a]	73	0.60	1.33	–0.16	68	0.74	1.29	0.29
	Comparison	104	1.44	1.63		92	0.76	1.33		78	0.45	0.92	
CR of total stressors	Intervention	94	39.60	10.04	0.32	72	36.14	7.88	–0.75	68	35.38	8.77	–0.35
	Comparison	104	39.28	8.84		92	36.89	9.57		78	35.73	8.56	
CR of resource problems	Intervention	94	14.32	4.75	0.34	72	12.36	4.09	–0.24	68	12.44	3.97	0.04
	Comparison	104	13.98	4.26		92	12.60	4.17		78	12.40	3.90	
CR of personal problems	Intervention	94	25.28	6.22	–0.02	72	23.78	4.97	–0.52	68	22.94	5.74	–0.39
	Comparison	104	25.30	5.76		92	24.29	6.39		78	23.33	5.57	

Outcome		Baseline				Six Months				12 Months			
		N	Mean	SD	Difference	*N*	Mean	SD	Difference	*N*	Mean	SD	Difference
CR of caregiver total number of traumatic experiences	Intervention	94	0.44	0.98	0.01	72	0.19	0.6	–0.01	68	0.16	0.44	0.03
	Comparison	104	0.42	0.69		92	0.21	0.57		78	0.13	0.47	
CR of caregiver experience of any non-DV trauma	Intervention	94	0.16	0.37	–0.03	72	0.06	0.23	–0.04	68	0.00	0.00	–0.03
	Comparison	104	0.19	0.4		92	0.10	0.30		78	0.03	0.16	
CR of caregiver experience of any DV	Intervention	94	0.12	0.32	–0.05	72	0.07	0.26	0.00	68	0.13	0.34	0.06
	Comparison	104	0.16	0.37		92	0.07	0.25		78	0.08	0.27	
CR of caregiver PTSD	Intervention	94	1.71	1.63	0.13	73	1.33	1.40	0.22	68	1.04	1.35	0.16
	Comparison	104	1.59	1.51		92	1.11	1.41		78	0.88	1.31	

NOTE: * = the significant difference between groups remains after adjustment for multiple comparisons. — = Cell is too small to show. Data are not shown for outcomes when the cell size is fewer than five for either group. Comparisons were not tested when the group size was fewer than ten for either group.
[a] A significant paired *t*-test of differences between groups ($p < 0.05$). In cells containing *0.05*, we have rounded the value to 0.05, but it is still less than 0.05.