

FINAL REPORT DRAFT

Evaluation of the Shaken Baby Prevention Initiative

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Introduction

The most common cause of infant and young child deaths is being shaken. Among children who survive shaking, the resulting injuries, sometimes called Shaken Baby Syndrome¹ (SBS), account for most cases of long-term disability among infants and young children due to physical abuse (Reece & Kirschner, 1998). According to the American Academy of Pediatrics, victims of SBS range in age from just a few days old to five years old. However, most often shaking involves children younger than 2 years of age.

Most experts believe that approximately 25% of babies who are injured by shaking die from their injuries (Poissant & Lin, 1997; Torpy, 2003). The American Academy of Pediatrics (2001) estimate mortality rates at 15% to 38%, with a median of 20% to 25%. The surviving children may exhibit a range of disabilities, including partial or complete loss of vision, hearing impairments, seizure disorders, cerebral palsy, sucking and swallowing disorders, developmental disabilities, autism, cognitive impairments, behavior problems and persistent coma-like existence.

The Connecticut Office of the Child Advocate (OCA) reports that between October 1, 2001 and October 1, 2008 there were 82 child/youth homicides for children under 18 years of age in Connecticut. About 45% (37) of these homicides were children between the ages of three days to five years old, and among these homicides, 27 (73%) died as a result of shaken baby syndrome (abusive head trauma). Boys are over-represented among homicides of young children; 70% of under-5 victims were boys. Consistent with national trends, all of the infants and young children that died as a result of shaking were killed by known caregivers. Arrests were made in all but one of these cases. Of those 26 deaths where arrests were made, 77% involved only male perpetrators, while in two cases both the mother and male partner were arrested (Office of the Child Advocate, 2009).

Why are infants and young children shaken? Several studies have concluded that adults most commonly shake children because they were crying and could not be soothed. A review of 26 SBS cases in Estonia revealed that in 23 of the cases parents had established contact with their physician or other specialist because of excessive crying or irritability prior to admission to hospital (Talvik et al., 2008). Brewster et al. (1998) examined 32 infant maltreatment deaths in the US Air Force that occurred between 1989 and 1995, where the infants were 12 months old or younger at the time of death. The mean age at death was 4.92 months ($SD = 3.11$) and 58% of deaths were caused by head trauma. In 58% of the deaths, the perpetrator reported that the infant's crying triggered the incident.

Attempts to prevent SBS have often focused on education about shaking babies. Dias et al. (2005) operated and evaluated a hospital-based parent education program which was delivered to parents at the time of the infant's birth. Over a five and a half year period,

¹ The term "shaken baby syndrome" is not universally accepted, but is used in this report to refer to the constellation of conditions resulting from internal head injuries following being shaken.

65,205 parents received information about violent infant shaking and were subsequently asked to sign a form acknowledging their receipt and understanding of the program materials. This represented 69% of the 94,409 live births during the study period. Of those participating in the program, 97% returned the form with at least one signature from the parent. During the study period, 21 cases of verified abusive head injury (SBS) were identified. By comparison, in the 6 years prior to the program 49 cases were identified. Of the 21 cases, 10 infants were born to parents who had previously signed the form acknowledging the understanding of program materials.

Some prevention efforts have focused specifically on the connection between crying and SBS. Barr et al. (2009) recruited 1,279 participants to evaluate their “Period of PURPLE Crying” approach. The PURPLE method portrays infant crying as a normal behavior and offers information on what to expect when babies cry. A control group was presented with brochures on safety tips, sleep positions, and sudden infant death syndrome. The investigators discovered that mothers who received the PURPLE materials had better knowledge about infant crying and were more likely to walk away when faced with inconsolable crying. In both groups, the rate of mothers’ being aware of the dangers of shaking was high.

Another approach, which aims to prevent excessive crying by teaching soothing techniques, is the Happiest Baby on the Block (HBB) system (2003) created by Harvey Karp, MD, a pediatrician. This method uses 5 techniques called the “5 S’s” -- swaddling, side/stomach lying, shushing, swinging, and sucking – to calm a crying baby. Karp’s baby-calming strategies (the 5 S’s) offer parent educators a concrete tool to help parents calm their babies and reduce the frustration that could lead to a parent shaking a baby. Although swaddling in particular is a widely recognized technique for baby soothing, the HBB method as a whole has not received much exploration in SBS prevention.

Overview of the CT SBS Initiative

An interagency effort to reduce the incidence of SBS in CT coordinated through the Department of Children and Families (DCF) Prevention unit, began in 2005, and focused on the HBB system. In recognition of Child Abuse Prevention month in April of 2005, DCF worked with OCA and Prevent Child Abuse CT to bring Harvey Karp to the state to train DCF workers, community providers and parents on strategies to calm crying babies and to stop toddler temper tantrums. Dr. Karp’s training generated tremendous excitement and DCF received extremely positive anecdotal feedback from their staff regarding the success of the 5 S’s. However, empirical data as to the effectiveness of the intervention was scarce. In September of 2007, DCF convened a planning meeting of state agencies to create, implement and evaluate a Training of Trainers on the baby soothing strategies of Dr. Karp. Given the connection between persistent crying and shaken baby incidents, the vision of the Collaborative was to change the culture regarding calming babies across the State as a way to decrease the incidence of SBS.

DCF and OCA, along with the Departments of Correction (DOC) and Mental Health & Addiction Services (DMHAS) were able to secure funding to conduct a pilot project to

reduce the incidence of SBS. Representatives of those agencies served as the core planning group, and guided the work of an evaluation team from the University of Connecticut School of Social Work, who are also part of the DMHAS Research Division.

Evaluation Questions

The interagency planning group asked the evaluation team to evaluate two approaches that could reduce SBS: the Happiest Baby on the Block (HBB) and the Period of PURPLE Crying (PC). With a low probability event such as SBS, the effectiveness of any technique cannot be tested directly without a large-scale trial. Instead, the evaluation focused on proximal outcomes thought to be related to SBS: parent confidence in being able to soothe babies and be capable parents; and knowledge about shaken baby syndrome and how to soothe babies.

Evaluation participants

The pilot project focused on expectant parents and parents of infants served by programs funded or operated by one of the state partners. Study sites were allowed to include parents of older children or people who intended to become parents within the next year, if necessary to achieve the desired sample sizes. Among non-incarcerated populations, persons aged 14 or older who could speak, read, and understand English were also included. Incarcerated individuals needed to be age 18 or older.

Featured interventions

Happiest Baby on the Block (HBB): Two DCF staff became certified as HBB trainers. The standard HBB certification requires extensive reading, viewing 2 DVDs, and taking a written test. The DCF staff then developed the curriculum for the 2 two day trainings of parent educators. CT's modification included a segment on adapting materials for parents with cognitive limitations, demonstrations of the soothing skills by the parent educators before they would be accepted as trainers, and instruction in how to train parents. In addition, all parent educators were reminded to tell the parents to 1) NEVER shake a baby and 2) never use the swaddling blanket as a regular blanket because of concerns regarding safe sleep. In addition to the in-person training and demonstrations, PEs were also required to complete the readings and a written exam to receive formal certification. Twenty-eight PEs completed the training/certification process. Twenty-seven of these were expected to participate in the evaluation (i.e. complete surveys and refer parents to be interviewed). The additional person assisted in training the others.

Purple Crying: The PC training was developed and delivered by one of the Prevention Services Coordinators at DCF, based on the PC materials (DVD and booklet). The agenda for the day was to review the materials, watch the DVD, review the script and background, and discuss the program. Parent educators were asked to practice using the script to teach parents the program. The training also included a segment on adapting materials for parents with cognitive limitations and instruction in how to train parents.

Approximately 30 people (including supervisors, other program staff, etc.) completed the training, 21 of whom were expected to be part of the evaluation.

Assignment of sites to interventions

Each of the state agency representatives was asked to identify programs where either HBB or PC could be launched. Except for DOC programs, most programs within the sponsoring agency were randomly assigned to be trained in HBB or PC. At DOC, a temporary vacancy in one program during the time that the HBB training would be offered forced us to direct that program to the PC condition, and the other DOC program to HBB. The resulting list of programs for each condition is shown in Table 1, along with the number of participants who were recruited from each site. Although we planned to recruit 50 parent educators (PEs) and 100 parents with equal representation in each condition, recruitment fell short of expectations. As shown in **Table 1**, a total of 47 PEs were enrolled, and a total of 78 parents. Recruitment was imbalanced in favor of HBB, since only 28 parents were enrolled for PC, compared to 50 for HBB. Lack of parent enrollment in certain programs was related to not offering the intervention.

Program directors informed research staff which of their parent educators (PEs) would be participating in the trainings, so that researchers could conduct informed consent and a baseline survey prior to the training. Some of the PEs (2 from HBB and 2 from PC) who were enrolled and completed baseline interviews did not complete their trainings. After the trainings, PEs were asked to invite at least 2 parents who would be receiving the intervention to hear about the evaluation. Prospective participants signed the permission to contact (referral) form, which the PE then sent to the research office. If the participants were under 18 years old, PEs were to include contact information for the legal guardian. For minors, both assent from the young participants and consent from the legal guardians were obtained.

Measures & Data Collection

Parent Educators

Prior to receiving training in one of the interventions, PEs were asked to complete a brief survey. In addition to basic demographic and background information, the survey consisted of 9 questions about their expectancies related to being able to train parents successfully. These questions were modified from the Teacher Efficacy Questionnaire (Hoover-Dempsey et al, 1987). One global item, modified from an item about global treatment expectancy (Meyer et al, 2002), asked how well the PE thought the parents served by their agency would care for their babies. In the Meyer study, global treatment expectancy was found to correlate strongly with therapeutic alliance and outcome measures. PEs were also invited to write in any open-ended comments they would like. Approximately 3 months following parent training, PEs were asked to complete a follow-up questionnaire. The follow-up consisted of most of the same baseline items, with the addition of two structured questions about their satisfaction with the training they received and with the intervention for the parents. Please see **Appendix A** for all PE survey items.

Parents

All of the PEs were asked to refer at least two parents to be interviewed for the evaluation prior to receiving training in the interventions. At some programs, several parents were referred at the same time, so research staff went to the site to conduct in-person consents and interviews. At other times, consent and interviews were conducted over the phone. Both the baseline and follow-up surveys took on average 10-15 minutes to complete, so it's not likely that doing them over the phone resulted in significant respondent burden. Parents received a \$20 store gift card after completing their follow-up interview, usually through the mail.

The baseline parent interview consisted of basic demographics, information about pregnancy and children, items from some existing scales, and some specific questions created for this study. The Perceived Maternal Parenting Self-Efficacy Scale (PMP-S) was used, consisting of 20 items about general parenting expectancies (Barnes et al, 2007). Selected items, some modified, from two factors of the Self-Efficacy in Infant Care Scale (Prasopkittikun et al, 2006) were used to reflect expectancies related to development promotion and safety. The Crying Knowledge Scale (Barr et al, 2009) was included to assess expectancies about infant crying behavior, specifically related to information taught as part of the PC training. Several items related to content specific to the soothing techniques taught in HBB approach (Baby Soothing Knowledge) were developed for this project. A few items were also developed reflecting the cultural competence of the PE. Please see **Appendix B** for all parent interview items.

At follow-up, in addition to most of the baseline items, selected items from the Post-Partum Depression Screening Scale (PDSS) were added for parents with children under 6 months old (Clemmens et al, 2004). Parents of small infants were also asked a single item about how long their baby cried. Several open-ended questions about the training and intervention were also included at follow-up.

Results

Parent Educators

In the HBB condition, 26 parent educators from 13 different programs completed baseline surveys, 23 of whom completed follow-ups, resulting in a follow-up rate of 88%. In the PC condition, 21 parent educators from 10 programs completed baseline surveys, 19 of whom completed follow-ups, resulting in a follow-up rate of 90%. The overall follow-up rate was 89%. See **Table 2** for details of demographic and background characteristics of staff. Ninety-eight percent of PEs were female, 42.6% White, 25.5% Black, 25.5% Hispanic, and 6.4% Other ethnicity. On average, they had worked with pregnant women for 9.26 years, and most were credentialed. There were no significant baseline differences between the HBB and PC groups, except that the HBB parent educators reported more positive expectancies of their clients ($p=.035$). (See **Table 3**.) The expectancy measure had an internal consistency of .67. The higher expectancies of

the HBB participants may, in part, be due to the fact that most of the PEs had viewed some of the training materials prior to their baselines.

At follow-up, both groups showed a significant increase in expectancies over time, as determined by paired t-tests ($p=.001$) (**Table 3**). Repeated analysis of variance showed no significant group by time effect. The HBB parent educators reported significantly higher satisfaction with the training ($p=.014$) and intervention ($p=.004$) at follow-up than the PC group.

Parents

Overall, 78 parents were recruited into the evaluation, 50 from HBB programs, and 28 from PC programs. There was uneven distribution of referrals from different programs, resulting in 4 HBB programs and 4 PC programs with no parents in the evaluation, while others had several (ranging from 1 to 10 per program). Forty-seven HBB parents completed follow-up interviews, resulting in a follow-up rate of 92%. Twenty-four PC parents completed follow-up interviews, leading to a follow-up rate of 86%. The overall follow-up rate was 89%. See **Table 2** for details of parent baseline characteristics. There were no significant group differences at baseline. All but one of the parent participants were female (the one male was the partner of a female participant). Average age was 26.86, ranging from 16 to 44 years old. Fifty-one percent were White, 14% Black, 28.2% Hispanic, 6.4% Other. Forty-six percent had completed high school or obtained a GED, with average years of education being 11, ranging from 8-16. Thirty-three percent were expecting a baby and 37.2% had a baby younger than 6 months old at baseline.

Table 4 shows average scores for the scales included in the baseline parent interview. There were no group differences on these scales at baseline. The Self-Efficacy in Infant Care (SEIC) scale demonstrated good internal consistency, $\alpha = .82$. The Perceived Maternal Parenting Self-Efficacy (PCMP-S) scale also showed good internal consistency, with an α of .94. The Baby Soothing Knowledge questions and the Crying Knowledge questions both showed poorer consistency (.65 and .47, respectively), although this is to be expected since they were not measures of a single construct, but rather discrete bits of information relating to the specific training approaches.

See **Table 4** for pre/post and group difference results. At follow-up, two measures demonstrated improvement over time. The Baby Soothing Knowledge scale improved for both groups ($p=.013$), although the HBB group score was significantly higher than that of the PC group ($p=.01$). This was to be expected since PC is not designed to target baby soothing. The Crying Knowledge scale also showed improvement for both groups at follow-up ($p=.000$), with the PC group score slightly higher than that of the HBB group, but this difference was not significant. The Post-Partum Depression Screening, completed for parents with children 6 months or less at follow-up ($n=24$), showed a low rate of endorsement overall, with an internal consistency of .68. Six of the 24 reported some (mild) depressive symptoms. There was no significant group difference for PPD. It should be noted that if a respondent reported any symptom, she was sent a brochure on PPD with information on services/resources available. The created questions about the

PEs showed a generally overwhelmingly positive view of the PEs and very good internal consistency ($\alpha=.84$). There were no group by time differences in parent outcomes, indicating no differential effects over time.

Parents were also asked several open-ended questions about the training, intervention approach, and what they would do if their baby cried excessively. The vast majority of feedback about the parent educators, training and intervention were positive, and responses to the crying question consistent with standard care. Although most of the parents in both approaches tended to mention steps to check on basic needs (e.g. being hungry or wet) and to comfort the baby when crying, the HBB participants were more likely to mention one or more of the 5 S's (especially shushing and swaddling), and PC parents more likely to indicate that they would walk away (with baby in a safe place and/or with other caretaker) if they needed to. See **Appendix C** for examples and details.

Conclusions

Overall, both the Purple Crying and Happiest Baby on the Block approaches were well received, and tended to increase knowledge about both baby soothing and crying. Neither intervention significantly increased parents' self-efficacy.

There were only three significant between-group differences at the follow-up period, all of which favored HBB. Not surprisingly, HBB parents scored higher on knowledge about baby soothing. In addition, HBB PEs reported greater satisfaction with their training and with the intervention. Qualitatively, HBB seemed to generate more enthusiasm than PC by both parents and PEs. However, it must be noted that HBB required a greater time commitment for both PEs and parents.

There were several important limitations to this evaluation. Randomization did not occur by individual, and not all programs could be randomly assigned to condition. The number of participants was small, yielding low statistical power, and there were unequal groups between HBB and PC parents. Both interventions were usually integrated into other parent training programs and we were not able to monitor other program components or fidelity to the models. For HBB in particular, the intervention was implemented in different ways by different programs, with information divided across sessions in varying amounts. Some study participants only received partial training since it occurred over several sessions and they were not able to complete it.

Future research would ideally involve true random assignment, controls over implementation, and fidelity monitoring. In order to truly affect SBS rates, a greater effect would probably be seen if males were targeted, since they are usually the perpetrators. In addition, because SBS is such a low incidence event, future research would be able to demonstrate an effect on overall rates only if it included a large sample followed over a long time period.

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Appendix A: Parent Educator Survey Items

- 1.1. Name of program; Town/City
- 1.2. How long have worked with pregnant women or parents of young children
- 1.3. Gender
- 1.4. Latino/Hispanic
- 1.5. Race: Black or African American; Asian; White; Native Hawaiian or other Pacific Islander; American Indian or Alaska Native; Other
- 1.6. Credentials: BA/BS degree in a human service field; MA/MS degree in a human service field; Doctoral degree in a human service field; Teaching certification; Counselor certification or licensure; Nursing; Other clinical license (e.g., social work, psychology, medicine); Other areas of specialty.
- 1.7. Are you a parent?
- 1.8. Is it part of your role at work to provide guidance to parents in the care of babies and/or young children?
- 1.9. In the past 3 months, have you given any parents specific training or tips in how to soothe crying babies?
- 2.1. Overall in the next year, how well do you think the parents served by your agency will care for their babies (assuming no education other than what is received at your agency)? *Adapted from global treatment expectancy.*

Absolute bottom/could not be worse				Absolute tops/could not be better
1	2	3	4	5

Note: *Unless otherwise indicated, response scale for rest of items was:*

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Items 3.1 – 3.9 were adapted from the TeacherEfficacy Questionnaire:

- 3.1. I feel that I am making a significant difference in the ability of parents to care for their babies.
- 3.2. I can teach all parents to soothe fussy infants, even if the parents are very inexperienced.

- 3.3. Most of a person’s ability to care for an infant depends on things that you can’t teach.
- 3.4. If a parent is easily frustrated by crying babies, there is a limited amount that I can do to help him or her.
- 3.5. I believe that most of the parents I serve will be able to soothe their babies successfully.
- 3.6. Because of the type of clients I serve, it is especially difficult to teach them how to be good parents.
- 3.7. What I teach parents about infant care can prevent injuries inflicted by caregivers.
- 3.8. Even if I show my clients infant care skills, it would be hard for them to apply those skills at home.
- 3.9. I feel stressed by the responsibility of trying to teach certain clients how to care for their babies.
- 4.0. On the reverse side of this page, please add any comments you would like the evaluators to know, concerning the training, intervention, or ideas you have about reducing the incidence of shaken babies.

Note: Last 2 items asked only at follow-up.

- 5.1. How satisfied are you with the training you received in Happiest Baby on the Block/Purple Crying?

Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied
1	2	3	4	5

- 5.2. How satisfied are you with the Happiest Baby/Purple Crying intervention?

Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied
1	2	3	4	5

Appendix B: Parent Interview Items

1.1. Gender

1.2. Date of birth

1.3. Latino/Hispanic

1.4. Race: Black or African American; Asian; White; Native Hawaiian or other Pacific Islander; American Indian or Alaska Native; Other

1.5. Highest grade completed

If less than 12, ask: Do you have a GED?

1.6. [If female] Are you currently expecting a baby?

1.6a. If yes: When is your baby due?

1.7. [If male] Do you have a female partner expecting a baby right now?

1.7a. If yes: When is your baby due?

1.8. Do you have children?

1.9. [If yes] Ages of all children (unless parental rights terminated)

Response scale for all following questions, unless otherwise indicated:

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
5	4	3	2	1

Self-Efficacy in Infant Child Care

I know that I can: [I know I will be able to]
2.1. Tell what my baby at <i>this</i> [any] age can do.
2.2. Play with my baby every day though I am very busy.
2.3. Teach my baby how to play.
2.4. Tell what my baby's different cries mean.
2.5. Get my baby to smile or laugh.
2.6. Tell what my baby likes or dislikes.
2.7. Show my baby I love him or her.
2.8. Understand what she/he wants or needs.
2.9. Protect my baby from cigarette smoke.
2.10. Protect my baby from germs.
2.11. Keep our home safe for my baby.
2.12. Provide safe toys for my baby.
2.13. Trust people who care for my baby.
2.14. Teach other people how to soothe a baby.

Baby Soothing Knowledge

I know:
3.1. That shaking babies can cause blindness or death, or can hurt the brain.
3.2. Swaddling newborn babies makes them feel calmer.
3.3. It's okay to let your baby suck your finger, as long as it's clean.
3.4. Making a "shushing" sound close to a baby's ear will help soothe him/her.
3.5. Holding a baby on his/her side may help to soothe him or her.
3.6. How to cradle a baby and gently bounce him/her to stop him/her from crying.
3.7. How to get a baby to stop crying.

Crying Knowledge Scale

4.1. Infants cry more often in the late afternoon and evening.
4.2. Infant crying increases in the first few weeks of life and reaches a peak in the first 2 or 3 months before getting less.
4.3. If an infant is healthy, it should not cry unexpectedly or without a clear reason.
4.4. When an infant cries it is always a sign that something is wrong.
4.5. Sometimes a crying infant can look like he/she is in pain, even when he/she is not.
4.6. Sometimes healthy infants can cry for 5 or more hours a day.
4.7. A good parent should be able to soothe his or her crying infant.
4.8. It is ok to walk away from a crying infant when his/her crying becomes very frustrating.

Perceived Maternal Self-Efficacy Scale

I believe that...
5.1. I <i>can</i> [will be able to] tell when my baby is tired and needs to sleep.
5.2. I [will] have control over my baby; I'll know if my baby is not safe.
5.3. I <i>can</i> [will be able to] tell when my baby is sick.
5.4. I <i>can</i> [will be able to] read my baby's "cues" or signs that say what the baby needs.
5.5. I <i>can</i> [will be able to] make my baby happy.
5.6. My baby responds [will respond] well to me.
5.7. My baby and I [will] have a good interaction with each other.
5.8. I <i>can</i> [will be able to] make my baby calm when he/she has been crying.
5.9. I <i>am</i> [will be] good at soothing my baby when he/she becomes upset.
5.10. I <i>am</i> [will be] good at soothing my baby when he/she becomes fussy.
5.11. I <i>am</i> [will be] good at soothing my baby when he/she continually cries.
5.12. I <i>am</i> [will be] good at soothing my baby when he/she becomes more restless.
5.13. I <i>am</i> [will be] good at understanding what my baby wants.
5.14. I <i>am</i> [will be] good at getting my baby's attention.
5.15. I <i>am</i> [will be] good at knowing what activities my baby does not enjoy.
5.16. I <i>am</i> [will be] good at keeping my baby occupied (busy).
5.17. I <i>am</i> [will be] good at feeding my baby.
5.18. I <i>am</i> [will be] good at changing my baby.
5.19. I <i>am</i> [will be] good at bathing my baby.
5.20. I <i>can</i> [will be able to] show affection to my baby.

Note: The rest of the items were asked only at follow-up.

6.0. In the past week, what's the longest period at one time that your baby cried for (when you were there)?

Postpartum Depression Screening Scale

Since my baby's birth:
6.1. I had trouble sleeping even when my baby was asleep.
6.2. I felt all alone.
6.3. I cried a lot for no real reason.
6.4. I could not concentrate on anything.
6.5. I felt guilty because I could not feel as much love for my baby as I should.
6.6. I felt like a failure as a mother.
6.7. I started thinking I would be better off dead.

Parent Educator Questions

My parent educator ...
7.1. Taught me new information about how to soothe a crying baby.
7.2. Used language I could always understand.
7.3. Was sensitive to my cultural background.
7.4. Understood how families do things in my community.
7.5. Was respectful of my values and beliefs.
7.6. If I could not calm my baby, I would seek help.

8.1. Can you tell me about your Parent Educator? For example, did you feel that she had a connection with you; that she cared about you; that she believed in your abilities as a parent?

8.2. Was the training helpful? What was the most important thing you learned? Do you think when it is done in the future, it should be changed in any way?

8.3. What do [would] you do when your baby starts crying? What if it won't stop?

8.4. After you had the training, did you show what you learned to others who might care for your baby? Did you have anyone else who cares for your baby look at the materials?

Appendix C: Parent Responses to Open-Ended Questions -- Percentages

1. *Can you tell me about your Parent Educator? Did you feel that she had a connection with you, cared about you, believed in your abilities as a parent?*

HBB:

- 80% of comments very positive.
Examples “She definitely believed in me and was very helpful. Very supportive and helpful;” “She was excellent. Open and receptive.”
- 15% somewhat positive/mixed. Example: “Yes, from what I remember.”
- 5% negative. Example: “They were really distant and couldn’t be bothered to help or answer questions.”

PC:

- 78% of comments very positive.
Examples “She was friendly and educated. She loves what she does and was very nice;” “We had a close relationship. When she taught me, she elaborated on the answers and that helped me to learn.”
- 13% somewhat positive/mixed. Example: “She was great with both me & my daughter, but I don’t think I learned anything I didn’t already know.”
- 8% negative. Example: “Not at all. She was very passive – we just watched the video and demonstrated really quickly.”

2. *Was the training helpful? What the most important thing you learned? Should it be changed in any way?*

HBB:

- 83% of comments very positive.
Examples: “The training was great. Liked the part with the music – that’s what used with other kids;” “Yes it was helpful. Most importantly I learned how to wrap them and what noises to do.”
- 15% somewhat positive/mixed. Example: “Lack of space was the only issue. Training should be offered as a group.”
- 2.5% negative. Example: “Not really helpful. Most important thing I learned was to place baby on side.”

PC:

- 83% of comments very positive.
Examples: “Extremely helpful. Mostly how to interact and how not to be so nervous;” “Yes, helpful. Most important was how to not get scared when my baby cries a lot.”
- 13% somewhat positive/mixed. Example: “No. I was reminded that it’s okay to walk away. No, it shouldn’t be changed in any way.”
- 4% negative. Example: “No, it wasn’t – I already knew everything she was talking about.”

3. *What would (do) you do when your baby starts crying? What if it won't stop?*

HBB:

- 40% of responses included would give comfort and/or attention, including soothing, rocking, playing, holding. Often mentioned one or more of the 5 S's in particular.
- 40% of responses indicated would check on basic needs, e.g. feed, change
- 38% indicated would seek help, from other caretaker or medical intervention

PC:

- 48% of responses included would give comfort and/or attention, including soothing, rocking, playing, holding
- 33.3% of responses indicated would check on basic needs, e.g. feed, change
- 19% indicated would seek help, from other caretaker or medical intervention. Often indicated would walk away if needed to.

4. *After the training, did you show what you learned to others who might care for your baby? Did you have anyone else look at the materials?*

HBB: 75% Yes
25% No

(Difference non-significant.)

PC: 65% Yes
35% No

Table 1. Recruitment by site and condition

Happiest Baby on the Block			
Agency	Program	Staff	Parent
DCF	LISA Inc., SAIL	1	0
	CHAP	1	0
	St. Agnes	2	1
	Wheeler Clinic-PEAS	1	0
	<i>Total DCF</i>	<i>5</i>	<i>1</i>
DMHAS	Coventry House	2	5
	Crossroads-Amethyst	2	10
	Connection-Mother's Retreat	2	7
	Connection-Hallie House	2	7
	<i>Total DMHAS</i>	<i>8</i>	<i>29</i>
DPH	Community Health Services	3	4
	Fairhaven Comm Hlth Svcs	2	3
	Bridgeport WIC	2	0
	Stamford WIC	3	4
	<i>Total DPH</i>	<i>10</i>	<i>11</i>
DOC	York CI Prenatal Program	3	9
	<i>Total DOC</i>	<i>3</i>	<i>9</i>
	<i>Total HBB</i>	<i>26</i>	<i>50</i>
Purple Crying			
Agency	Program	Staff	Parent
DCF	McCall Foundation	2	0
	FSA CHAP	1	0
	Mi Casa	4	4
	<i>Total DCF</i>	<i>7</i>	<i>4</i>
DMHAS	Morris Foundation	2	4
	Families in Recovery	3	5
	New Life Center-CPAS	3	6
	<i>Total DMHAS</i>	<i>8</i>	<i>15</i>
DPH	Stay Well Center-CHC	2	3
	East Hartford WIC	1	0
	Torrington WIC	2	4
	Optimus-Bridgeport CHC	1	0
	<i>Total DPH</i>	<i>6</i>	<i>7</i>
DOC	York CI Parenting Program	0	2
	<i>Total DOC</i>	<i>0</i>	<i>2</i>
	<i>Total PC</i>	<i>21</i>	<i>28</i>
	<i>Total for both conditions</i>	<i>47</i>	<i>78</i>

Table 2. Baseline Characteristics

Parent Educators			
	Purple Crying N=21 N(%) / Mean(SD)	Happiest Baby N=26 N(%) / Mean(SD)	Total N=47 N(%) / Mean(SD)
Female	20 (95.2%)	26 (100%)	46 (97.9%)
Race			
White	11 (52.4%)	9 (34.6%)	20 (42.6%)
Black	5 (23.8%)	7 (26.9%)	12 (25.5%)
Hispanic	3 (14.3%)	9 (34.6%)	12 (25.5%)
Other	2 (9.5%)	1 (3.8%)	3 (6.4%)
Years worked with pregnant or parenting women	8.43 (7.54)	9.92 (10.04)	9.26 (8.95)
Is a parent	14 (66.7)	18 (69.2%)	32 (68.1%)
Parents			
	Purple Crying N=28 N(%) / Mean(SD)	Happiest Baby N=50 N(%) / Mean(SD)	Total N=78 N(%) / Mean(SD)
Female	28 (100%)	49 (98%)	77 (99%)
Age	26.84 (7.83)	26.88 (6.61)	26.86 (7.02) 16.06-43.87
Race			
White	13 (46.4%)	27 (54%)	40 (51.3%)
Black	5 (17.9%)	6 (12%)	11 (14.1%)
Hispanic	8 (28.6%)	14 (28%)	22 (28.2%)
Other	2 (7.1%)	3 (6%)	5 (6.4%)
Education (in years)	11.0 (1.59)	11.28 (1.99)	11.18 (1.85)
Graduated HS or GED	14 (50%)	22 (44%)	36 (46.2%)
Currently expecting a baby	9 (32.1%)	17 (34%)	26 (33.3%)
Month of pregnancy	6.78 (1.99)	5.59 (2.15)	6 (2.14)
Number of children	1.54 (1.17)	1.50 (1.18)	1.51 (1.17)
Age	4.27 (4.37)	3.02 (3.73)	3.46 (3.98)
Under 6 months	10 (35.7%)	19 (38%)	29 (37.2%)

Note: there were no significant differences between the groups in baseline characteristics.

Table 3: Pre-Post and Between Group Differences for Parent Educators

Parent Educators					
	Purple Crying	Happiest Baby	Total	Group Difference	Time Difference
	N Baseline = 21 Followup = 19 Mean(Std. Dev)	N Baseline = 26 Followup = 23 Mean(Std. Dev)	N Baseline = 47 Followup = 42 Mean(Std. Dev)		
Positive Expectancies of Clients					
Baseline	3.58 (0.37)	3.86 (0.49)	3.74 (0.46)	<i>Yes, p=.035</i>	NA
Follow-up	3.95 (0.46)	4.08 (0.47)	4.02 (0.46)	No	<i>Yes, p=.001</i>
Satisfaction with Training (3-month only)	4.21 (0.86)	4.74 (0.45)	4.50 (0.71)	<i>Yes, p=.014</i>	NA
Satisfaction with Intervention (3-month only)	4.00 (0.77)	4.61 (0.49)	4.34 (0.69)	<i>Yes, p=.004</i>	NA

Table 4: Pre-Post and Between Group Differences for Parents

Parents					
	Purple Crying	Happiest Baby	Total	Group Difference	Time Difference
	N Baseline = 28 Followup = 24 Mean(Std. Dev)	N Baseline = 50 Followup = 47 Mean(Std. Dev)	N Baseline = 78 Followup = 71 Mean(Std. Dev)		
Self-Efficacy in Childcare					
Baseline	4.32 (0.45)	4.43 (0.39)	4.39 (0.41)	No	NA
Follow-up	4.34 (0.44)	4.49 (.041)	4.44 (.042)	No	No
Baby Soothing Knowledge					
Baseline	4.03 (0.53)	4.01 (0.52)	4.02 (0.52)	No	NA
Follow-up	4.13 (0.49)	4.42 (0.41)	4.32 (0.45)	Yes, $p=.01$	Yes, $p=.000$
Crying Knowledge					
Baseline	3.26 (0.48)	3.12 (0.49)	3.17 (0.49)	No	NA
Follow-up	3.44 (0.52)	3.29 (0.42)	3.34 (0.46)	No	Yes, $p=.000$
Maternal Parenting Self-Efficacy					
Baseline	4.44 (0.46)	4.42 (0.40)	4.43 (0.42)	No	NA
Follow-up	4.38 (0.45)	4.47 (0.41)	4.44 (0.42)	No	No
Satisfaction with PE (3-month only)	4.13 (0.51)	4.35 (0.48)	4.28 (0.50)	No	NA
Post-partum depression (3-month only & only if baby < 6 months)	N=9 2.08 (0.19)	N=15 2.20 (0.86)	N=24 2.15 (0.68)	No	NA
Length of crying in hours (3-month only & only if baby < 6 months)	N=9 0.09 (.30)	N=15 0.18 (.54)	N=24 0.15 (.47)	No	NA