Online Training for Resource Parents of Substance-Exposed Children

Caesar Pacifici, Ph.D.

Phase I Final Progress Report
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Northwest Media, Inc.
326 West 12th Avenue
Eugene, OR 97401

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A. General Scientific and Technological Aims

The aim in Phase I was to develop the first in a series of seven online interactive multimedia (IMM) training courses for resource parents on understanding and parenting substance-exposed infants and children. The series is an adaptation of the TIES for Adoption program (Training, Intervention, Education, and Services), a leading intervention program developed at the University of California, Los Angeles (UCLA) that prepares and supports resource families with infants and children exposed to parental substance abuse. In Phase I we developed and evaluated the first unit in the proposed series on parenting strategies for substance-exposed (SE) infants. The course focused on helping foster, adoptive, and kinship parents better understand how infants are affected by substances – developmentally, medically, and behaviorally – and how parents can more effectively care for these infants. The course format was consistent with the state-of-the-art training courses used on FosterParentCollege.com, which blend audio/video multimedia photo montage, in-stream "talking head" video, drag-and-drop exercises with instant feedback, and printable handouts.

B. Phase I Research Activities

Instructional Content

Part 1 of the program provides in-depth background about substance-exposed infants. The course begins with a brief video scenario showing a foster mother who gets the call that an infant exposed to substance abuse is about to be released into her care. The foster mother and two specialists – a developmental behavioral pediatrician and one of the founders of the TIES program – are the hosts for the course. They provide background information about the TIES program and a quick overview of relevant definitions and issues. They then introduce the topic of myths and misinformation commonly held about substance-exposed infants. Viewers are presented with a number of true-false statements and are asked to identify whether each one is myth or fact. When they click on an answer they are given immediate feedback. The next section outlines risks and protective factors for the SE child's development and goes into detail regarding the effects of alcohol, nicotine, and a variety of illegal drugs. In the next section, five key medical risks to infants are reviewed: prematurity, gastrointestinal issues, sleep problems, infectious diseases, and sudden infant death syndrome. Finally, viewers are presented with the stories of three resource parents. Each story is followed by a set of interactive true-false questions that test viewer knowledge of risk factors. When viewers select an answer they receive immediate feedback.

Part 2 presents an array of essential parenting skills and strategies. The first section deals with parenting knowledge, strategies, and cues for SE infants in typical and dysregulated behavioral states. The next segment presents brief videos explaining and modeling key parenting skills for SE infants: face-to-face interaction, self-calming, giving notice, carrying and vertical rocking, infant massage, and swaddling. In the following section videos briefly explain and model feeding skills for irritable and lethargic babies. Next the three previously presented stories are revisited. This time, viewers are presented with true-false questions about the use of parenting strategies with SE infants. Viewers receive immediate feedback on their answers. That is followed by a section describing the variety of services and professionals and specialists – including the resource parent – that comprise the child's care team. The course then explores the relationship between foster and birth parents and developing appropriate expectations. The program closes with concluding remarks from each of the program's hosts.

In most of the segments throughout the program, viewers are offered a printable handout with review and supplemental information.

Preliminary Assessments

Pilot Studies of Knowledge Measure for Phase I

Two consecutive pilot studies were conducted to assess the face validity of the knowledge questionnaire developed for the feasibility study. In the first study, six resource parents were recruited through the Foster and Adoptive Parent Association of Lane County (Oregon). The group consisted of 5 females and 1 male, 25-42 years old; 2 were Hispanic; 4 were White and 2 were more than one race. All had at least some college, and the modal family income category was $50,000-$59,999 per year. Three had previously had some training in caring for SE infants. Each participant was asked to independently complete the knowledge questionnaire and

to also provide comments about items that were not clear. The initial version of the questionnaire consisted of 40 multiple-choice and true-false questions covering the instructional content across the entire module. Based on participant responses, 17 items were dropped because they were deemed too easy – that is, either all or all but one of the participants answered them correctly. Of the dropped items, 13 were rewritten in an attempt to increase their level of difficulty. Several of the original and dropped items were reworded based on feedback from participants, to eliminate overly technical terms or to clarify wording. The second version, therefore, contained 36 items (23 original and 13 rewritten items).

We then recruited a second group of resource parents to complete the revised version of the knowledge questionnaire. Parents were recruited through FosterParentCollege.com, an online training venue for resource parents developed by Northwest Media, Inc. Announcements were sent to subscribers who had previously taken courses on the site. Nine participants completed and returned questionnaires via email. The group consisted of 8 females and 1 male; the mean age was 46 years; there were no Hispanics; 7 were White and 2 Black; all had at least some college; the modal annual income category was above $70,000; and none had previously taken a training course about substance-exposed infants. Of the 36 items, 9 were deemed too easy and dropped, again, because all or all but one participant answered them correctly. The final version of the questionnaire, therefore, contained 27 items. Parents in both pilot studies received $25 for their participation.

Preliminary Feedback on the Training Content

We placed an ad in a foster parent newsletter asking for the names of foster parents who were experienced in caring for substance-exposed newborns. We spoke with five respondents by phone. Based on the number of years experience and the number of infants that they had cared for, two were asked to review a preliminary version of the script for the course. One foster parent was a registered nurse and had cared for 95 substance-exposed infants over the course of two decades. The second foster parent was a trainer on Advanced Principles for Caring for the Medically Fragile Infant for the Foster and Adoptive Parent Association of Lane County. Both foster parents reviewed the script and the handouts. In addition to their open feedback, they were asked the following questions:

- What has been the most challenging problem you have faced caring for SE infants?
- What supports have been the most helpful?
- What types of training have you received? Where? Through which agency?
- Are there any supports you have wanted/needed and not received?
- In retrospect, what information/training would you have liked to have had up front that you didn't get?
- What advice would you have for new foster parents?
- What lessons have you learned through the experience of parenting SE infants?

Changes and additions were made to the script based on input from the two foster parents. Each of them received $100 for her assistance with the project.

Project Evaluation

The purpose of the study in Phase I was to evaluate the effectiveness of an online training workshop for foster, kinship, and adoptive parents on understanding and managing substance-exposed (SE) infants. We wanted to assess whether the online training was effective in increasing parents' knowledge, attitudes, openness, and preparedness related to parenting SE infants, as well as their satisfaction with the training program.

Participants

Resource parents were recruited through FosterParentCollege.com (FPC), Northwest Media's training venue for foster, adoptive, and kinship parents. We sent email announcements about the study directly to 5,000 parents who had previously registered and taken parent training courses through FPC. To be eligible to participate, prospective subjects had to meet several criteria. They had to have access to a high-speed Internet connection; be a foster, kinship, or adoptive parent; and they could not have previously cared for an infant prenatally exposed to substance abuse. A total of 307 parents who were eligible responded. One hundred fifty were randomly chosen, and 50 were then randomly assigned to each of the three conditions (treatment, comparison, or control). Thirty-nine of those never started the study, and another 7 completed the pretest but never completed the posttest and were dropped from the study. At that point, 104 participants had completed the study: 33 in the treatment group, 33 in the comparison group, and 38 in the control group. Since we wanted at least 40 subjects per group we admitted another 30 participants for a second wave of the study, 10

randomly assigned per group. Seven of those never started the study, but all who did, completed it. In total, 43 subjects completed the treatment condition (33 in wave 1and 10 in wave 2), 40 the comparison condition (33 + 7), and 44 the control condition (38 + 6). Of the 127 participants who completed the study, 68.5% were female. Sample participants ranged in age from 25-64 years, with a mean age of about 45. Ethnically, about 4% were Hispanic. Racially, almost 80% were White, 12% Black, about 1% American Indian, 1% Asian, 4% more than one race, and 3% race unknown. In terms of education, 33% had completed some college, 12% had completed an associate's degree, 30% a bachelor's degree, and almost 13% a master's degree. The annual family income of about 27% was under $40,000; another 27% had incomes of $40,000 - $59,999; and the remaining 46% had incomes of $60,000 or more. About 12% of the sample had previously participated in some training on caring for substance-exposed infants. (See Appendix B, Tables 1 and 2 for more detail regarding sample demographics.) Participation in the study was voluntary. Participants received $40 and a certificate for 4 training hours from FPC after completing the study.

Procedure

After receiving the announcement about the study, interested parents received an email describing the eligibility criteria and containing the consent form. Those who were eligible were asked to complete the consent form and reply by email to a dedicated email address for the study. When we received the consent form, they were given login information to access the course (user name and password), as well as the start and end date of their participation. Participants received follow-up emails reminding them about the start date, their login information, the URL link for their workshop on FPC, how to access the workshop, and contact information for Northwest Media for technical support.

To control for extraneous sources of variability as well as threats to internal validity, we randomly assigned participants to the treatment, comparison, or control condition. Those in the treatment group viewed an online, interactive multimedia version of the module developed in Phase I, titled *Substance-Exposed Infants.* Those in the comparison group viewed a text-only version of the same module online. Those in the control condition did not view either version of the training. At the announced start date of the study, participants in all three conditions logged on to the study site on FosterParentCollege.com and completed an online pretest assessment battery (see below for a listing and description of the measures). After completing the pretest assessment, participants in the treatment and comparison conditions could access their respective version of the course. Once they started the course they no longer had access to the pretest. Participants had to view the instructional segments and interactive exercises in sequence. They could access only segments that they were currently viewing or had already viewed.

After completing the last segment in the course, participants in the treatment and comparison conditions were prompted to complete the online posttest assessment battery, which included the same outcome questionnaires as the pretest assessment battery, as well as a *User Satisfaction Questionnaire* and a *System Usability Scale.* Subjects in the control condition were reminded by email to login and complete the same post-assessment battery, but without the satisfaction or usability questionnaires. After subjects in the comparison and control conditions completed the posttest assessment they were given the option of viewing the interactive multimedia version of the course.

Measures

(All study measures were online self-report measures; copies are included in Appendix A.)

Background Information. A brief background information questionnaire was developed by project staff and used to obtain information on the participant's gender, race/ethnicity, age, education, income, and previous participation in other trainings on caring for substance-exposed infants.

Substance-Exposed Infants Parent Knowledge Questionnaire. A 27-item knowledge questionnaire developed in-house that assessed participants' knowledge of content from the module developed in Phase I. Items were true-false and multiple-choice questions that covered the effects of prenatal substance exposure on infants and young children, developmental and temperament considerations, medical issues, symptoms, and parenting strategies.

Openness to Fostering: A single item developed by TIES to assess parents' openness to fostering or adopting a child exposed to drug abuse. Parents rated, on a scale of 1 (*not at all willing*) to 6 (*definitely willing*), how willing they would be to foster or adopt a child exposed to parental drug abuse. Based on feedback from the first focus group, we dropped "Adopting" from the measure's name and the item's wording. We also changed "child" to "infant." So we adapted the original TIES measure, and it became: TIES Openness to

Fostering Scale, with the following item: "Check the number that indicates how willing you would be to foster an infant exposed to parental drug abuse."

TIES Attitude Questionnaire: Originally a 21-item version of this questionnaire was created by TIES to assess attitude changes directly related to the program's educational activities. The measure is organized into three subscales that produced the following reliability coefficients in a previous large-scale study: attitudes toward children with prenatal substance exposure (alpha = .75), empathy toward drug abusers (alpha = .63), and negative attitudes toward drug abuse and pregnant drug users (alpha = .77). For the current study, eight items were dropped a priori because they related to content not covered in this first module. Ten of the remaining items were used to create the two revised scales used in this study's analyses: Attitudes toward Children with Prenatal Substance Exposure (five items) and Attitudes toward Drug Abuse and Pregnant Drug Users (five items). The third scale, Empathy toward Drug Abusers, was dropped because only one of the five items in the original scale was left. Scoring of the two scales that were kept was reversed so that higher scores indicate more positive attitudes.

TIES Preparedness Survey: A 15-item version of this questionnaire was created by TIES to assess how prepared prospective parents felt about fostering/adopting a substance-exposed infant or child. For the current study, four items were dropped a priori because they related to content not covered in the first module.

User Satisfaction. This questionnaire, developed in-house, elicited feedback from the intervention and comparison groups on specific aspects of the instructional approach, the training content, and the social validity of the intervention.

System Usability Scale (SUS). The *SUS* is a 10-item questionnaire designed to assess the usability of computer systems and/or Web sites (e.g., Tullis & Stetson, 2004). It included questions such as, "I think I would use this site frequently" and "I found this Web site unnecessarily complex." Treatment and comparison group participants rated their responses on a scale from 0 (*Strongly Disagree*) to 5 (*Strongly Agree*). Responses were summed for an overall usability score. The *SUS* is a reliable and low-cost usability measure that has been found to correlate well with other such measures (Brooke, n.d.).

Hypotheses

The following hypotheses were tested:

- We anticipate that the treatment group will increase significantly more than the comparison and control groups in knowledge, attitudes, preparedness, and openness to fostering, from pretest to posttest.
- We anticipate that the treatment group will have higher usability and user satisfaction scores than the comparison group.

Preliminary Analyses

Means and standard deviations for all measures can be found in Appendix B, Tables 3 - 5; Table 6 contains correlations between measures, combining pre- and posttests. Independent samples *t* tests and/or chi-square analyses on demographic information from the Background Information questionnaire were conducted to detect any differences between the intervention and control groups. No significant differences were found between the groups.

Reliability of Measures

The internal consistency of the TIES Preparedness Survey, revised Attitude Scales, System Usability Scale, and User Satisfaction Questionnaire was examined using Cronbach's Coefficient Alpha. High internal consistency was found for the Preparedness Survey (α = .939), Attitudes toward Children with Prenatal Substance Exposure Scale (α =.763), System Usability Scale (α = .864), and User Satisfaction Questionnaire (α = .839). Adequate reliability was obtained for the Attitudes toward Drug Abuse and Pregnant Drug Users Scale (α = .651).

Analysis

Our study used a pretest/posttest design to test whether the treatment group increased in knowledge, attitudes, preparedness, and openness to fostering significantly more than the comparison and control groups. Because we also used random assignment to groups, this experimental design was able to adequately control for all main threats to internal validity (Shadish, Cook, & Campbell, 2002). The hypothesis was tested using five Linear Mixed Models with Repeated Measures, one for each outcome measure (Substance-Exposed Infants Parent Knowledge, TIES Preparedness, Attitudes toward Children with Prenatal Substance Exposure Scale,

Attitudes toward Drug Abuse and Pregnant Drug Users Scale, and Openness to Fostering), with a between-subject variable for group (treatment, comparison, control), a within-subject variable for time (pretest, posttest), and a time x group interaction. The interaction tested whether the improvements across time were different between any of the three treatment groups, and two post-hoc contrasts were used to test for specific differences in slopes for time between the treatment group and control group and between the treatment group and comparison group.

Assumptions of the model include normally distributed residuals and homogeneity of variance between treatment groups at each time point. Normality was tested by visual inspection of the histogram of the residuals along with assessing skewness and kurtosis values of residuals from each model. Levene's test was used to assess homogeneity of variance. All of the outcomes had approximately normally distributed residuals except for Openness to Fostering, which is a single-item questionnaire. A majority of the participants answered a 5 or 6 on the 6-point scale, causing a skewed distribution (skewness = -1.6). Because our models are robust to data that are modestly skewed (-2 to 2) where sample sizes are large (at least 30 in each group), the *F*-tests in our analysis are still trustworthy.

Levene's test was insignificant for four of the five outcomes but did show a significant difference in the variability of the Preparedness scale between the three groups at posttest $F(2, 124) = 6.65$, $p = .002$. Participants in the control group (who gave responses all across the scale) showed twice as much variability in their responses as did those in the treatment group (who gave mostly higher ratings) at posttest. Because the heteroskedasticity may affect the standard errors and *p*-values in the results, we fit the model for that outcome with robust standard errors (the "empirical" option in SAS Proc Mixed) to prevent inflating the type-1 error.

An alpha level of 0.05 was used to determine significance in all statistical tests.

Results

Results for Substance-Exposed Infants Parent Knowledge indicate a significant interaction between time and group ($F(2, 124) = 25.34$, $p < .001$), where the treatment group's knowledge improved significantly more than both the control group's ($t(124) = 7.118$, $p < .001$) and the comparison group's ($t(124) = 3.448$, $p = .001$).

Results for TIES Preparedness also showed a significant interaction between group and time ($F(2, 124) = 42.11$, $p < .001$), where feelings about fostering/adopting a substance-exposed infant or child improved significantly more in the treatment group than in the control group ($t(124) = 8.37$, $p < .001$), but not significantly more than in the comparison group ($t(124) = 1.54$, $p = .125$).

For the two subscales created out of the TIES Attitude Questionnaire, there was a significant group by time interaction for the Attitudes toward Children with Prenatal Substance Exposure Scale ($F(2, 123.7) = 4.762$, $p = .010$), where attitudes improved significantly more in the treatment group than in both the control group ($t(123.3) = 2.649$, $p = .009$) and the comparison group ($t(123.3) = 2.681$, $p = .008$). There was also a difference between groups in improvements on the Attitudes toward Drug Abuse and Pregnant Drug Users Scale ($F(2, 123.7) = 9.98$, $p < .001$), where attitudes improved significantly more in the treatment group than in the control group ($t(123.9) = 4.406$, $p < .001$) but not significantly more than in the comparison group ($t(123.4) = 1.518$, $p = .132$).

There was also a significant time by group interaction for Openness to Fostering ($F(2, 124) = 5.265$, $p = .006$). Only the treatment group showed higher average responses on the item at posttest than at pretest. The treatment group's improvement was again significantly greater than the control group's ($t(124) = 3.243$, $p = .002$), but not greater than the comparison group's ($t(124) = 1.503$, $p = .135$).

User Satisfaction

Two between-subjects analysis of variance (ANOVA) tests were run in order to analyze the User Satisfaction Questionnaire and System Usability Scale. Group served as the independent variable with two levels: treatment and comparison.

There was no significant effect of group on the User Satisfaction Questionnaire, $F(1, 81) = 1.15$, $p = .286$ or System Usability Scale, $F(1, 81) = .058$, $p = .811$.

Discussion

The effort in Phase I resulted in an attractive and professionally produced interactive multimedia training course for resource parents on *Substance-Exposed Infants*. The module was the first unit we adapted from the TIES Parent Training program, a reputable program developed at UCLA that enjoys widespread use.

Producing the media for the content, exercises, and handouts involved an extensive process of input and review among project team members, including the creators of the program at UCLA. All anticipated production milestones in Phase I were successfully achieved. The formal curriculum was designed, programmed, performance-tested, and launched on FosterParentCollege.com and also published on DVD. The content and look of the course were fully consistent with the quality of programs already available on FosterParentCollege.com. The program represented the first online version of a training program for resource parents on substance-exposed children. Consistent with the high quality standard of other programs on FosterParentCollege.com, the program included an array of visual montage, interactive exercises, and printable handouts to deliver state-of-the-art information to parents on resource parenting.

Results of the Phase I feasibility study generally supported the efficacy of the online IMM format for training. Parents who viewed the online interactive multimedia presentation made significantly greater gains in knowledge than parents in either control group – the print version and no instruction. Parents in the intervention group also showed significantly greater improvements in stereotyped Attitudes toward Children with Prenatal Substance Exposure than those in either of the other two groups. Differences were in the hypothesized direction, although not significant, for the other attitude scale — Attitudes toward Drug Abuse and Pregnant Drug Users. Similarly, parents in the media intervention group made significantly greater improvements in feeling prepared to parent a substance-exposed infant than those in the control group, but differences between the treatment and comparison groups did not reach significance. Finally, parents in the treatment group — but not the comparison group — showed significantly greater improvement than the control group in their openness to fostering a child affected by substance exposure. The findings on the one attitudes scale, on preparedness, and on openness to fostering, while still not completely differentiated from the comparison group, were meaningful nonetheless. These are core attitudes that showed change in Phase I, despite the fact that the program tested represents only a fraction of the overall intervention.

Parents gave both the IMM and print presentations very high satisfaction ratings. However, if in Phase II we use the same comparison condition, we would expect satisfaction ratings for the IMM version to remain high, whereas it will be much less likely that a print version of the entire curriculum could sustain viewers' patience and interest.

In summary, we successfully adapted the first unit in the TIES training as an online interactive multimedia program. The program was replete with interactive multimedia instruction, case scenarios, exercises, and printable handouts. Parents using the online IMM version improved their knowledge, preparedness, openness to fostering, and attitudes about drug abuse and abusers. Overall satisfaction with the program was also high. Outcomes will be more fully assessed in Phase II when we deliver the full training program.

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Appendix A – Phase I Measures

Foster parent College
Substance-Exposed Infants

Background Information

Fill in the answer or answers for the following questions about yourself.

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1. Gender:
   ☐ Female ☐ Male

2. Age: _____ years

3. Ethnic background: *(check all that apply)*
   ☐ Hispanic or Latino ☐ Not Hispanic or Latino ☐ Unknown

4. Racial background: *(check all that apply)*
   ☐ White
   ☐ Black or African American
   ☐ American Indian or Alaska Native
   ☐ Native Hawaiian or Other Pacific Islander
   ☐ Asian
   ☐ Other: _____
   ☐ Unknown

5. Highest level of school completed:
   ☐ Junior High
   ☐ High School / GED
   ☐ Some college
   ☐ Associate Arts (AA) degree
   ☐ Bachelor's (BA/BS) degree
   ☐ Master's (MA/MS) degree
   ☐ Doctorate (PhD)

6. What is your family's annual personal income:

   ☐ Under $10,000 ☐ $10,000- 19,999 ☐ $20,000-29,999 ☐ $30,000-39,999

   ☐ $40,000-49,999 ☐ $50,000-59,999 ☐ $60,000-69,999 ☐ $70,000 or over

7. Have you participated in other trainings on caring for substance-exposed infants before this one?
   ☐ Yes ☐ No

Foster Parent College
Substance-Exposed Infants

Parent Knowledge

This questionnaire contains 27 multiple choice and true-or-false questions.

1. Resource parents of substance-exposed infants most need:
   a. Information on typical infant development at different ages.
   b. Training in basic nursing skills.
   c. Information about illnesses of the birth mother.
   d. Both A and C.

2. Low birth weight infants are also premature.
   True.
   False.

3. Infants born to IV heroin-addicted mothers are at risk for which of the following?
   a. Lethargy.
   b. Hepatitis.
   c. Constipation.
   d. Mental retardation.

4. The estimated number of newborn infants in the U.S. exposed to illegal substances every year is:
   a. 400,000.
   b. 100,000.
   c. 40,000.
   d. 10,000.

5. The infant's withdrawal from opiates will be easier if the mother was also taking methadone.
   True.
   False.

6. With babies who were exposed to heroin or methadone, which of the following is not a recommended strategy?
   a. Allow her to set her own schedule.
   b. Avoid over-stimulation.
   c. Pause before picking her up.
   d. Help her suck her fingers for calming.

7. Which symptom(s) are associated with Fetal Alcohol Syndrome?
   a. Large heads.
   b. Hyperactivity.
   c. Severe learning problems.
   d. All of the above.

8. To help a substance-exposed infant stay calm in face-to-face interactions, the mother should place the infant on his back and lean over him, with her face close to his.
   True.
   False.

9. Side-lying is the safest sleeping position for babies in order to prevent Sudden Infant Death Syndrome (SIDS).
   True.
   False.

10. Tobacco is generally NOT recognized as a “substance” that can be abused by pregnant mothers.
   True.
   False.

11. Which of the following statements is accurate?
   a. Most babies born to crack-addicted mothers grow up to be unruly toddlers and preschoolers.
   b. Most substance-exposed newborns are brain-damaged.
   c. It is difficult to tell the effects of one specific drug on a child’s development and behavior.
   d. It is usually disadvantaged women who abuse drugs while pregnant.

12. In general, the ongoing development of infants exposed to opiates during pregnancy is most influenced by:
   a. The amount of drugs used by the mother.
   b. A stable and nurturing home environment.
   c. Problems with feeding and nutrition.
   d. The severity of the withdrawal.

13. Risk factors for Sudden Infant Death Syndrome (SIDS) include prenatal cigarette smoking and exposure to alcohol.
   True.
   False.

14. The percentage of women that drink alcohol while pregnant is about:
   a. Less than 3%.
   b. 10%.
   c. 23%.
   d. 43%.

15. It can be difficult to know when substance-exposed infants are hungry because:
   a. They have a difficult time regulating their behavioral states.
   b. They want to sleep all the time and do not need as much nourishment.
   c. A and B.
   d. None of the above.

16. Birth mothers agree to enter substance abuse programs because:
   a. They fear going to jail.
   b. They want to regain custody of their babies.
   c. Hospitals require it before discharge.
   d. It is a requirement for working with the infant’s foster parents.

17. Infants born to cocaine-addicted mothers are at risk of developing hyperactivity as they grow older.
   True.
   False.

18. The best way to calm a fussy baby is by gently supporting the head and rocking him side-to-side.
   True.
   False.

19. Irritable, dysregulated infants may need:
    a. A nipple with a larger hole to reduce feeding time.
    b. Special formula to reduce the effects of GERD.
    c. A nipple with a smaller hole to slow the flow of formula.
    d. To be fed whenever they appear hungry.

20. Babies exposed prenatally to cocaine are likely to show which symptom(s)?
    a. Neonatal Abstinence Syndrome.
    b. Lower IQ.
    c. Lethargy.
    d. None of the above.

21. Substance abuse occurs in the majority of parents whose children are placed in care.
    True.
    False.

22. Infants prenatally exposed to methamphetamines are at risk for:
    a. Unusual facial features.
    b. Mental retardation.
    c. Sleep problems.
    d. All of the above.

23. Rubbing a baby's feet is appropriate for:
    a. Calming a dysregulated infant.
    b. Stimulating a lethargic infant for feeding.
    c. Stimulating a dysregulated baby during play.
    d. Calming a lethargic baby when excited.

24. Smoking tobacco is associated with which health risk(s)?
    a. Mental retardation.
    b. Prematurity.
    c. Dysregulation.
    d. A and B.

25. Women continue to use drugs during pregnancy because:
    a. Addiction is a chronic illness.
    b. Detoxing during pregnancy is dangerous for the baby.
    c. Many drugs "treat" the unpleasant symptoms of pregnancy.
    d. Hormonal changes during pregnancy increase drug cravings.

26. Substance-abusing mothers can transmit which of the following diseases to their babies?
    a. Tuberculosis.
    b. Syphilis.
    c. Neither A nor B.
    d. Both A and B.

27. The health and developmental problems of infants who have been prenatally exposed to substances are caused only by the particular drug(s) the mother used.
    True.
    False.

Foster Parent College
Substance-Exposed Infants

TIES Openness to Fostering Scale

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	not at all willing					definitely willing
Check the number that indicates how willing you would be to foster an infant exposed to parental drug abuse.	1	2	3	4	5	6

Foster Parent College
Substance-Exposed Infants

Attitude Questionnaire*

*Adapted with permission from the *TIES Attitude Questionnaire*, TIES for Adoption/UCLA.

For each statement, circle the number that indicates how much you agree or disagree:

	Strongly Disagree						Strongly Agree
1. Pregnant women who use substances would stop if they could.	1	2	3	4	5	6	7
2. Infants who were prenatally exposed to drugs will have lifelong problems.	1	2	3	4	5	6	7
3. A woman who uses drugs during her pregnancy does not care about her child	1	2	3	4	5	6	7
4. Children with prenatal substance exposure may need extra help controlling themselves.	1	2	3	4	5	6	7
5. Drug addiction is a vice, not an illness.	1	2	3	4	5	6	7
6. Children with prenatal drug exposure usually have problems with learning.	1	2	3	4	5	6	7
7. Drug addiction among pregnant women is a sign of sickness, not of weak character.	1	2	3	4	5	6	7
8. With help, children with prenatal substance exposure will function normally.	1	2	3	4	5	6	7
9. Society is too tolerant toward pregnant drug addicts.	1	2	3	4	5	6	7
10. Children with prenatal drug exposure have a lot of difficulty bonding with parents.	1	2	3	4	5	6	7
11. Women who use drugs while pregnant care only about themselves.	1	2	3	4	5	6	7
12. A woman who uses drugs during pregnancy does not deserve to keep the child.	1	2	3	4	5	6	7
13. Children with prenatal substance exposure may need extra help paying attention.	1	2	3	4	5	6	7

Foster Parent College
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TIES Preparedness Survey

For each question, check the number that indicates how well you think you currently can do each of the following:

How well can I…	**not at all**						**very well**
1. Describe my own feelings about women who use substances (alcohol and/or other drugs) during pregnancy.	1	2	3	4	5	6	7
2. Describe issues in predicting long-term outcomes for individual children with prenatal substance exposure.	1	2	3	4	5	6	7
3. Identify the important issues involved in adopting a child with prenatal substance exposure	1	2	3	4	5	6	7
4. List ways in which chemical dependency affects parenting.	1	2	3	4	5	6	7
5. Describe symptoms seen in infants with prenatal substance exposure.	1	2	3	4	5	6	7
6. List the effects on children of living with a substance-abusing caregiver.	1	2	3	4	5	6	7
7. List day-to-day caregiving strategies for infants with a history of prenatal substance exposure..	1	2	3	4	5	6	7
8. Assess the pros and cons of sharing information about children's prenatal substance exposure with other individuals and agencies.	1	2	3	4	5	6	7
9. Describe the causes of substance abuse.	1	2	3	4	5	6	7
10. Describe potential developmental difficulties for children with prenatal substance exposure.	1	2	3	4	5	6	7
11. List medical problems that have been seen in infants and children with prenatal substance exposure.	1	2	3	4	5	6	7

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Satisfaction Questionnaire

For each statement, circle the number that shows how much you agree or disagree:
1 means strongly disagree** and **5 means strongly agree.

Feedback about the course

	Strongly Disagree				Strongly Agree
1. The course helped me understand substance-exposed infants.	1	2	3	4	5
2. The course helped me understand how to parent substance-exposed infants.	1	2	3	4	5
3. I liked the narration and overall presentation of the material.	1	2	3	4	5
4. The stories of families were helpful	1	2	3	4	5
5. I would recommend this course to other foster parents.	1	2	3	4	5

Feedback about the Web site

6. I would like to receive more foster parent training on the Web.	1	2	3	4	5
7. I liked the way the course was organized into different segments.	1	2	3	4	5
8. The interactive exercises were helpful.	1	2	3	4	5
9. I found the supplemental printouts helpful.	1	2	3	4	5

Continue to next page

Satisfaction Questionnaire

10. How much time did you spend with the training?
    (Check one)

    ☐ Less than 1 hour ☐ About 1 hour ☐ About 2 hours ☐ More than 2 hours

11. What difficulties did you have using the Web site?
    (Write your comment)

    _____

    _____

    _____

    _____

12. Do you have any comments or suggestions to the producers about this project?
    (Write your comment)

    _____

    _____

    _____

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System Usability Scale

(Adapted from Brooke, 1996)

For each statement, check the number that indicates how much you agree or disagree:

	Strongly Disagree				Strongly Agree
1. I would like to use this Web site frequently.	1	2	3	4	5
2. I found the Web site unnecessarily complex.	1	2	3	4	5
3. The Web site was easy to use	1	2	3	4	5
4. I would need technical support to use this site	1	2	3	4	5
5. I found the various functions in this Web site were well integrated.	1	2	3	4	5
6. There was too much inconsistency in this Web site.	1	2	3	4	5
7. Most people would learn to use this Web site very quickly.	1	2	3	4	5
8. I found the Web site very cumbersome to use.	1	2	3	4	5
9. I felt very confident using the Web site.	1	2	3	4	5
10. You have to learn a lot about this Web site before you can use it effectively	1	2	3	4	5

Appendix B – Tables

Table 1

Sample Demographics - Part 1

	Control Group (*n* = 44)		Comparison Group (*n* = 40)		Treatment Group (*n* = 43)		Total Sample (*N* = 127)	
Item	%	*n*	%	*n*	%	*n*	%	*N*
Gender								
Female	68.2	30	67.5	27	69.8	30	68.5	87
Male	31.8	14	32.5	13	30.2	13	31.5	40
Ethnic background								
Hispanic or Latino	9.1	4	0.0	0	2.3	1	3.9	5
Not Hispanic or Latino	86.4	38	95.0	38	97.7	42	92.9	118
Unknown or not reported	4.5	2	5.0	2	0.0	0	3.1	4
Racial background								
White	79.5	35	77.5	31	81.4	35	79.5	101
Black or African American	9.1	4	15.0	6	11.6	5	11.8	15
American Indian or AK Native	0.0	0	2.5	1	0.0	0	0.8	1
Asian	0.0	0	2.5	1	0.0	0	0.8	1
More than one race	4.5	2	2.5	1	4.7	2	3.9	5
Unknown or not reported	6.8	3	0.0	0	2.3	1	3.1	4
Highest level of school completed								
High school/GED	15.9	7	15.0	6	4.7	2	11.8	15
Some college	27.3	12	25.0	10	46.5	20	33.1	42
Associate Arts (AA) degree	13.6	6	12.5	5	9.3	4	11.8	15
Bachelor's (BA/BS) degree	36.4	16	27.5	11	25.6	11	29.9	38
Master's (MA/MS) degree	6.8	3	17.5	7	14.0	6	12.6	16
Doctorate/PhD	0.0	0	2.5	1	0.0	0	0.8	1
Family's annual personal income								
$10,000 - $19,999	2.3	1	2.5	1	4.7	2	3.1	4
$20,000 - $29,999	9.1	4	7.5	3	11.6	5	9.4	12
$30,000 - $39,999	6.8	3	22.5	9	14.0	6	14.2	18
$40,000 - $49,999	20.5	9	15.0	6	14.0	6	16.5	21
$50,000 - $59,999	11.4	5	2.5	1	16.3	7	10.2	13
$60,000 - $69,999	15.9	7	15.0	6	9.3	4	13.4	17
$70,000 or over	34.1	15	35.0	14	30.2	13	33.1	42
Previously participated in other trainings on caring for substance-exposed infants?								
Yes	20.5	9	10.0	4	4.7	2	11.8	15
No	79.5	35	90.0	36	95.3	41	88.2	112

Note. No significant difference was found between the three groups on any of these variables.

Table 2

Sample Demographics - Part 2

	Control Group (*n* = 44)		Comparison Group (*n* = 40)		Treatment Group (*n* = 43)		Total Sample (*N* = 127)	
Item	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age in Years	43.48	8.86	46.48	9.17	45.72	8.33	45.18	8.81

Note. No significant difference was found between the three groups on this variable.

Table 3

Mean Performance on Attitude Scales and Parent Knowledge, by Group and Pre/Post Status

	Revised Scale: Attitudes toward Drug Abuse and Pregnant Drug Users			Revised Scale: Attitudes toward Children with Prenatal Substance Exposure			Parent Knowledge		
Group	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Intervention-Pre	*3.50	1.24	43	*1.70	0.88	43	*0.56	0.11	43
Intervention-Post	4.43	1.05	43	2.71	1.11	43	0.73	0.11	43
Comparison-Pre	3.70	1.02	40	1.77	1.22	40	0.57	0.11	40
Comparison-Post	4.29	0.92	40	2.11	0.87	40	0.65	0.13	40
Control-Pre	3.71	0.91	43	1.81	0.99	44	0.56	0.11	44
Control-Post	3.68	0.93	44	2.17	1.05	44	0.56	0.09	44

Note. Unless otherwise noted, unadjusted means are reported throughout the table.
* Differences between pretest and posttest are significant at $p < .05$.

Table 4

Mean Performance on Preparedness and Openness to Fostering, by Group and Pre/Post Status

	Preparedness Survey			Openness to Fostering Scale		
Group	*M*	*SD*	*n*	*M*	*SD*	*n*
Intervention-Pre	*4.08	1.20	43	*5.07	1.37	43
Intervention-Post	5.59	0.64	43	5.26	1.05	43
Comparison-Pre	4.22	1.40	40	5.25	1.19	40
Comparison-Post	5.32	0.93	40	5.18	1.15	40
Control-Pre	4.24	1.30	44	5.27	1.15	44
Control-Post	4.10	1.29	44	4.91	1.27	44

Note. Unless otherwise noted, unadjusted means are reported throughout the table.

* Differences between pretest and posttest are significant at $p < .05$.

Table 5

Mean Performance on Usability and Satisfaction Measures, by Group

	System Usability			User Satisfaction		
Group	*M*	*SD*	*n*	*M*	*SD*	*n*
Intervention-Post	4.54	0.52	43	4.56	0.44	43
Comparison-Post	4.57	0.44	40	4.45	0.52	40
Control-Post	—	—	—	—	—	—

Note. Unless otherwise noted, unadjusted means are reported throughout the table.

Table 6

Correlations Between All Measures, Pre- and Posttests Combined

	Parent Knowledge	Preparedness	Attitudes: Children with PSE	Attitudes: Drug Abuse/Pregnant Drug Users	System Usability	User Satisfaction
Open to Fostering	.154 (254)	.265 (254)	.040 (253)	-.028 (253)	.316 (166)	.127 (166)
Parent Knowledge		.281 (254)	.126 (253)	.265 (253)	.049 (166)	-.110 (166)
Preparedness			.074 (253)	.121 (253)	.269 (166)	-.162 (166)
Attitudes: Children with PSE				.228 (253)	.029 (166)	.117 (166)
Attitudes: Drug Abuse/Pregnant Drug Users					.149 (166)	.034 (166)
System Usability						.493 (166)