An Evaluation of the Effects of an Infant-Care Skills Training Program on Fathering Behaviors

G. Joseph Vrazo
Western Michigan University

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AN EVALUATION OF THE EFFECTS OF AN INFANT-CARE SKILLS TRAINING PROGRAM ON FATHERING BEHAVIORS

by

G. Joseph Vrazo

A Thesis
Submitted to the
Faculty of The Graduate College
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requirements for the
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Department of Psychology

Western Michigan University
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AN EVALUATION OF THE EFFECTS OF AN INFANT-CARE SKILLS
TRAINING PROGRAM ON FATHERING BEHAVIORS

G. Joseph Vrazo, M.A.
Western Michigan University, 1987

This study replicated the findings and expanded the assessment
procedures of a previous study that had established the effectiveness
of a multi-component infant-care skills training program for first-
time fathers. A multiple probe design was used in this study to
demonstrate that the training program produced criterion performance
of the infant-care skills by four experimental fathers; also, an
increase in the frequency of infant stimulation activities initiated
by these fathers was observed. A pre/post training evaluation of the
effects of the training program on the fathers' performance of play
and affectional behaviors and daily infant-care activities yielded
negative results. Four control fathers were assessed throughout the
study to evaluate the effects of time, and exposure to their infants
on the same dependent measures as the experimental fathers.
ACKNOWLEDGEMENTS

I would like to thank my loving and extremely tolerant wife, Nita, for her complete support and encouragement throughout all phases of this project.

Appreciation is extended to Ron Dachman for his conceptual input, practical advice, and friendship; to Lisa Largo for all of her assistance; and to my wonderful friends and co-workers at the Early Intervention Program for their support and patience.

Special thanks to Mark Gibbs, Peg Malnight, Helen Arend, and the birthing class instructors (especially Lily Brown) at Bronson Methodist Hospital; your support, assistance, and resources made this project possible.

G. Joseph Vrazo
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INTRODUCTION

There is general agreement that the quality of care in early life can have a significant impact on physical and social development (Lamb, 1976; Parke, Hymel, Power, & Tinsley, 1980). The primary caretakers for infants have traditionally been mothers, however, recent sociological and "cultural trends," and medical practices have combined to produce changes in the perceived and actual role of the father in caring for his infant (Parke et al., 1980, p. 175).

Dachman, Alessi, Vrazo, Fuqua, and Kerr (1986) summarized these "trends" as follows:

An increasing number of mothers who are employed outside the home, a greater percentage of legal decisions awarding child custody to fathers, enhanced father participation in labor and delivery, earlier postpartum hospital discharges, an increase in the percentage of Caesarean-delivered infants, a rise in the survival rate of low-birth-weight pre-term infants, and the diminished role of the extended family as a major support mechanism. (p. 221)

In light of these trends a number of studies have suggested the need for some form of systematic, even formal, intervention to assist fathers in becoming the most effective and competent parents they can be (e.g., Belsky, 1985; Crummette, Thompson, & Beale, 1985; Dachman et al., 1986; Giefer & Nelson, 1981; Lamb, 1976; Parke et al., 1980).

Crummette et al. (1985), citing Frodi, provide a clear and convincing rationale for systematically facilitating fathers' parenting skills. They stated: "A father's sensitivity to his infant was not a precursor, but a consequence of his experience with infants. She
[Frodi] concluded that fathers need direct exposure and experience with infants if they are to develop necessary nurturant behaviors" (p. 90).

In spite of the growing interest in the father's role in parenting, research has been meager and plagued with a variety of methodological problems. For example, Crummette et al., (1985) designed a program to improve fathers' parenting skills through didactic instruction and experiential activities. The authors displayed data suggesting that the training program had positive effects on the fathers' "knowledge" and infant care and stimulation behavior; however, the lack of a control group, and exclusive reliance on self-report data of questionable reliability and validity render their findings speculative and debatable.

In another study, Giefer and Nelson (1981) designed a program to teach fathers basic infant care skills (diapering, bottle feeding, and holding an infant) through group discussions, lectures, audiovisual presentations, and demonstrations. The authors' use of a 4-item questionnaire as the sole outcome measure and other methodological problems (e.g., one group only posttest design, and the lack of established performance criterion levels) makes any evaluation of the training program difficult.

Parke et al. (1980) conducted an "assessment of the effect of exposure to a specially designed intervention during the postpartum hospital period on the attitudes and behavior of fathers" (p. 180). One group of fathers saw a 15-minute videotape titled "Fathers and Infants," in which a father demonstrated infant stimulation activities,
feeding, burping, and diapering. A control group of fathers followed the usual hospital routine and did not see the videotape. Fathers who viewed the videotape diapered and fed their infants more frequently at three months, if they were boys; control fathers diapered and fed their female infants more often than experimental fathers diapered and fed their female infants. Experimental fathers also vocalized more toward their infants during play sessions, but only if they were boys. The reasons for the gender differences were not fully understood. Additionally, methodological difficulties such as the lack of baseline data on infant-care activities, and the absence of a pretest for "attitudes and knowledge" differences preclude strong conclusions regarding the efficacy of the videotape intervention.

Finally, one study offered an "experimental analysis of an infant-care training protocol using multiple outcome measures (i.e., direct observation of father-infant interaction and self-report data)" (Dachman et al., 1986, pp. 221-222). An analysis of the fathers' behavior pre and post training clearly showed that the training package was responsible for producing criterion performance on infant-care and infant stimulation measures by expectant and first-time fathers in hospital and home based training settings. The researchers' use of a criterion and socially validated training manual, direct behavior observations, baseline data collection, established performance criteria, and interobserver agreement) i.e., reliability data) presents sound research methodology; thus, the training effects are clear and convincing.
Once limitation of this study is that the researchers were unable to assess whether or not trained fathers "actually engaged in more infant-care skills at home with their babies than do untrained fathers" (Dachman et al., 1986, p. 230). Also, questions about the maintenance of the training effects beyond one month, and other "residual benefits" (p. 230) to the father-infant relationship remain unanswered.

This study replicated and expanded on Dachman et al. (1986) by addressing three issues:

1. Do trained fathers display more infant stimulation/affectional behaviors during play-time? At issue is whether or not this type of training can enhance the delivery of enriching stimuli to the infant by the caregiver.

2. Will the training effects be maintained beyond one month? Consistent, competent care is the goal with human infants, thus, the longer the training effects persist the greater the quality of life for the infant.

3. Do trained fathers actually engage in more infant related activities in their homes? This may be the most critical and practical issue; fathers that know "how" to appropriately care for their infants and provide infant stimulation may not actually engage in those behaviors on a daily basis, thus, raising questions about this training program's utility and social relevance.

This study experimentally addressed these concerns using multiple outcome measures (i.e., direct and videotaped data) across fathers and time (i.e., multiple probe design); also, a control group
of fathers was simultaneously monitored to help ferret-out experimental confounds and "chance" improvements on the part of experimental fathers.

Replication and expansion of the Dachman et al. (1986) program will assist in evaluating its effectiveness and utility of infant-care skills training for fathers, in general.
METHODS

Subjects

Following a description of the research project, expectant, first-time fathers from birthing classes at a local hospital were asked to volunteer for the study. Eight fathers were randomly selected from the pool of volunteers. Four of these eight fathers were randomly assigned to the control group, with the remaining four being assigned to the experimental group.

Experimental father 1 (Ex 1), age 25, held a high school diploma and was employed as a construction worker; experimental father 2 (Ex 2), age 29, held a college degree and was employed as a computer systems analyst for a manufacturing firm; experimental father 3 (Ex 3), age 21, had completed some college course work and was employed as a parts manager for a manufacturing firm; and, experimental father 4 (Ex 4), age 27, held a master's degree in science and was employed as a chemist. All four experimental fathers reported having had limited prior experience in infant-care (e.g., infrequent opportunities to hold, diaper, feed, and burp an infant).

Control father 1 (C1), age 28, held a college degree and was employed as a stock and securities broker; control father 2 (C2), age 23, had completed some college course work and was employed as a warehouse manager; control father 3 (C3), age 27, held a college degree and was employed as a relocation specialist for a moving firm; and, control father 4 (C4), age 27, held a college degree and was
employed as a welder and welding instructor at a local community college. Control fathers 1, 3, and 4 reported having limited infant care experience comparable to the experimental fathers; control father 2 reported having no prior infant care experience.

All fathers signed consent forms (see Appendix A) prior to beginning any baseline sessions.

All of the infants that participated in the study were born at a gestational age of at least 36 weeks; they were not admitted to the Neonatal Intensive Care Unit; and had not been diagnosed to have a medical difficulty that would interfere with their ability to participate in the study.

Setting and Materials

All baseline data related to the infant-care procedures were collected in an educational classroom located in a local hospital. The classroom contained a table on which the materials necessary for the correct performance of all infant-care procedures were located. These items included a synthetic, "life-like," newborn doll; several disposable and cloth diapers; one jar of petroleum jelly; a box of pre-soaped and scented wipes for diapering; diaper pins; rubbing alcohol; washcloths; towels; soap and shampoo; a plastic bathtub; glass thermometer; T-shirts; a plastic wash basin; bath water; an 8-ounce bottle with nipple; and "formula" (i.e., colored water in a clear dispensing pitcher labelled "FORMULA").

All subsequent measurements (i.e., baseline and follow up assessments of play and affectional behaviors, pre and posttraining
infant-care observations; follow up infant-care observations, and
journal recording) were home based. Typically, fathers used equip­
ment similar to that previously described while performing infant-care
skills in their homes. Certain infant-care skills (e.g., bathing and
changing diapers) were performed at different locations in the home
(e.g., infant tub inside of a regular bath tub, living room rug)
than the location in the hospital (i.e., on a table).

Additional materials included: journals for recording daily
infant related activities in the home (Parke et al., 1980), cassette
player with sequencing tape and headset(s), videotaping equipment,
infant-care skills recording sheets, play and affectional behavior
recording sheets, and a birth to six month rattle to be used during
a play session by the father-infant dyads (Parke et al., 1980).

**Dependent Variables**

Four classes of behavior were measured at various phases of the
study. These behaviors were: (a) infant care skills, such as bath­
ing, diapering, holding, etc; (b) infant stimulation behaviors that
occurred during the infant care observations; (c) play and affec­
tional behaviors, such as singing, stroking, eye contact, "bicycling"
legs, etc. (Crummette et al., 1985; Dachman et al., 1986); and (d)
"daily activities," such as comforting, playing, feeding, etc.

**Infant-Care Skills**

Dachman et al. (1986) identified ten infant-care skills that
were evaluated by infant care professionals as being essential and
appropriate. The skills included the upright, football, and cradle holds, feeding, bathing, cloth and disposable diapering, and rectal and axillary temperature measurement (p. 222). A task analysis was developed for each of these ten skills that identified a sequence of specific behaviors required to complete that task. Then steps in each task analysis were validated based on the evaluation by experts of their necessity for performing the infant-care task correctly. These ten infant-care skills and their task analyses were used for all infant-care skills observations and training during this study.

Critical steps were those that were necessary for the practical completion of an infant-care task; they are contrasted with optional steps, those that were not judged essential to successful completion of the task. For example, filling the bottle with formula, or rubbing or patting the infant's back during a burp are both critical steps, whereas putting a towel on the bottom of the bathtub or sticking the diaper pins in a bar of soap were optional.

Task analysis recording sheets (Appendix B) were used to assess the occurrence of the correctly performed, specific component tasks during all infant-care observations. The overall percentage of correctly completed steps was the primary outcome dependent variable.

**Infant Stimulation Behaviors**

Infant stimulation behaviors that occurred during the infant-care observations were defined as any vocal or "physical" (nonverbal) stimulus change directed by the father toward the infant, such as talking, singing, patting or rubbing the infant's head or stomach, bicycling
the infant's legs, etc. These stimulation behaviors were recorded directly on the task analysis recording sheet by the observer with a "V" or "P", indicating that a vocal or physical response had been emitted by the father and directed toward the infant. The absolute number of vocal and physical infant stimulation activities performed during an infant-care observation was recorded. Infant stimulation activities that continued over a duration of time (e.g., singing a song) were counted as a single occurrence of infant stimulation.

Play and Affectional Behaviors

Play and affectional behaviors assessed during 10-minute play sessions, included smiling, eye-to-eye contact, stroking, talking, singing, holding, hugging, touching a rattle to the infant's hand, rocking, and general physical (nonverbal) stimulation (e.g., bouncing infant on knee, kissing on nose or forehead, pulling infant into a standing position, etc.). These behaviors were adapted from a list of infant stimulation and affectional behaviors developed by Crummette et al., (1985), pp. 93-94. The occurrence of play and affectional behaviors during play times was recorded using a 15-second partial interval scoring system. An occurrence was scored whenever the father engaged in a play or affectional behavior anytime during a 15-second interval; the absence of such behavior resulted in that interval being scored a nonoccurrence. The absolute number of intervals in which play or affectional behaviors occurred during the play-times was recorded (see Appendix C for the scoring form).
Daily Activity Journals

All fathers and their spouses self-recorded data on the father's daily activities with their infants, including bathing/cleaning, feeding, diapering, comforting (e.g., holding, rocking, stroking to calm, etc.), and playing. Parents were given definitions of these behaviors adapted from lists of daily infant-care tasks assessed in studies by Crummette et al. (1985) and Parke et al. (1980). Fathers and mothers were given journals (Appendix D) in which they independently recorded daily estimates of the time spent engaged in the listed activity (to the nearest 5-minutes) and the total amount of time the parent had spent in the home. From these fathers' raw data, the percentage of time engaged in each of the five listed infant care activities was calculated by dividing the time engaged in that activity by the total amount of time he spent in the home.

Observation Procedures

Infant-Care Observations

We evaluated all fathers on their performance of infant-care tasks by asking them to bathe, feed, burp, hold (three types), diaper (two types), and take their infant's temperature (two procedures). The observation and data collection procedures during these observation sessions were similar to those described in Dachman et al. (1986, p. 224). During all infant-care observations a trained observer, seated or standing approximately 1 m from the father/infant dyad, recorded the occurrence and sequence of each step on the task analysis.
of each infant-care skill. Occurrence of each infant-care step were recorded in 15-second intervals that were signalled to observers via headphones. Frequency of infant stimulation activities was simultaneously scored during the observation (sequence and interval data were irrelevant for stimulation activity recording).

**Play Observations**

All fathers and their infants engaged in two, 10-minute playtime sessions (postpartum baseline and follow up) to evaluate the fathers' play and affectional behaviors. The play time was videotaped and scored by a trained observer who viewed the videotape at a later time, assessing the occurrence of play and affectional behaviors displayed by the father. The tapes were scored using a partial interval scoring system for the occurrence and nonoccurrence of each of the previously defined play-affectional behaviors during 15-second intervals.

**Journal Recording**

Journal data were recorded independently by fathers and their spouses for one week during the postpartum-pretraining phase (infants were between two and four weeks old), and for one week following the last infant-care skills observation (infants were between 14 and 18 weeks old).
Experimental Conditions

Baseline

During the baseline condition all fathers participated in: infant-care assessments (classroom and home based), and play and affectional behaviors assessments (home based). Additionally, all fathers and their respective spouses recorded the frequency and duration of infant related "daily activities" in their journals.

At the beginning of the infant-care assessments fathers were informed that they would be asked to perform ten infant-care tasks to the best of their ability, and that all the materials that were necessary for completing those tasks were available on the table next to them. Additionally, they were told that they could describe any activity that they were engaged in during the assessment.

At the beginning of the play and affectional behavior assessment fathers were given a toy (i.e., "Sunny Rattle," Fisher Price Co.) and then asked to "play with your baby the way you usually do" (Feldman, Towns, Betel, & Case, 1985, p. 4).

During the baseline condition there were no experimentally programmed consequences or feedback for the fathers on their performance of any of the previously described activities. Fathers were instructed to hold all questions during each activity, and, if feasible, the observer would answer the question after the activity was completed. Following each baseline activity fathers were thanked for their participation.
Manual

Following the completion of all baseline measures each experimental father received an instructional manual that was identical to the manual used by Dachman et al. (1986) with the exception of minor changes in the manual's illustrations. The manual included:

(a) instructions for using the materials, (b) a series of fact sheets providing supplementary information regarding the care skills, (c) a description of each skill with examples of all procedures, (d) review questions to answer following each procedure throughout the text, and (e) a self-administered 15-item practice quiz and answer sheet. (Dachman et al., 1986, p. 226; also Appendix E)

Each experimental father had approximately one week to read the manual and complete the questions and the practice quiz (Ex 2 took approximately three weeks to complete the manual; the father reported that mitigating circumstances interfered with his ability to complete the manual more quickly). Each father then met individually with the trainer to review the 15-item quiz; the father was given immediate feedback on his performance on the quiz and then participated in the infant care assessment under the same conditions described in baseline (no feedback) to determine the effect of the training manual (Dachman et al., 1986, p. 226).

Training

Based on the father's performance during the manual-only observation (described above) the father was given praise for any correctly performed steps-tasks and corrective feedback on any specific step that he performed incorrectly or omitted, this typically consisted of
a brief description of the missed or omitted step (e.g., "Joe, you forgot to wash Jill's back during the bath"); second, any omitted or incorrectly performed step was demonstrated correctly, by the trainer (typically with the doll); and, finally, the father was asked to remediate by correctly performing the step with his infant or the training doll.

When a father performed all "critical" steps and 80 percent of the overall steps of each infant care task, he met the performance criteria for that task. Training was terminated when a father competently performed any eight of the ten infant-care procedures across two sessions (criterion performance during the post-manual observation could be counted toward the two-session criteria). All experimental fathers completed training in two sessions.

Follow-Up

Follow-up observations occurred for experimental fathers approximately one and two months after they had met criteria during the training. Infants ranged in age from 14 to 18 weeks by the time the second follow-up probe occurred.

During the first follow-up, fathers participated in infant-care observations under the same procedures as described in Baseline. During the second follow-up, fathers were asked to participate in the infant-care skills observation, videotaped during a play and affectational behavior observation, instructed to collect journal data for seven days, and complete consumer satisfaction questionnaires (see Appendix F).
Experimental Design

The effects of the manual and training procedures on the infant-care skills and infant stimulation activities performed during the completion of those procedures were examined using a multiple-probe design, a variation on the multiple baseline across subjects design (Dachman et al., 1986, p. 225; Horner & Baer, 1978).

To examine the effects of time and exposure to one's infant alone, on the dependent measures, four fathers were randomly assigned to a control group. The control fathers did not receive a manual or any of the training that the experimental fathers received. However, the control fathers were repeatedly assessed using the previously described procedures for changes in infant care skills, infant stimulation activities, play and affectional behaviors, and daily infant interactions. At the completion of the study, control fathers were given the infant care skills manual and offered the same training as given the experimental fathers; none of the control fathers requested any further assistance or training.

Consumer Satisfaction and Feedback

Experimental Group

The social significance of the treatment goals, strategies, and outcomes was assessed using a parent satisfaction questionnaire (Dachman et al., 1986, p. 225; Appendix F). Each father and his wife were asked to complete the appropriate form following the completion of the study (Table 1). Four questionnaires were returned.
from the fathers (100%) and four from the wives (100%). Questionnaires were not completed anonymously.

Table 1
Mean Responses to Father and Wives Satisfaction Questionnaire

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Attitude/Activity</th>
<th>Response Fathers</th>
<th>Response Wives</th>
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<tr>
<td>Overall Program</td>
<td>At this point, my expectation for a satisfactory outcome of the training program is: 1 = very pessimistic to 7 = very optimistic.</td>
<td>6.33</td>
<td>6.0</td>
</tr>
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<td></td>
<td>I feel the approach to teaching infant-care by using this type of training program is: 1 = very inappropriate to 7 = very appropriate.</td>
<td>6.25</td>
<td>6.25</td>
</tr>
<tr>
<td></td>
<td>Would you recommend the program to a friend or relative? 1 = strongly not recommend to 7 = strongly recommend.</td>
<td>6.5</td>
<td>6.0</td>
</tr>
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<td></td>
<td>How confident are you in your ability (your husband's ability) to use these infant-care skills with your newborn? 1 = very unconfident to 7 = very confident.</td>
<td>7.0</td>
<td>6.75</td>
</tr>
<tr>
<td></td>
<td>My overall feeling about the training program is: 1 = very negative to 7 = very positive.</td>
<td>6.5</td>
<td>6.0</td>
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<tr>
<td></td>
<td>At this point, I think my husband's ability to handle caretaking concerns is 1 = considerably worse to 7 = greatly improved.</td>
<td>6.75</td>
<td></td>
</tr>
<tr>
<td>Difficulty</td>
<td>(scale: 1 = extremely difficult, 2 = difficult, 3 = somewhat difficult, 4 = neutral, 5 = somewhat easy, 7 = extremely easy)</td>
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<td></td>
<td>Holding</td>
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<td>Burping</td>
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<td></td>
<td></td>
<td>Fathers</td>
<td>Wives</td>
<td></td>
</tr>
<tr>
<td>Bathing</td>
<td>5.25</td>
<td>5.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diapering</td>
<td>5.75</td>
<td>6.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature taking</td>
<td>6.0</td>
<td>6.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall group of procedures</td>
<td>5.75</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Usefulness** (scale: 1 = extremely not useful, 2 = not useful, 3 = somewhat not useful, 4 = neutral, 5 = somewhat useful, 6 = useful, 7 = extremely useful)

<table>
<thead>
<tr>
<th></th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holding</td>
<td>5.75</td>
</tr>
<tr>
<td>Feeding</td>
<td>6.0</td>
</tr>
<tr>
<td>Burping</td>
<td>5.0</td>
</tr>
<tr>
<td>Bathing</td>
<td>5.75</td>
</tr>
<tr>
<td>Diapering</td>
<td>5.75</td>
</tr>
<tr>
<td>Temperature taking</td>
<td>6.0</td>
</tr>
<tr>
<td>Overall group of procedures</td>
<td>6.0</td>
</tr>
</tbody>
</table>

**Control Group**

Control fathers were given a post-study questionnaire to assess factors that may have influenced fathers' performances throughout the study (see Appendix G). All four control fathers completed the questionnaire (Table 2).
Table 2
Responses to the Control Fathers' Feedback Form

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>Respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which sources of information on infant care were helpful to you?</td>
<td>The Fathers Almanac</td>
<td>C1</td>
</tr>
<tr>
<td></td>
<td>Parents, friends, doctors</td>
<td>C2</td>
</tr>
<tr>
<td></td>
<td>Prenatal (birthing) classes</td>
<td>C3, C4</td>
</tr>
<tr>
<td>Did anyone provide suggestions, demonstrations, and/or feedback on infant care procedures?</td>
<td>Suggestions:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Friend</td>
<td>C1, C2, C4</td>
</tr>
<tr>
<td></td>
<td>Mom</td>
<td>C1, C2, C3</td>
</tr>
<tr>
<td></td>
<td>Wife</td>
<td>C2</td>
</tr>
<tr>
<td></td>
<td>Sister</td>
<td>C3</td>
</tr>
<tr>
<td></td>
<td>Sister-in-law</td>
<td>C3</td>
</tr>
<tr>
<td>Demonstrations:</td>
<td>Mom</td>
<td>C2</td>
</tr>
<tr>
<td></td>
<td>Wife</td>
<td>C2, C4</td>
</tr>
<tr>
<td>Feedback:</td>
<td>Wife</td>
<td>C2</td>
</tr>
<tr>
<td></td>
<td>Mom</td>
<td>C1</td>
</tr>
<tr>
<td></td>
<td>Sisters and brothers</td>
<td>C1</td>
</tr>
<tr>
<td>Rate your level of confidence with infant-care procedures right after baby was born. Scale: 1 = extremely confident to 5 = complete lack of confidence</td>
<td>3</td>
<td>C1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>C2</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>C3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>C4</td>
</tr>
<tr>
<td>Rate how confident you feel now with infant care procedures. Scale: 1 = extremely confident, 5 = complete lack of confidence.</td>
<td>2</td>
<td>C1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>C2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>C3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>C4</td>
</tr>
<tr>
<td>Comments regarding participation in this project?</td>
<td>It was sometimes hard to do the exercises without feedback.</td>
<td>C1</td>
</tr>
<tr>
<td></td>
<td>I think it was good to practice some of the things before the baby was born.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Only comment is that I wish I'd been chosen for training.</td>
<td>C2</td>
</tr>
</tbody>
</table>
Table 2 (Continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other than that I enjoyed myself, and at no time did it become a 'chore'.</td>
<td></td>
</tr>
<tr>
<td>I felt the project was extremely helpful. I can understand why such a study as this would be helpful.</td>
<td>C3</td>
</tr>
<tr>
<td>This project made me more involved with my daughter than I would have been without it.</td>
<td>C4</td>
</tr>
<tr>
<td>Any suggestions for improvements?</td>
<td>None</td>
</tr>
</tbody>
</table>

Interobserver Agreement

Infant-Care Skills

Interobserver agreement data were collected in 21% of infant-care assessments by a second observer who independently scored infant-care skills in the hospital (i.e., educational classroom) and homes. An agreement was scored when both observers recorded the occurrence of a particular step in the same or adjacent 15-second interval. Occurrence and nonoccurrence reliabilities were computed in two ways. First, interval agreement was computed by dividing the total number of agreements (occurrences and nonoccurrences) by the total of all agreements and disagreements. Additionally,
Kappa (K), a conservative correlational statistic which provides an estimate of agreement between observers corrected for chance agreements (Kazdin, 1982, pp. 66-67), was calculated.

Interval agreement across infant-care skills observations ranged from 84.6% (Ex 2, follow-up 1) to 96.3% (C3, observation/session 6) (M = 90.0%). Kappa for infant-care skills observations ranged from .251 (Ex 3, follow-up 1) to .925 (C3, observation/session 6) (M = .624).

**Play-Times**

Interobserver agreement data were collected in 31% of the videotaped father/infant play-times. Data were collected by a second observer who independently recorded the occurrence of play and affectional behaviors during the viewing of the 10-minute play-time. An agreement was scored when both observers recorded the occurrence of a particular play or affectional behavior in the same 15-second interval. Occurrence and nonoccurrence reliabilities were calculated using the previously described formulae.

Interval agreement for the play-times ranged from 95% (C3, post) to 97% (Ex 3, pre) (M = 96%). Kappa for the play-times ranged from .89 (C3, post) to .93 (Ex 3 & Ex 4, pre) (M = .91).

**Daily Activity Journals**

Interobserver agreement data were calculated on one of the two weeks that fathers and their spouses recorded journal data. Interobserver agreement was calculated by comparing the father's recordings
of time spent in each father/infant activity (e.g., feeding, bathing, comforting, etc.) on a particular date with the amount of time that his spouse recorded for each father/infant activity. An agreement was scored between the father and his spouse when the estimated time they recorded for a particular activity on a particular day was plus or minus 5-minutes of the spouse's estimate (e.g., Monday - Bathing: Father - 25-minutes, Spouse - 20-minutes = agreement; Playing: Father - 45-minutes, Spouse - 30-minutes = disagreement). Additionally, a father's estimate of the total amount of time he spent home on a particular day was compared with his spouse's estimate. An agreement was scored when the estimate was plus or minus one hour of the spouse's estimate. Interobserver agreement was computed by dividing the number of agreements by the total of agreements plus disagreements.

Interobserver agreement ranged from 57.1% (Ex 2 & spouse, pre) to 92.8% (Ex 1 & spouse, pre) (M = 75.25%).
RESULTS

Infant-Care Skills

Figure 1 shows the percentage of infant care steps performed correctly by the fathers in this study. Experimental fathers 1-3 baseline performances were characterized by low to moderate, stable levels of correctly completed infant-care skills steps. Experimental father 4 performed at a less stable, moderate level, with performance during session 4 approaching the 80% criterion level (70.5%); due to the father’s ascending performance level, baseline conditions were extended for one session and the father’s performance leveled off. All four experimental fathers attained high performance levels following the completion of the infant-care skills manual (range 80.7% to 92.5%, M = 87.5%). The addition of the training procedures produced even greater, though less dramatic, changes in the fathers’ performances (range 84.1% to 98.7%, M = 94.5%). Follow-up performances continued at a stable, high level (follow-up 1, range 87.1% to 96.1%, M = 92.9%; follow-up 2, range 85.7% to 92.4%, M = 89.0%).

Control fathers performed at a low to moderate rate throughout the study on the infant-care skills steps (range across all control fathers and sessions 29.2% to 78.4%, M = 55.4%). All control fathers showed performance gains across time, however, two of the control fathers’ (C1 & C3) gains leveled off or decreased over the duration of the study. Two fathers’ (C2 & C4) performances remained moderate and steady. Though control father 1 performed quite well during
Figure 1. Percent of Infant-Care Steps Completed Correctly by Fathers

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session 4 (78.4%), no control father reached the established criterion performance level of 80% at any time during this study.

Infant Stimulation Activities

Figure 2 shows the number of infant stimulation activities initiated by the fathers during the infant-care skills observations. In spite of a standard encouragement (e.g., "Engage in the requested activity just as you would with a real baby"), during baseline with the "newborn" doll, no fathers engaged in a single infant stimulation activity. During baseline with their infants (homebased observation), experimental fathers 1, 2, and 4 initiated low levels of vocal (i.e., vocal verbal responses) and "physical" (i.e., nonverbal responses) infant stimulation activities; experimental father 3 initiated a high number of vocal responses and no physical activities. Following completion of the infant-care skills manual, all experimental fathers initiated higher levels of vocal and physical stimulation activities. During the training phase all experimental fathers initiated more vocal responses; fathers 1 and 4 initiated slightly more physical activities, and fathers 2 and 3 initiated slightly fewer physical stimulation activities. Experimental fathers' 1 and 2 follow-up data were relatively unstable, with father 1 initiating many more vocal than physical activities, and father 2 initiating low to moderate levels of vocal and physical activities. Experimental fathers' 3 and 4 follow-up data were relatively stable, moderate levels of vocal responding, and low levels of physical activities.
Figure 2. Number of Infant Stimulation Activities Initiated During Infant-Care Skills Observations
Following the classroom baseline with the "newborn" doll, control fathers 2, 3, and 4 initiated steady, low to moderate levels of vocal and physical stimulation activities across all infant-care skills observations. Control father 2 appeared to be steadily increasing the number of vocal responses during his last two infant-care observations, suggesting continued improvements or maintenance at a higher level. Similar to his control cohorts, control father 4 initiated steady, low levels of physical stimulation throughout the study, however, beginning at session 3 he initiated a steadily increasing level of vocal responses; at session 4 he peaked at a high level of responding and maintained a high level during his last two infant-care observations.

Play and Affectional Behaviors

Table 3 displays interval data from the play-time sessions. The data are displayed by group, by phase (pre and post intervention), and by play or affectional behavior.

During the pre and post-intervention measures, control and experimental fathers engaged in similar levels of play and affectional behaviors, with the control fathers engaging in slightly higher levels each phase. The performances between the control and experimental fathers during each phase were statistically analyzed and none of the analyses revealed significant differences. Also, separate statistical analyses of the control and experimental fathers' performances, pre and post-intervention, were computed and revealed no significant improvements in performance.
Table 3
Group Mean Percent of Intervals in Which Fathers Engaged in Play or Affectional Behaviors

<table>
<thead>
<tr>
<th></th>
<th>Control Pre</th>
<th>Control Post</th>
<th>Experimental Pre</th>
<th>Experimental Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smile</td>
<td>16.3%</td>
<td>37.5%</td>
<td>2.5%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Eye to Eye</td>
<td>99.4%</td>
<td>100.0%</td>
<td>98.7%</td>
<td>99.4%</td>
</tr>
<tr>
<td>Stroke</td>
<td>10.0%</td>
<td>3.1%</td>
<td>13.7%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Talk</td>
<td>83.1%</td>
<td>83.1%</td>
<td>61.2%</td>
<td>93.1%</td>
</tr>
<tr>
<td>Sing</td>
<td>8.1%</td>
<td>13.1%</td>
<td>0.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Hold</td>
<td>46.9%</td>
<td>53.1%</td>
<td>58.7%</td>
<td>31.9%</td>
</tr>
<tr>
<td>Hug</td>
<td>2.5%</td>
<td>0.0%</td>
<td>3.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Touch w/Rattle</td>
<td>1.3%</td>
<td>22.5%</td>
<td>0.0%</td>
<td>23.7%</td>
</tr>
<tr>
<td>Rock</td>
<td>13.1%</td>
<td>0.0%</td>
<td>10.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>General Physical</td>
<td>67.5%</td>
<td>68.8%</td>
<td>63.1%</td>
<td>75.6%</td>
</tr>
</tbody>
</table>

Control and experimental fathers engaged most frequently in four classes of play and affectional behaviors; they were eye-to-eye contact, talking to their infant, holding and general physical activities. Relatively high levels of all these behaviors were maintained by both groups of fathers, however, the experimental fathers greatly reduced the mean percent of intervals that they were holding their infants from the pre to post-intervention measure.

Journal Data

Table 4 displays the number of minutes that fathers reported they engaged in daily activities with their infants during the week long pre and post-intervention data collection periods. The number of minutes that a father spent with his infant during that period
Table 4

Journal Data: Minutes Engaged in Activities Per Week and Percentage Per Week

<table>
<thead>
<tr>
<th></th>
<th>Pre Minutes w/ Infant</th>
<th>Pre Total Minutes Home</th>
<th>%</th>
<th>Post Minutes w/ Infant</th>
<th>Post Total Minutes Home</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex 1</td>
<td>530</td>
<td>4260</td>
<td>12.4</td>
<td>430</td>
<td>3900</td>
<td>11.0</td>
</tr>
<tr>
<td>Ex 2</td>
<td>570</td>
<td>6780</td>
<td>8.4</td>
<td>635</td>
<td>6480</td>
<td>9.8</td>
</tr>
<tr>
<td>Ex 3</td>
<td>425</td>
<td>2570</td>
<td>16.4</td>
<td>1320</td>
<td>6660</td>
<td>19.8</td>
</tr>
<tr>
<td>Ex 4</td>
<td>995</td>
<td>7080</td>
<td>14.1</td>
<td>745</td>
<td>5200</td>
<td>13.1</td>
</tr>
<tr>
<td>Mean</td>
<td>630</td>
<td>5172.5</td>
<td>12.8</td>
<td>782.5</td>
<td>5685</td>
<td>13.4</td>
</tr>
<tr>
<td>C1</td>
<td>1170</td>
<td>6120</td>
<td>19.1</td>
<td>1120</td>
<td>6150</td>
<td>18.2</td>
</tr>
<tr>
<td>C2</td>
<td>n/a</td>
<td>-</td>
<td>-</td>
<td>940</td>
<td>6180</td>
<td>15.2</td>
</tr>
<tr>
<td>C3</td>
<td>890</td>
<td>6360</td>
<td>13.9</td>
<td>875</td>
<td>6420</td>
<td>13.6</td>
</tr>
<tr>
<td>C4</td>
<td>430</td>
<td>8310</td>
<td>5.2</td>
<td>510</td>
<td>5340</td>
<td>9.6</td>
</tr>
<tr>
<td>Mean</td>
<td>830</td>
<td>6930</td>
<td>12.7</td>
<td>861.2</td>
<td>6022.5</td>
<td>14.2</td>
</tr>
</tbody>
</table>

(7-days each phase) was divided by the number of minutes that a father was home (including sleeping hours) with his infant during that same period to yield the percentage of time that the father spent engaged in the relevant daily activities.

Although control fathers, on the average, spent a larger number of minutes engaged in the daily activities with their infants than the experimental fathers, the percentage of the total time at home engaged with their infants was highly similar across groups.

Table 5 shows the mean percent of time that control and experimental fathers spend engaged in the specific daily activities during the pre and post-intervention phases.

No clear pre-post trends emerge from the data for either group of fathers, minus the moderate shift away from infant-care skills to
Table 5
Journal Data: Mean Percent of Time Spent Engaged in Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>Control Pre</th>
<th>Control Post</th>
<th>Experimental Pre</th>
<th>Experimental Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathe/Clean</td>
<td>1.8%</td>
<td>2.95%</td>
<td>3.56%</td>
<td>2.25</td>
</tr>
<tr>
<td>Feed</td>
<td>23.35*</td>
<td>16.62</td>
<td>7.33*</td>
<td>9.97*</td>
</tr>
<tr>
<td>Diaper</td>
<td>19.55</td>
<td>11.37</td>
<td>15.26</td>
<td>8.37</td>
</tr>
<tr>
<td>Comfort</td>
<td>34.52</td>
<td>31.85</td>
<td>44.40</td>
<td>29.45</td>
</tr>
<tr>
<td>Play</td>
<td>20.75</td>
<td>3600</td>
<td>29.40</td>
<td>46.52</td>
</tr>
</tbody>
</table>

* 2 mothers in this group were breastfeeding approximately 85-100% of this time.

playing for the experimental fathers, and a nearly identical exchange of comforting and playing percentages for the control fathers. Statistical analyses (independent and correlational t-tests) were computed using the individual fathers percentage scores; comparisons between experimental and control fathers, and pre and post-intervention by group analyses revealed no significant differences or improvements. The pre and post-intervention breastfeeding data were not analyzed due to differences in the number of mothers breastfeeding from the pre to the post-intervention measures.
DISCUSSION

The results of this study replicate the effectiveness of the Dachman et al. (1986) multi-component, training program for teaching ten infant care skills to first-time fathers. In contrast to Dachman et al., by completing the training manual alone, the experimental fathers were able to perform the skills at criterion level; these results support the effectiveness of the "revised" manual that was not tested alone following Experiment I in Dachman et al. (1966, p. 230). Training enhanced each of the experimental fathers' performances on the infant-care skills. Criterion performance was maintained by each of the experimental fathers during follow-up for up to two months following the completion of the training package. Though not systematically assessed, a reduction in the duration of the infant care observations and anecdotal reports by fathers suggested that the infant-care procedures required less time to complete, reducing one of the aversive features of routine infant care.

The results of this study also replicated the impact of the training package on the amount of infant stimulation that experimental fathers initiated during the infant care observations, however, the infant stimulation data in this study should be interpreted cautiously due to the lack of any interobserver agreement data.

The consumer satisfaction data suggested that fathers and mothers were quite satisfied with the training program's methods and the training's effect on the father's infant care behavior. The
fathers and mothers expressed confidence in the fathers' ability to implement the trained infant-care skills.

The control fathers' performance of the infant care and infant stimulation activities represents relatively high levels of competence; as the study progressed, the control fathers were able to correctly perform 6-7 steps out of every 10 required. A number of factors may have influenced the control fathers' performances. For example, the assessment procedures (i.e., infant-care skills observations) may have been reactive and introduced a "practice effect"; and, in spite of encouragements by the researcher to not solicit outside information or feedback, control fathers solicited advice and suggestions from various family members and resource materials throughout the study (see control fathers' feedback questionnaire and anecdotal reports).

The results of this study expanded on the Dachman et al. findings by observing positive experimental effects beyond one month. Three experimental fathers (Ex 2-4) showed slight declines in their infant care skills performances by the second follow-up (i.e., two months post-training); experimental father 1 showed a slight increase in his performance during his second follow-up observation. Each of the experimental father's performances from the manual phase through follow-up appeared stable, suggesting that competent infant care would be continued by these fathers.

Two other issues were addressed by this study; they were: First, do trained fathers display more play and affectional behaviors during play times with their infants? Second, do trained
fathers actually engage in more infant related activities in their homes?

Concerning the play and affectional data, experimental fathers engaged in play and affectional behaviors in fewer intervals during both pre and post-training measures than the control fathers. Additionally, they made only slight gains following training, proportionally equal to that of the control fathers. These data suggest that all fathers improved slightly during the post-training measure due, perhaps, to nonexperimental factors such as the increased reinforcing qualities of their infants (e.g., infants' reciprocal eye contact, increased movement, contingent smiling, etc.).

The amount of time engaged in daily activities with their infants increased for both experimental and control fathers. This suggests that the training program had little effect on time that experimental fathers spent with their infants. During both pre and post-training measures the experimental fathers spent less time (proportionally) with their infants than the control fathers spent with their infants. Based on the spouse's recording of the amount of time that they spent with their infants, it appears as though the mothers provided a much higher proportion of the daily infant care than the fathers.

The results of this study suggest that the training program had no effect on these issues. This finding is not surprising given the focus of the program on infant-care skills. It seems likely that other factors (e.g., time constraints, division of labor with spouse) outside the variables manipulated in this experiment could effect those behaviors.
Due to the subject selection bias of this study (e.g., "motivated" volunteers from middle class backgrounds), generalizing from these results to the population of all first-time fathers would be erroneous. Nevertheless, these findings may have generality to the population from which the subjects were selected, namely community based birthing classes. Whether a manual-based training program would be effective with parents of lower educational attainment and less sophisticated reading skills remains to be seen.

Future research on father and parent training might address issues related to the actual development and implementation of effective training programs within local prenatal education systems. For example, questions regarding the acceptance and responsiveness of typical birthing class participants to more technical and systematic training approaches needs to be addressed; or what types of teaching approaches are most effective under group contingencies?

Another line of research could evaluate the impact of training manuals on skills that were not directly trained in this study. For example, would exposure to a task analysis assessment and training program for infant stimulation activities produce higher and more stable levels of infant stimulation by parents during infant care? Might we observe more play and affectional behaviors (i.e., "residual benefits") during play times if the activities described in the "menu" were systematically trained? Equally important, could the infants benefit?

Finally, future research in father and parent training could take a different approach. The results of this study suggest that
repertoires of complex behavior such as infant care skills, or affectional behaviors are not strengthened and maintained by the effects or consequences of "doing the job right" (i.e., competence). To a great extent, an already thin repertoire may be further weakened by the immediate aversive consequences of the infant care task (e.g., "messy" diaper) or competing contingencies of reinforcement (e.g., softball game, newspaper, or nap). A productive line of research might focus on assessing the effects of increasing the frequency of spouse/partner delivered, contingent reinforcement for engaging in infant care and infant stimulation; or, based on the apparent evidence that mothers continue to provide the majority of infant care, teach mothers assertiveness skills so that they can creatively rearrange the competing contingencies of reinforcement that influence their husband's/partner's repertoires.

Though many important issues regarding the impact and scope of early parental training are unclear, formal infant-care skills training can greatly improve a father's competence and confidence in providing routine care for his infant. He benefits his infant by providing optimally safe and healthy care, and the experience is presumably less aversive for the father and the child.
APPENDIX A

Consent Forms
Informed Consent for Participation in an Investigation

Background

Within the last few years researchers and experts have begun to examine the role of fathers in the early development of their children. Essentially, they have concluded that there is a need for training programs that will assist fathers in becoming the best parents they can be. A few training programs have been developed and tested, to see how well they work; thus far, no one program has been shown to be the most effective.

Purpose of this Study

As part of my master's thesis research in association with the Clinical Psychology Department at Western Michigan University, and the Health Education Services at Bronson Methodist Hospital, I have developed a project whose general purpose is to look at the ways in which first-time fathers interact with and care for their infants.

In spite of the situation described above (i.e., that no one program seems to be the most helpful) one training program shows good potential to be very helpful to fathers. Examining the effectiveness of this infant-care skills training program will be the specific purpose of this project.

Qualifications for Participation

Thank you for volunteering for this investigation. You have been randomly selected and randomly assigned to be in the group of fathers who will be trained with the infant-care training program mentioned above. (Note: Random selection and random assignment are systematic and scientific procedures which assure that volunteers were selected and assigned to groups in an unbiased and fair way. If you have a question concerning these procedures, feel free to ask.)

Further, you qualify for this project because you are a first-time father and part of a two-parent family (i.e., you, your wife/partner, and infant make-up your family).

You will receive a five dollar ($5.00) payment at the end of each session. If you complete the investigation you will receive a twenty-five dollar ($25.00) bonus.

Course of the Study

This investigation will be carried out during a minimum of two meetings in an educational classroom and a minimum of five meetings in your home. Specifically, there will be two introductory meetings in the classroom; an introductory meeting in your home after your baby is born; at least two training meetings; and two follow-up meetings - one when your infant is approximately one month old and one when your infant is approximately three months old.

The classroom based introductory meetings will last about 30-minutes each. You will be asked to perform an infant-care skills exercise.

The home based introductory meeting will occur following the birth of your baby; it will last about 1 1/2 hours. You will participate in the infant-care skills exercise, a short videotaping session with your infant, and be introduced to a journal that you and your spouse/partner will use to record the amount of time you spend on certain activities related to your baby (e.g., bathing, diapering, playing, etc.).
When you have finished recording journal information for one week, you will be given a training manual that you will work-on for approximately one week. Two home based training meetings will follow. The first one will last about 1 1/2 hours and the second one will last about 1 hour. During the training meetings, you will be taught to use appropriate infant-care skills. Specifically, you will be taught to bathe, feed, hold, diaper, and take your infant's temperature. You will also be taught some creative ways to interact with your own baby.

Following the last training meeting, you will, once again, participate in a short videotaping session with your baby.

Each of the follow-up meetings will last about 1 hour. During these meetings you will participate in the infant-care skills exercise and another short videotaping session with your baby. You and your spouse/partner will be asked to keep journal records for one week at one of the follow-up meetings (i.e., one or three months). Additionally, you and your spouse/partner will be asked to complete short questionnaires during the last follow-up meeting.

Risks and Benefits

Risks: During the course of this investigation, especially during the home based sessions, your privacy will be temporarily invaded by this investigator and, at times, another project staff member. This investigation will be done in such a way so as to reduce any unnecessary invasion of your family's privacy. You may, at times, experience some feelings of inadequacy or uncomfortableness in your role as a caregiver, the investigator will try to reduce the potential of this happening by treating you and your infant with respect and dignity at all times, by providing opportunities for you to ask questions during the course of sessions, and by directly reassuring you if you become uncomfortable or concerned. Your infant will not be handled by the project staff unless, at your request, to provide brief assistance to you.

Benefits: General - your participation in the project will enhance our understanding of the father's role in his child's early development. Also, provided this investigation yeilds positive results, it may be helpful in making training programs more readily available to all interested fathers. Specific - you will have an opportunity to learn helpful infant-care and infant stimulation skills, possibly enhancing the overall relationship that you will have with your newborn baby.

Participant's Acknowledgement

"I have been given an opportunity to ask questions regarding this research study, and these questions have been answered to my satisfaction. I understand that if I have any additional questions I can contact G. Joseph Vrazo at 382-3082. If the solution is unsatisfactory I may contact Dr. Ellen Page-Robin of the Human Subjects Institutional Review Board, at 383-4917."

"In giving my consent, I understand that my participation in this research project is voluntary, and that I may withdraw at any time without affecting my future medical care, or relations with Western Michigan University. I also understand that the investigator in charge of this study, with my welfare as a basis, may decide at any time that I should no longer participate in this study."
"I understand that I will be excluded from the investigation if my infant is born prior to 36 weeks gestational age (i.e., "prematurely"); if my infant is placed in NICU (i.e., Neonatal Intensive Care Unit) by his/her physician; or has any medically diagnosed difficulty that may interfere with my infant’s ability to participate in the investigation. I understand that I will be given a training manual and further training and assistance with infant-care/infant stimulation skills, if I so desire. Further, I understand that my participation will be on a nonpayment basis if I am asked to withdraw from the investigation."

"I hereby authorize the investigator (G. Joseph Vrazo) to release the information obtained in this study to the medical/psychological science literature. I understand that neither my infant nor I will be identified by name. I understand that all videotapes made of interactions between my infant and me will be kept intact (i.e., not erased) for one year following the completion of the last follow-up session. I understand that these videotapes will be kept in a secure and locked location at all times that they are not being transported or used for recording data. Further, I understand that these videotapes will be observed by the primary investigator (G. Joseph Vrazo), a project assistant, and the project advisor (Dr. R. Wayne Fuqua); and at the completion of the one year period the tapes will be completely erased."

"Because no medication or medically invasive procedures are involved in collection of this information, no physical injury is anticipated due to this study. In the event of unanticipated physical injury resulting from the research procedures, Bronson Methodist Hospital, and/or G. Joseph Vrazo will provide or arrange to provide for all necessary medical care to help me recover, but they do not commit themselves to pay for such care, or to provide any additional compensation. I also understand that neither Bronson Methodist Hospital, Western Michigan University, nor G. Joseph Vrazo agree to bear the expense of medical care for any new illness or complications which may develop during my participation in this study, but are not a result of the research procedures. If I have further questions or concerns regarding my participation in this study, I may direct them to the investigator in charge."

"I acknowledge that I have read and understand the above information, and that I agree to participate in this study. I have received a copy of this document for my own records."

If you are interested in the outcome of this investigation, please contact G. Joseph Vrazo at 382-3082, or Dr. R. Wayne Fuqua at 383-6052.

Participant Date

Witness Date

12/27/86

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Informed Consent for Participation in an Investigation

Background
Within the last few years researchers and experts have begun to examine the role of fathers in the early development of their children. Essentially, they have concluded that there is a need for training programs that will assist fathers in becoming the best parents they can be. A few training programs have been developed and tested, to see how well they work; thus far, no one program has been shown to be the most effective.

Purpose of this Study
As part of my master's thesis research in association with the Clinical Psychology Department at Western Michigan University and the Health Education Services at Bronson Methodist Hospital, I have developed a project whose general purpose is to look at the ways in which first-time fathers interact with and care for their infants.

In spite of the situation described above (i.e., that no one program seems to be the most helpful) one training program shows good potential to be very helpful to fathers. Examining the effectiveness of this program will be the specific purpose of this project.

Qualifications for Participation
Thank you for volunteering for this investigation. You have been randomly selected and randomly assigned to the group of fathers who will not initially be receiving any training. (Note: Random selection and random assignment are systematic and scientific procedures which assure that volunteers were selected and assigned to groups in an unbiased and fair way. If you have a question concerning these procedures, feel free to ask.)

Further, you qualify for this project because you are a first-time father and part of a two-parent family (i.e., you, your wife/partner, and infant make-up your family).

You will receive a five dollar ($5.00) payment at the end of each session. If you complete the study you will receive a twenty-five dollar ($25.00) bonus.

Course of the Study
This research will be carried out during a minimum of two meetings in an educational classroom and a minimum of four meetings in your home. Specifically, there will be two introductory meetings in the classroom: an introductory meeting in your home after your baby is born; and three follow-up meetings - one when your infant is approximately two weeks old, one when your infant is about one month old, and one when your infant is approximately three months old.

The classroom based introductory meetings will last about 30-minutes each. You will be asked to perform an infant-care skills exercise.

The home based introductory meeting will occur following the birth of your baby; it will last about 1 1/2 hours. You will participate in the infant-care skills exercise, a short videotaping session with your infant, and be introduced to a journal that you and your spouse/partner will use to record the amount of time you spend on certain activities related to your baby (e.g., bathing, diapering, playing, etc.).

Each of the follow-up meetings will last about 1 hour. During these meetings you will participate in the infant-care
skills exercise and another short videotaping session with your baby. You and your spouse/partner will be asked to keep journal records for one week at one of the follow-up times (i.e., one or three months). Additionally, you and your spouse/partner will be asked to complete short questionnaires during the last follow-up meeting.

When the research project is completed you will be offered the training manual and, if desired, further training.

Risks and Benefits

Risks: During the course of this investigation, especially during the home based sessions, your privacy will be temporarily invaded by the investigator and, at times, another project staff member. This investigation will be done in such a way so as to reduce any unnecessary invasion of you and your family’s privacy. You may, at times, experience some feelings of inadequacy or uncomfortableness in your role as a caregiver, the investigator will try to reduce the potential of this happening by treating you and your infant with respect and dignity at all times, by providing opportunities for you to ask questions during the course of sessions, and by directly reassuring you if you become uncomfortable or concerned. Your infant will not be handled by the project staff unless, at your request, to provide brief assistance to you.

Benefits: Your participation in the project will enhance our understanding of the father’s role in his child’s early development. Also, provided this investigation yields positive results, it may be helpful in making training programs more readily available to all interested fathers.

Participant’s Acknowledgement

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"I understand that I will be excluded from the study if my infant is born prior to 36 weeks gestational age (i.e., "prematurely"); if my infant is placed in NICU (i.e., Neonatal Intensive Care Unit) by his/her physician; or has any medically diagnosed difficulty that may interfere with the infant’s ability to participate in the investigation. I understand that I will receive a program training manual and further training and assistance with infant-care/infant stimulation skills, if I so desire. I understand that my participation will be on a nonpayment basis if I am asked to withdraw from the investigation."

"I hereby authorize the investigator (G. Joseph Vrazo) to release the information obtained in this study to the
medical/psychological science literature. I understand that neither my infant nor I will be identified by name. I understand that all videotapes made of interactions between my infant and me will be kept intact (i.e., not erased) for one year following the completion of the last follow-up session. I understand that these videotapes will be kept in a secure and locked location at all times that they are not being transported or used for recording data. I understand that these videotapes will be observed by the primary investigator (G. Joseph Vrazo), a project assistant, and the project advisor (Dr. R. Wayne Fuqua). Further, I understand that at the completion of the one year period the tapes will be completely erased.

"Because no medication or medically invasive procedures are involved in collection of this information, no physical injury is anticipated due to this study. In the event of unanticipated physical injury resulting from the research procedures, Bronson Methodist Hospital, and/or G. Joseph Vrazo will provide or arrange to provide for all necessary medical care to help me recover, but they do not commit themselves to pay for such care, or to provide any additional compensation. I also understand that neither Bronson Methodist Hospital, Western Michigan University, nor G. Joseph Vrazo agree to bear the expense of medical care for any new illness or complications which may develop during my participation in this study, but are not a result of the research procedures. If I have further questions or concerns regarding my participation in this study, I may direct them to the investigator in charge."

"I acknowledge that I have read and understand the above information, and that I agree to participate in this study. I have received a copy of this document for my own records."

If you are interested in the outcome of this investigation, please contact G. Joseph Vrazo at 382-3082, or Dr. R. Wayne Fuqua at 383-6052.

Participant ______________________________ Date ______________________________

Witness ______________________________ Date ______________________________

12/27/86
APPENDIX B

Task Analysis Recording Sheet
FEEDING SCORING SHEET

<table>
<thead>
<tr>
<th>Date</th>
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<th>Phase/Session</th>
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**Percentage**

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<th>Father</th>
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Place the appropriate interval number in the box next to each item.

1. Wash hands.
2. Fill bottle with about three to four ounces of formula or follow physician's advice.
3. Size of nipple hole should be checked: formula should drop but not flow in a steady stream.
4. Bottle cap should be checked. It should be loose enough so that air bubbles can enter the bottle as milk is sucked out of it.
5. Use cradle hold.
6. Gently touch baby's lips with nipple (baby will turn and grasp the nipple with his/her mouth).
7. Hold the bottle straight out at a 90° angle to the baby's mouth.
8. Both the neck and nipple of the bottle should be filled with formula.
9. After feeding, place the unused portion of formula in the refrigerator.

**Stimulation Activities**
APPENDIX C

Play and Affectional Behavior Recording Sheet
"PLAY-TIME SCORING FORM"

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APPENDIX D

Daily Activity Journals
Journal: Father's Form

Date: Day:

Please estimate (to the nearest 5-minute interval; for example 20-minutes, 35-minute, etc.) the amount of time you have spent doing a listed activity today with your infant.

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Please estimate the amount of time you have spent at home each day: S ___ M ___ T ___ W ___ Th ___ F ___ Sat ___

PLEASE NOTE:

Bathing/Cleaning - may include either a tub or sponge bath; time begins when you begin to undress your infant and ends when our child is dressed again.

Feeding - include only bottle feedings; if your wife/partner is breastfeeding, please make a note of the number of bottle feedings.

Diapering - time begins when you start to undress your infant and ends when your infant is dressed again; please note any illness (e.g., diarrhea or constipation) that may affect the number of changes you made that day.
Comforting - record comforting during those times when this is the sole activity with your child; if you are feeding, bathing, or diapering and comforting at the same time, score the other infant-care skill only.

Playing - includes discrete occurrences only (i.e., times when you are only playing with your child and not involved with any other infant-care skill).
Journal: Mother's Form

Date: Day:

Please estimate (to the nearest 5-minute interval; for example 20-minutes, 35-minutes, etc.) the amount of time YOU have spent doing a listed activity today with your infant.

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Please estimate the amount of time YOU have spent at home each day: S ___ M ___ T ___ W ___ Th ___ F ___ Sat ___

Please estimate the amount of time YOUR SPOUSE has spent doing these activities today (Note: if you have no good way to make this estimate please indicate by using the code—NBE; NBE = no basis for estimate).

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</table>
Playing: __ __ __ __ __ __ __ __ __

Please estimate the amount of time YOUR SPOUSE has spent at home each day: S ___ M ___ T ___ W ___ Th ___ F ___ Sat ___

PLEASE NOTE:

Bathing/Cleaning - may include either a tub or sponge bath; time begins when you begin to undress your infant and ends when your child is dressed again.

Feeding - include only bottle feedings; if you breast feed please note the number of bottle feedings.

Diapering - time begins when you start to undress your infant and ends when your infant is dressed again; please note any illness (e.g., diarrhea or constipation) that may affect the number of diaper changes you made for that day.

Comforting - record comforting during those times when this is the sole activity with your child; if you are feeding, bathing, or diapering and comforting at the same time, score the other infant-care skill only.

Playing - includes discrete occurrences only (i.e., times when you are only playing with your infant and not involved with any other infant-care skill).
APPENDIX E

Training Manual
PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

54-90

University Microfilms
International
300 N. ZEEB RD., ANN ARBOR, MI 48106 (313) 761-4700

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APPENDIX F

Consumer Satisfaction Questionnaires
PARENT'S CONSUMER SATISFACTION QUESTIONNAIRE

Parent's Name ___________________________ Date ______________________

The following questionnaire is part of our evaluation of the training program that you have received. It is important that you answer as honestly as possible. The information obtained will help us to evaluate and continually improve the program we offer. Your cooperation is greatly appreciated.

A. The Overall Program

Please circle the response that best expresses how you honestly feel.

1. At this point, my expectation for satisfactory outcome of the training program is:

| very pessimistic | slightly pessimistic | neutral | slightly optimistic | very optimistic |

2. I feel the approach to teaching infant care by using this type of training program is:

| very inappropriate | slightly inappropriate | neutral | slightly appropriate | very appropriate |

3. Would you recommend the program to a friend or relative?

| strongly recommend | slightly neutral | not recommend | strongly not recommend | slightly not recommend | not recommend |

116
4. How confident are you in your ability to use these infant care skills with your newborn?

very unconfident somewhat neutral somewhat confident very confident

5. My overall feeling about the training program is:

very negative somewhat neutral slightly positive very positive

PARENT'S CONSUMER SATISFACTION QUESTIONNAIRE

B. Teaching Format

Difficulty

In this section, we'd like to get your ideas of how difficult each of the following types of teaching has been for you to follow. Please circle the response that most closely describes your opinion.

1. Lecture Information

extremely easy somewhat neutral somewhat difficult extremely difficult
easy easy difficult
difficult
difficult

easy
difficult
difficult

easy
difficult
difficult

easy
difficult
difficult

easy
difficult
difficult

2. Demonstration of Skills by the Trainer

extremely easy somewhat neutral somewhat difficult extremely difficult
easy easy difficult
difficult
difficult
easy
difficult
difficult
easy
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3. Practice of skills in the hospital with the trainer.

extremely easy somewhat neutral somewhat difficult extremely difficult
easy easy difficult
difficult
difficult
easy
difficult
difficult
easy
difficult
difficult

4. The written materials you were asked to read were:

extremely easy somewhat neutral somewhat difficult extremely difficult
easy easy difficult
difficult
difficult
easy
difficult
difficult
easy
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difficult

Usefulness

In this section, we'd like to get your ideas of how useful each of the following types of teaching is for you now. Please circle the response
that most clearly describes your opinion

1. Lecture Information

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2. Demonstration of Skills by Trainer

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3. Practice of skills in the hospital with the trainer were:

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4. The written materials you were asked to read were:

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<th>useful</th>
<th>not</th>
<th>useful</th>
<th>useful</th>
<th>extremely</th>
<th>useful</th>
<th>useful</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

C. Specific Infant Care Procedures

Difficulty

In this section, we'd like to get your ideas of how difficult it usually is to each of the following techniques now. Please circle the response that most closely describes how difficult the technique is to do.

1. Holding

<table>
<thead>
<tr>
<th></th>
<th>extremely</th>
<th>easy</th>
<th>somewhat</th>
<th>neutral</th>
<th>somewhat</th>
<th>difficult</th>
<th>extremely</th>
<th>not</th>
<th>easy</th>
<th>easy</th>
<th>difficult</th>
<th>difficult</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Feeding

<table>
<thead>
<tr>
<th></th>
<th>extremely</th>
<th>easy</th>
<th>somewhat</th>
<th>neutral</th>
<th>somewhat</th>
<th>difficult</th>
<th>extremely</th>
<th>easy</th>
<th>easy</th>
<th>easy</th>
<th>difficult</th>
<th>difficult</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Burping
extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult
difficult
difficult

4. Bathing
extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult
difficult
difficult

5. Diapering
extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult
difficult
difficult

6. Temperature Taking
extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult
difficult
difficult

7. The overall group of procedures were:
extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult
difficult
difficult

Usefulness
In this section, we'd like to get your opinion of how useful each of the following techniques is to you in improving your interaction with your child. Please circle the response that most clearly describes the usefulness of the technique.

1. Holding
extremely not somewhat neutral somewhat useful extremely
not useful not useful useful useful

2. Feeding
extremely not somewhat neutral somewhat useful extremely
not useful not useful useful useful
3. Burping

<table>
<thead>
<tr>
<th>Extremely useful</th>
<th>Not useful</th>
<th>Somewhat useful</th>
<th>Neutral</th>
<th>Somewhat useful</th>
<th>Useful</th>
<th>Extremely useful</th>
</tr>
</thead>
</table>

4. Bathing

<table>
<thead>
<tr>
<th>Extremely useful</th>
<th>Not useful</th>
<th>Somewhat useful</th>
<th>Neutral</th>
<th>Somewhat useful</th>
<th>Useful</th>
<th>Extremely useful</th>
</tr>
</thead>
</table>

5. Diapering

<table>
<thead>
<tr>
<th>Extremely useful</th>
<th>Not useful</th>
<th>Somewhat useful</th>
<th>Neutral</th>
<th>Somewhat useful</th>
<th>Useful</th>
<th>Extremely useful</th>
</tr>
</thead>
</table>

6. Temperature Taking

<table>
<thead>
<tr>
<th>Extremely useful</th>
<th>Not useful</th>
<th>Somewhat useful</th>
<th>Neutral</th>
<th>Somewhat useful</th>
<th>Useful</th>
<th>Extremely useful</th>
</tr>
</thead>
</table>

7. The Overall Group of Procedures

<table>
<thead>
<tr>
<th>Extremely useful</th>
<th>Not useful</th>
<th>Somewhat useful</th>
<th>Neutral</th>
<th>Somewhat useful</th>
<th>Useful</th>
<th>Extremely useful</th>
</tr>
</thead>
</table>

D. Trainer(s)

In this section, we'd like to get your ideas about your trainer(s). Please circle the response to each question that best expresses how you feel.

1. I feel that the trainer(s)'s teaching was

<table>
<thead>
<tr>
<th>Very poor</th>
<th>Fair</th>
<th>Slightly above average</th>
<th>Average</th>
<th>Slightly below average</th>
<th>High</th>
<th>Superior</th>
</tr>
</thead>
</table>

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2. The trainer(s)'s preparation was:

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Slightly</th>
<th>Average</th>
<th>Slightly</th>
<th>High</th>
<th>Superior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below</td>
<td>Average</td>
<td>Above</td>
<td>Average</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Concerning the trainer(s)'s interest and concern in me, I was

<table>
<thead>
<tr>
<th>Extremely dissatisfied</th>
<th>Slightly dissatisfied</th>
<th>Neutral</th>
<th>Slightly satisfied</th>
<th>Extremely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied</td>
<td>Dissatisfied</td>
<td></td>
<td>Satisfied</td>
<td></td>
</tr>
</tbody>
</table>

4. At this point, I feel that the trainer in the program was

<table>
<thead>
<tr>
<th>Extremely not helpful</th>
<th>Slightly not helpful</th>
<th>Neutral</th>
<th>Slightly helpful</th>
<th>Extremely helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not helpful</td>
<td>Helpful</td>
<td></td>
<td>Helpful</td>
<td></td>
</tr>
</tbody>
</table>

5. Concerning my personal feelings toward the trainer(s)

<table>
<thead>
<tr>
<th>I dislike</th>
<th>I dislike</th>
<th>I dislike</th>
<th>I have a neutral attitude toward him/her</th>
<th>I like</th>
<th>I like</th>
<th>I like</th>
</tr>
</thead>
<tbody>
<tr>
<td>Him/her</td>
<td>Him/her</td>
<td>Him/her</td>
<td>Very much</td>
<td>Him/her</td>
<td>Him/her</td>
<td>Him/her</td>
</tr>
</tbody>
</table>
SPouse's Satisfaction Questionnaire

Name ___________________________________ Date ____________________

The following questionnaire is part of our evaluation of the training program that your spouse has received. It is important that you answer as honestly as possible. The information obtained will help us to evaluate and continually improve the program we offer. Your cooperation is greatly appreciated.

A. The Overall Program

Please circle the response that best expresses how you honestly feel.

1. At this point, my expectation for satisfactory outcome of the training program is:

   very pessimistic slightly neutral slightly optimistic very optimistic

2. I feel the approach to teaching infant care by using this type of training program is:

   very inappropriate slightly neutral slightly appropriate very appropriate

3. Would you recommend the program to a friend or relative?

   strongly recommend slightly neutral not not not
   recommend recommend recommend recommend

4. How confident are you in your spouse's ability to use these infant care skills with your newborn?

   very unconfident somewhat neutral somewhat confident very confident

   unconfident unconfident confident confident
5. My overall feeling about the training program is:

- very negative
- somewhat negative
- neutral
- slightly positive
- positive
- very positive

6. At this point, I think my husband's ability to handle caretaking concerns is:

- considerably worse
- somewhat worse
- neutral
- somewhat improved
- improved
- greatly improved

B. Teaching Format

Difficulty

In this section, we'd like to get your ideas of how difficult each of the following types of teaching has been for your spouse to follow. Please circle the response that most closely describes your opinion.

1. Lecture Information

- extremely easy
- somewhat easy
- neutral
- somewhat difficult
- difficult
- extremely difficult

2. Demonstration of Skills by the Trainer

- extremely easy
- somewhat easy
- neutral
- somewhat difficult
- difficult
- extremely difficult

3. Practice of skills in the hospital with the trainer.

- extremely easy
- somewhat easy
- neutral
- somewhat difficult
- difficult
- extremely difficult

4. The written materials your spouse was asked to read were:

- extremely easy
- somewhat easy
- neutral
- somewhat difficult
- difficult
- extremely difficult

C. Specific Infant Care Procedures

Difficulty

In this section, we'd like to get your ideas of how difficult it usually is for your spouse to do each of the following techniques now. Please
circle the response that most closely describes how difficult the technique is to do.

1. Holding
   extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult

2. Feeding
   extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult

3. Burping
   extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult

4. Bathing
   extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult

5. Diapering
   extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult

6. Temperature Taking
   extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult

7. The overall group of procedures were:
   extremely easy somewhat neutral somewhat difficult extremely
easy easy difficult difficult

Usefulness

In this section, we'd like to get your opinion of how useful each of the following techniques is to your spouse in improving his interaction with your child. Please circle the response that most clearly describes the usefulness of the technique.
1. Holding

<table>
<thead>
<tr>
<th>extremely not useful</th>
<th>somewhat neutral</th>
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<th>somewhat useful</th>
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<th>extremely useful</th>
</tr>
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</table>

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APPENDIX G

Control Father's Feedback Form
Father's Questionnaire

Father __________________________

Date __________________________

1. Which sources of information on infant-care were helpful to you?

2. Did anyone provide suggestions, demonstrations, and/or feedback on infant-care procedures? (Check and list individuals by their relationship to you, e.g., mom, neighbor, friend)

   ___ Suggestions: 1
   2
   3

   ___ Demonstrations: 1
   2
   3

   ___ Feedback: 1
   2
   3

3. Rate your level of confidence with infant-care procedures (like the exercises we did together) right after your baby was born. (Please circle the number that matches how you felt.)

   1  2  3  4  5
   extremely confident complete lack of confidence

4. Rate how confident you feel now with infant-care procedures.

   1  2  3  4  5
   extremely confident complete lack of confidence

5. a. Any comments regarding your participation in this project

   b. Any suggestions for improvements?
BIBLIOGRAPHY


