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ABSTRACT

A study gauged the effectiveness of prenatal intervention with low socioeconomic, first-time fathers whose partners were experiencing a high- or low-risk pregnancy. Of the 67 men, who were recruited by their partners, half were randomly assigned to participate in an intervention program designed to acquaint fathers-to-be with information, insights, and clinically appropriate techniques in responsive care for infants. Intervention group fathers received two intensive sessions on the nature and capabilities of the preborn and newborn, sensitive responsiveness to preborn and newborn cues and partner cues. After infants' births, fathers were videotaped with infants during two feeding interactions. At time one, intervention fathers were rated from videotapes as significantly more sensitive during feeding interactions. At time two, 1 month later, differences between father groups approached significance. It is concluded that findings demonstrate that an information support program for first-time, low socioeconomic class fathers is feasible, particularly when women in high- or low-risk pregnancies enlist their partners' participation. (Author/RH)

# Father Sensitivity and Empathy With Infants After a Prenatal Information Support Program

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Running head: PRENATAL FATHER INFORMATION SUPPORT

## Abstract

The focus of this study was to determine the effectiveness of prenatal intervention with low socio-economic, first-time fathers whose partners were experiencing a high or low risk pregnancy. Of the 67 men, who were recruited by their partners, half were randomly assigned to participate in an intervention program designed to acquaint fathers-to-be with information, insights and clinically appropriate techniques in responsive care for infants. Intervention group fathers received two intensive one and one-half hour sessions emphasizing the nature and capabilities of the preborn/newborn, sensitive responsiveness to preborn/newborn cues and to partner cues. Postnatally, fathers were videotaped with their infants during two feeding interactions. At Time 1, intervention fathers were rated from videotapes as significantly more sensitive during feeding interactions with their newborn infants ( $p < .004$). At Time 2, one month later, differences between father groups approached significance ( $p < .06$).

# Father Sensitivity and Empathy with Infants After a Prenatal Information Support Program

## Introduction

Expectant fathers can be influential through support of the pregnant partner and in direct appropriate interactions with the baby after birth (Bowlby, 1958; Cox et al., 1989; Pedersen, 1981; Van de Carr, 1988). Lamb (1977) has convincingly demonstrated that babies know their fathers, develop strong attachments to them, and even prefer them to their mothers for some playful activities (Kotelchuck, 1976; Lewis, Feiring & Weinraub, 1981). Yet, of 30 middle class couples interviewed, 23 males reported no previous experience with child care or education for parenting (Fein, 1976). Taubenheim (1981) reported that first-time fathers who fed their infants showed more bonding behaviors. Engaging in a caregiving activity such as feeding may be an important element in the process of paternal infant bonding. A father who is highly bonded to his infant prenatally is more likely to have a stable marriage and be active in the caregiving behavior of his infant at one year. In contrast, fathers with low prenatal attachment scores are less likely to be highly involved with their infants at one year (Robson & Mandel, 1985). New fathers have themselves identified the need for information on infant care skills as their major concern (Obrzut, 1976).

Many new parents face the responsibilities of parenthood

with a personal background ill-suited to providing responsive care to their new baby (Belsky, 1985; Helfer 1980; Resnick, Resnick, Packer & Wilson, 1980). While this lack of preparedness exists for both first-time mothers and fathers, men who are trying to become involved fathers encounter many problems, including the lack of successful role models, a need for practical instruction about the nature of the child and experience in child care, and lack of societal acknowledgement--resulting in almost no socialization for the fathering role for the young male in our culture (Gearing, 1980).

## The Problem

One societal goal of the 80's is to improve the quality and continuity of services to the emerging family (Belsky, 1985; Clarke-Stewart, 1984; Cronenwett, 1984). The possibility of positively influencing parent-infant relations in the opening days of life has led parenting professionals to provide social support in one, a combination, or all of the following categories: informational, instrumental, emotional or appraisal. In their work on educational support to parents, Sparling and Lewis (1980) emphasize the fact that information can play an important role in the area of human services. It is inexpensive, can reach many parents, and can be flexibly presented through varying modalities. House (1981) defines information support as "Provision of information which the

person can use in coping with personal and environmental problems", and specifically, "the number of fathering tips the man has received from professionals, friends, or relatives in the previous month" (p. 24-25).

Those primarily interested in providing information support face questions of clientele, timing and content. Populations of first-time fathers available to researchers have been classified according to SES: upper, middle or lower class; age: teen or adult; ethnicity: caucasian or non-caucasian; relational status: married or unmarried; and pregnancy risk status: high or low.

Perinatal information support programs including fathers are predominantly designed for middle class populations of adult married couples experiencing low risk pregnancies (Arbuckle, 1984; Belsky, 1985; Parke, Hymel, Power & Tinsley, 1980). Despite persistent efforts of some investigators to involve low socioeconomic (SES) couples, research samples are predominantly middle class (Grossman, Eichler & Winickoff, 1980). Others decline to work with a low SES sample based upon the vicissitudes inherent in the circumstances surrounding the lives of many low SES couples, such as change of residence, family breakup, unemployment, or transportation problems, all of which impact on the processes of recruitment, intervention, and attrition.

Research programs for low-income first-time fathers are rare, yet providing information support for low SES fathers

in the prenatal period can be productive. Both attendance of the mother at an antenatal clinic and pregnancy outcome were strongly positive for women whose husbands attended the prenatal program designed for them at the Mother Craft Clinic of Malavani India (Bhalerao, Galwankar, Kowliss, Kumar & Chaturved, 1984).

The change from the childless to the childbearing/childrearing state is one of the most radical lifestyle shifts a person can make - an important factor in offering fathers information support as a risk-prevention service (Cronenwett & Wilson, 1983; Wilson, 1984). Crummette, Thompson and Beale (1985) based their five hour Father-Infant Interaction Program on the conviction that the prenatal period is the most appropriate time to be available to the father to encourage him to discuss his concerns and feelings regarding his role as first-time father as well as to increase his knowledge of newborns. Program fathers were involved in more affective and social activities with their infants than in caregiving functions and increased their knowledge of newborn characteristics and behaviors.

Parke and his colleagues (1980) have concluded that in contrast to high school programs for teaching parenting, where accessibility may be high but motivation is low, pregnancy is a period where motivation is high but accessibility is low. On the assumption that transition to parenthood is an important period of change and learning for

both parents, the present study was designed so that first time low-income fathers-to-be, in both low and high risk pregnancy situations, would be provided with an information support program prior to the birth of their infants.

## Hypotheses

The following three Hypotheses were proposed:

1. Recruitment of low-income, low education fathers can be carried out through contact with pregnant partners, and an information support program for the fathers can be implemented in a hospital clinic setting.

2. At Time 1, on the day of hospital discharge, father sensitivity with infant during a feeding interaction will be higher for intervention than for comparison group fathers.

3. At Time 2, one month post-hospital discharge of the infant, father sensitivity during a feeding interaction in the home will be higher for intervention compared to comparison group fathers.

# Method and Procedures

## Subjects

The sample of 67 fathers consisted of 47(70%) caucasian and 20(30%) non-caucasian. Thirty-six (54%) were single; 31(46%) were married. A small percentage (12%) were acquainted with their partners for less than a year; 30(45%) knew them for a period of 1-2 years, and 29(43%) were

acquainted for three or more years.

The fathers' ages ranged from 19 to 32 years with a mean age of 22.46 years. The mothers' ages ranged from 14-36 years with a mean age of 20.48 years. The educational level for fathers ranged from 7-12 grades with a mean of 11.08. The educational level for mothers ranged from 7-12 grades with a mean of 10.70. Low socioeconomic class status was determined by the Hollingshead 4-factor index (1975). The median Hollingshead score for fathers was 22, with a range of 11-32 and a mean of 20.1. Thus, the majority of the fathers were unskilled laborers or semiskilled workers (See Table 1).

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Insert Table 1 about here

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The sample of fathers was recruited via two pregnancy care centers of the State University of New York (SUNY) Health Science Center. Twenty-two fathers were recruited from the Perinatal Center, which services high risk pregnancies. The Maternity Center, serving women with low-risk pregnancies, provided 45 fathers.

If the mother agreed to discuss participation in the research project with her partner, her agreement was recorded on the preliminary interview, as well as the date

of her next appointment. If the father accompanied her to her next appointment, the interviewer introduced herself to him with the mother present. With the couple together, she explained the nature and purpose of the research project with its three phases, the benefits and risks to the father, the responsibilities of the subjects and the researcher, and our appreciation of his willingness to participate. The consent form was read (aloud if necessary)and signed by the partners and one other witness. A demographic interview was then filled out.

Research Design

The purpose of this study was to determine the effectiveness of a prenatal intervention with low socioeconomic first-time fathers whose partners were experiencing either a low or high risk pregnancy. Fathers agreed to participate throughout the perinatal period, which consisted of three phases:

Phase 1: Antepartum (2nd month of pregnancy to birth). Recruitment, initial interview, pre-testing (for groups 1-4) plus intervention program for treatment group only.

Phase 2: Intrapartum (birth through hospital discharge of infant). Time 1 filming of every father while bottle feeding his infant (either milk or water) in the hospital

setting.

Phase 3: Postpartum (hospital discharge of infant through one month post discharge). Time 2 filming of every father bottle feeding his infant (either milk or water) in the home setting.

Within each pregnancy status group, fathers in this study were randomly assigned into the following groups:

Group 1: High Risk Pregnancy Intervention; Pre-Post Test (HRP I PP) n=11

Group 2: High Risk Pregnancy Comparison; Pre-Post Test (HRP C PP) n=11

Group 3: Low Risk Pregnancy Intervention; Pre-Post Test (LRP I PP) n=11

Group 4: Low Risk Pregnancy Comparison; Pre-Post Test (LRP C PP) n=11

Group 5: Low Risk Pregnancy Intervention; Post-Test Only (LRP I P) n=12

Group 6: Low Risk Pregnancy Comparison; Post-Test Only (LRP C P) n=11

Thus, the independent variables in this study were: 1) treatment status, 2) pregnancy risk status and 3) testing status . Low risk pregnancy groups 3, 4, 5, and 6 form a

Solomon-Postman four-group design (Campbell & Stanley, 1963), with groups 5 & 6 receiving post-test only (See Table 1).

The administration of a variety of measures (such as knowledge of and attitude toward infant) was carried out with Groups 1,2,3, and 4--the pretest groups; items were read aloud if necessary. Intervention program fathers then received a booklet, "Where Are the Fathers?", designed specifically to highlight and summarize the content of the intervention program. Comparison fathers received this booklet at the Time 2 in-home filming of father/infant feeding interactions one month after infant hospital discharge. After the Time 2 filming,each father was provided with:

1. Enrollment in the Cooperative Extension's monthly parent newsletter Baby Business

2. An infant toy or a child's book.

3. Free copying of a videotape of father/infant and father/mother/infant interactions if the couple provided a blank tape.

Intervention Methods

Subsequent to demographic interviews during the late second-to-middle-third trimester of pregnancy, groups 1,3, and 5 received the intervention. Comparison fathers in

groups 2,4, and 6 were not seen again until the postpartum, in-hospital filming of father-infant feeding episodes, carried out with all subjects.

The Information and Insights about Infants (III) intervention program involved two teaching and modelling sessions each one and one-half hours long. Information was shared about: the capacities and functioning of the unborn; pregnancy; father self-image; attitude toward infants; capacities and functioning of babies; responsive parent-infant interactions; and skills and activities in caring for a baby. With a life-size black or white doll (as appropriate), the intervenor modelled the following nurturant behaviors that are performed in empathic infant caregiving:

stimulating to feed without intrusiveness
burping style with gentle pats
postural adjustments and holding, including 'en face'
comforting response to cry and attunement to prevent distress cry
massage for gas pain; general massage
talking to an infant
awareness of infant state cues optimal for responsive interactions
swaddling an infant for comforting
diapering an infant with attentiveness to infant cues

Tender caregiving behaviors were also modelled in response

to simulated infant cues. Time-tables of normal child development from birth to one year of age were provided and the intevenor discussed and clarified child rearing myths, misconceptions, and misperceptions as well as positive attitudes that would facilitate bonding and responsiveness to a newborn. Questions of fathers were answered.

The predominant pattern for delivery of intervention was either group or tutorial sessions in the hospital clinic. Over half of the fathers (57%) were able to participate in group sessions; the rest had tutorials.

Dependent Measures

Two 10 minute videotaped father-infant feeding interactions were coded for each father using the AFIS scale. AFIS is a modified-for-fathers version of the AMIS (Assessment of Mother-Infant Sensitivity) scale (Price, 1983). The AFIS evaluates the quality of early father-infant interactions from a perspective of behavioral empathy. The scale incorporates cognitive, affective, motoric and motivational components of empathy scored as a function of three classes of behaviors that occur in infant feeding: holding and handling, social and affective, and feeding and caregiving. Father-initiated behaviors during interaction with the infant are scored along a 5-point scale, behaviorally defined from failure in behavioral empathy (scores 1,2) or relative failure alternating with sensitive responses (score 3), to sensitive/empathic

behaviors (scores 4 or 5).

## Results and Discussion

All 67 fathers were able to complete both sessions of the information support program provided in the hospital setting. Use of the pregnant partner as a prime person for helping to enlist the low-income fathers was a successful recruitment technique whether fathers were randomly assigned for each pregnancy risk status to the treatment or to the comparison group.

This paper will report on the analysis of the 12 AFIS father items and the 6 AFIS father-plus-infant items coded. Intercoder reliability was established for three coders blind to the group status of the fathers. The Cohen (1960) Kappa reliability coefficients for the three coders were .72, .85 and .79 respectively.

Both ANOVA and Fisher's Exact Tests were used for the data analyses. ANOVA performed on AFIS scores at hospital discharge (Time 1) revealed a significant main effect for the treatment group regardless of testing status or partner pregnancy status. There were no interaction effects (See Table 2).

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Insert Table 2 about here.

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Thus, in the hospital setting, just prior to discharge of the baby, low-income, first-time fathers who had received a brief intervention prenatally were able to hold, feed, and respond to their newborn infants in a more tuned-in, tender, and responsive manner than comparison group fathers who had not experienced the three hours of the information support program.

For summed father-plus-infant AFIS items at Time 1, treatment group scores were significantly higher ( $F$ =9.35, $p$ = <.003) than comparison fathers' scores (see Table 3), and some interaction effects emerged.

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Insert Table 3 about here.

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There was a trend toward a significant treatment x pregnancy interaction ( $F$ =3.61, $p$ <.06). Fathers in the low-risk pregnancy group with intervention had higher scores than intervention fathers in the high-risk pregnancy group. The stresses of a partner's high-risk pregnancy may interfere with some fathers' ability to invest energy in learning new information and attitudes about infants and skills in infant care as provided through the intervention program.

At Time 1, a significant treatment x testing interaction was found ( $F$ = 5.39, $p$ <.02). Group 5 fathers, who had intervention with posttest only, received higher father-

plus-infant AFIS scores compared to groups 1 and 3, the treatment plus pretest groups (see Figure 1).

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Insert Figure 1 about here.

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It is interesting that those fathers who did not fill out a series of pre-test measures but did receive the information support program had higher AFIS scores when father-plus-infant items were tallied. Possibly, fathers who did not have to answer questions prior to intervention had higher expectations of their competence as a function of their participation in the intervention program. Those who were extensively asked questions about their attitudes, perceptions, and knowledge of infants may not have felt as confident once they thought about all the ramifications of becoming empathic toward and caring well for a newborn infant. Sensitization due to pretest inquiries may have decreased their paternal confidence.

At Time 2, one month after infant discharge from the hospital, AFIS scores coded from the in-home father-infant feeding video tapes no longer distinguished as clearly between the intervention and comparison groups, although the ANOVA showed that the difference in favor of the treatment fathers approached significance ( $F$ =3.64, $p$ <.06). These results were for father AFIS codes examined separately (See

Table 4). Similar results were found in favor of the father-plus-infant AFIS scores of the treatment group ( $F$ =3.45, $p$ <.07), at one month after hospital discharage of the infant (See Table 5).

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Insert Tables 4 and 5 about here.

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A post-hoc one-tailed Fisher's Exact Test for the AFIS father items was carried out for the Time 2 scores only, since the main interest of this research relates to the ability of the prenatal intervention program to sustain effects across time after the birth of the baby (See Table 6).

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Insert Table 6 about here.

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For half of the AFIS father items, intervention fathers achieved higher scores significantly more often than comparison fathers. These items were:

1. holding style with close bodily contact; father tuned into infant signals
2. attentiveness, pleasurable mood and affect
3. loving and animated verbal tone
4. stimulating visual interaction with smiling

and verbalization while holding baby 'en face'

5. gentle, smooth, predictable rather than unpredictable or rough handling
6. content of verbalizations is warmly affectionate and loving

The comparison fathers had significantly higher scores on two items:

1. modulation of distress by noticing subtle cues and intervening to prevent crying
3. ceasing to feed when infant seemed satiated rather than continuing to try to feed

The superiority of AFIS father/infant interaction scores for the intervention group, whether or not infant items were included, held up marginally one month after hospital discharge. At this point, there was only a trend for intervention group father/infant interactions in the feeding situation to be more appropriate and attuned than comparison group scores. Some attenuation of initial positive effects of treatment can be seen clearly in examination of individual AFIS items, where the comparison fathers were superior on two and the intervention fathers on six items. Thus, it may well be that two sessions of an information support program for low-income fathers (who are partners of women with high or low-risk pregnancies) are simply not enough to sustain initial new learnings and behavioral patterns which are taught. Or, it may be that the two

fairly lengthy prenatal treatment sessions were sufficient to impel significant empathic, positive father interactions with newborns, but that for sustained positive effects, in work with low-income, low-education fathers, supports need to be provided for first-time fathers well into the infancy period.

## Conclusions

This study demonstrated that an information support program for first-time low-socioeconomic class fathers is feasible particularly when women in high or low risk pregnancies enlist their partners' participation. Intervention fathers were able to participate in three hours of the III (Information and Insights about Infants) program either in group sessions or tutorials. The effectiveness of this treatment was evident in the father-infant interactions coded (by coders blind to the father's group status) from video tapes of father feeding of the infant at time of hospital discharge. Effectiveness of the program as measured from videotapes of an in-home father/infant feeding situation was attenuated at one month postpartum. Programs for low-income, low-education fathers may need to provide more sustained long-term supports after the birth of the infant in order to optimize father/infant interactions.

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## Footnotes

1. Psychometric Characteristics of the AMIS Scale

The internal consistency of the scale items measured by the Cronbach alpha coefficient: 1) maternal items ( n =206, alpha .70 - .87), 2) infant items ( n =206, alpha .68 - .72), and 3) dyadic items ( n =69, alpha .52 - .54) (Walker & Thompson, 1981). Inter-observer reliability coefficients of .70 (Kendall's coefficient of concordance) and .90 (Spearman-Brown correlation coefficient) and percent exact agreement of 92% - 94% have been reported (Price, 1975).

Table 1

Demographic Data for the Six Father Groups

| Variable | M | SD | Range |
|---|---|---|---|
| High Risk Pregnancy Intervention (Pre/Post) n=11 | | | |
| Age of Father | 23.36 | 2.84 | 19-27 |
| Ed. of Father | 10.73 | 1.35 | 8-12 |
| Age of Mother | 23.82 | 6.34 | 16-36 |
| Ed. of Mother | 10.73 | 1.68 | 7-12 |
| Hollingshead | 17.09 | 5.77 | 11-27 |
| High Risk Pregnancy Comparison (Pre/Post) n=11 | | | |
| Age of Father | 23.82 | 3.82 | 19-32 |
| Ed. of Father | 11.27 | 0.91 | 10-12 |
| Age of Mother | 21.36 | 5.20 | 16-32 |
| Ed. of Mother | 10.46 | 1.70 | 8-12 |
| Hollingshead | 21.82 | 4.64 | 17-29 |
| Low Risk Pregnancy Intervention (Pre/Post) n=11 | | | |
| Age of Father | 22.00 | 2.57 | 19-28 |
| Ed. of Father | 11.00 | 1.67 | 7-12 |
| Age of Mother | 19.46 | 3.01 | 14-25 |
| Ed. of Mother | 9.73 | 1.42 | 8-12 |
| Hollingshead | 21.27 | 4.59 | 13-32 |
| Low Risk Pregnancy Comparison (Pre/Post) n=11 | | | |
| Age of Father | 22.27 | 2.80 | 19-27 |
| Ed. of Father | 11.09 | 1.58 | 7-12 |
| Age of Mother | 19.46 | 1.86 | 17-22 |
| Ed. of Mother | 10.91 | 1.38 | 8-12 |
| Hollingshead | 19.75 | 4.25 | 11-24 |
| Low Risk Pregnancy Intervention (Post) n=12 | | | |
| Age of Father | 21.25 | 2.96 | 18-26 |
| Ed. of Father | 10.83 | 1.19 | 8-12 |
| Age of Mother | 19.08 | 2.35 | 17-23 |
| Ed. of Mother | 11.17 | 0.94 | 10-12 |
| Hollingshead | 19.75 | 3.79 | 14-25 |
| Low Risk Pregnancy Comparison (Post) n=11 | | | |
| Age of Father | 22.18 | 2.60 | 19-27 |
| Ed. of Father | 11.55 | 0.82 | 10-12 |
| Age of Mother | 19.82 | 1.78 | 17-22 |
| Ed. of Mother | 11.18 | 1.47 | 8-12 |
| Hollingshead | 21.18 | 5.47 | 14-32 |

Groups were equivalent regarding race.

Table 2

Means and Standard Deviations for Time 1 Postnatal Father AFIS Scores

| Father Group | N | M | SD |
|---|---|---|---|
| Comparison | 32 | 9.37 | .63 |
| Intervention | 34 | 9.77 | .52 |
| High Risk Pregnancy | 22 | 9.43 | .55 |
| Low Risk Pregnancy | 44 | 9.65 | .62 |
| Pre-Post | 43 | 9.56 | .57 |
| Post Only | 23 | 9.60 | .67 |

Table 3

Means and Standard Deviations for Time 1 Postnatal Father Plus Infant AFIS Scores

| Father Group | N | M | SD |
|---|---|---|---|
| Comparison | 32 | 11.94 | 1.11 |
| Intervention | 34 | 12.42 | 0.83 |
| High Risk Pregnancy | 22 | 11.92 | 0.89 |
| Low Risk Pregnancy | 44 | 12.32 | 1.03 |
| Pre-Post | 43 | 12.01 | 0.88 |
| Post Only | 23 | 12.51 | 1.31 |

Table 4

Means and Standard Deviations for Time 2 Postnatal Father AFIS Scores

| Father Group | N | M | SD |
|---|---|---|---|
| Comparison | 32 | 8.95 | 0.89 |
| Intervention | 34 | 9.33 | 0.86 |
| High Risk Pregnancy | 22 | 9.22 | 0.87 |
| Low Risk Pregnancy | 44 | 9.11 | 0.91 |
| Pre-Post | 43 | 9.17 | 0.93 |
| Post Only | 23 | 9.10 | 0.83 |

Table 5

Means and Standard Deviations for Time 2 Postnatal Father Plus Infant AFIS Scores

| Father Group | N | M | SD |
|---|---|---|---|
| Comparison | 32 | 11.78 | 1.28 |
| Intervention | 34 | 12.43 | 1.23 |
| High Risk Pregnancy | 22 | 12.33 | 1.34 |
| Low Risk Pregnancy | 44 | 12.16 | 1.24 |
| Pre-Post | 43 | 12.18 | 1.29 |
| Post Only | 23 | 12.28 | 1.23 |

Table 6

One Month Postnatal Father AFIS Scores: Fisher Exact Tests For Intervention vs. Comparison Groups

| Item | Score | Comparison Freq | Comparison % | Intervention Freq | Intervention % | p |
|---|---|---|---|---|---|---|
| 1. spatial distance | low | 287 | 47.60 | 295 | 48.92 | .53 |
| | high | 10 | 1.66 | 11 | 1.82 | |
| 2. holding style | low | 60 | 9.95 | 42 | 6.97 | .02 (I) |
| | high | 237 | 39.30 | 264 | 43.78 | |
| 3. mood/ affect | low | 65 | 10.78 | 23 | 3.81 | .000 (I) |
| | high | 232 | 38.47 | 283 | 46.93 | |
| 4. verbal tone | low | 183 | 30.35 | 116 | 19.24 | .000 (I) |
| | high | 114 | 18.91 | 190 | 31.51 | |
| 5. visual interaction | low | 120 | 19.90 | 47 | 7.74 | .000 (I) |
| | high | 177 | 29.35 | 259 | 42.95 | |
| 6. modulation of distress | low | 32 | 5.31 | 50 | 8.29 | .03 (C) |
| | high | 265 | 43.95 | 256 | 42.45 | |

Table 6 (continued)

| Item | Score | Comparison Freq | Comparison % | Intervention Freq | Intervention % | p |
|---|---|---|---|---|---|---|
| 7. care-giving | low | 82 | 13.60 | 57 | 9.45 | .006 (I) |
| | high | 215 | 35.66 | 249 | 41.29 | |
| 8. amount non-feed stim. | low | 61 | 10.12 | 63 | 10.45 | .53 |
| | high | 236 | 39.14 | 243 | 40.30 | |
| 9. resp. to I's changing level of activity | low | 32 | 5.31 | 24 | 3.98 | .14 |
| | high | 265 | 43.95 | 282 | 46.77 | |
| 10. verbal content | low | 226 | 37.48 | 177 | 29.35 | .000 (I) |
| | high | 71 | 11.77 | 129 | 21.39 | |
| 11. manner of stim. to feed | low | 151 | 25.04 | 171 | 28.36 | .12 |
| | high | 146 | 24.21 | 135 | 22.39 | |
| 12. response to infant satiation | low | 8 | 1.33 | 33 | 5.47 | .000 (C) |
| | high | 289 | 47.93 | 273 | 45.27 | |

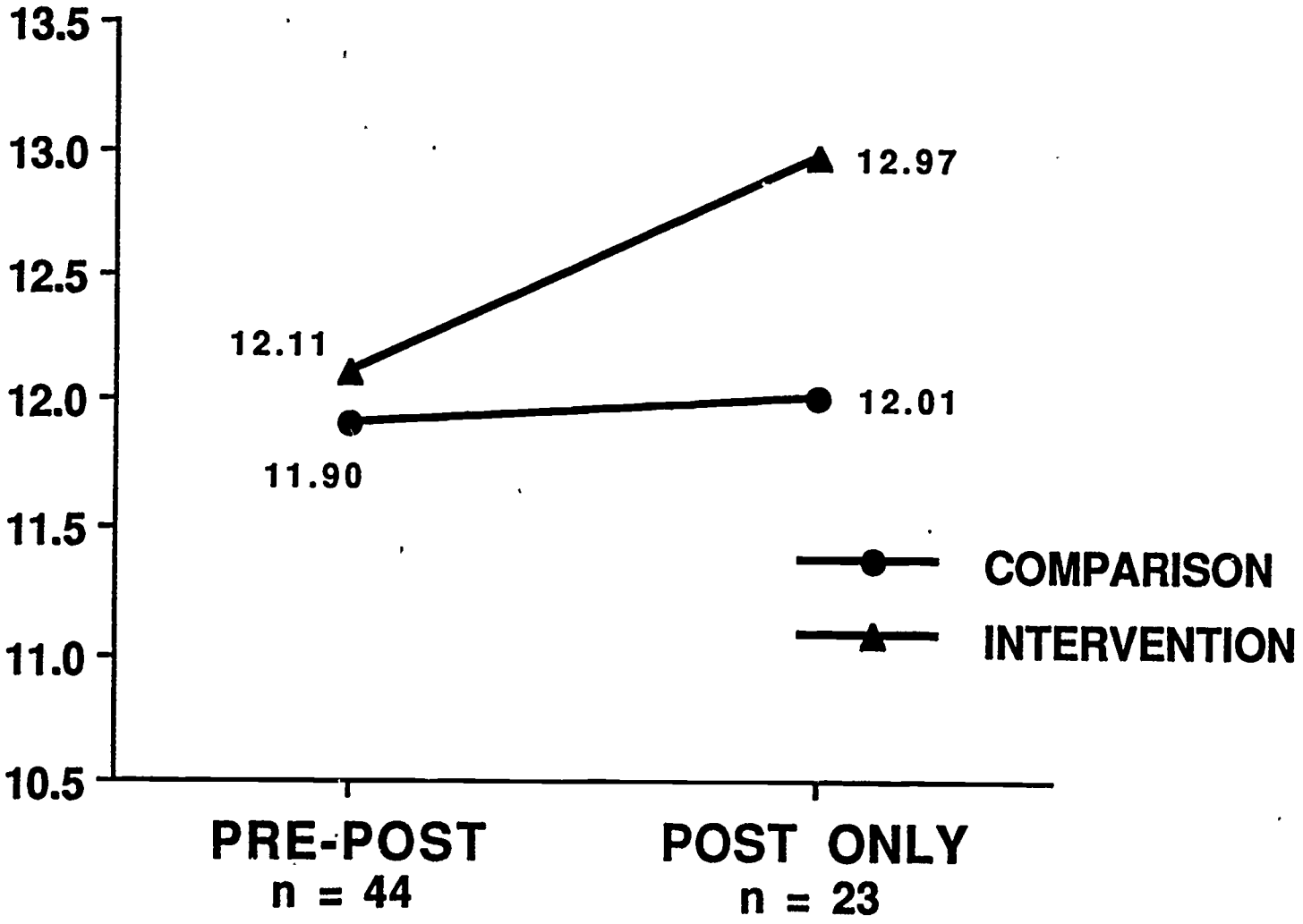
Note. (C): Comparison group scores for this item show significantly more instances of high (4-5) scores than low (1-3) scores.

(I): Intervention group scores for this item show significantly more instances of high (4-5) scores than low (1-3) scores.

## Figure Caption

Figure 1 Interaction of treatment x testing father-plus-infant scores (Time 1).

# FIGURE 1.


13.5
13.0
12.5
12.0
11.5
11.0
10.5
12.97
12.11
12.01
11.90
COMPARISON
INTERVENTION
PRE-POST
n = 44
POST ONLY
n = 23