Incorporating a neurobehavioral intervention into state early intervention programming improves parents’ understanding of their high risk infant.

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Background

- The Individuals with Disabilities Education Act mandates that states provide early intervention services for infants and toddlers with or at risk for developmental difficulties.
- Although infants referred to EI have a host of social and biological risk factors, developmental difficulties center around self-regulation.
- Self-regulation difficulties can further complicate parental psychosocial distress initiated by a high-risk pregnancy or NICU hospitalization.

Study Participants

- Families of infants (< 8 weeks of age, corrected referred to 3 EI programs in Massachusetts were eligible.
- Infants (n=58) were randomly assigned to a NBO-based intervention or usual care group and followed for 7 weeks.
- The NBO group (n=21) received weekly home visits by an EI provider certified in the Newborn Observational (NBO) system - a neurobehavioral relationship-building intervention tool. The usual-care group (n=37) received traditional weekly home visits.

Measures

- All mothers completed the Home Visiting Index (n=50) - a 25-item measure of parents’ perception of the quality and content of home visits.
- The antenatal guidance sub-scale (n=58) contains 10 items including:
  - “My home visitor gave me good advice about feeding,”
  - “My home visitor gave me good advice about caring for my baby,” and
  - “My home visitor told me how behavioral changes I could expect to see each week in my baby.”

Results: Descriptive Statistics

- 8 infants (14%) were minority (black, non-Hispanic, Hispanic, or American Indian).
- 4 (11%) had less than a high school diploma, 9 (24%) had a high school diploma, 9 (24%) had some college, and 16 (42%) had a college degree.
- Six mothers (16%) worked full-time, 9 worked part-time (24%), 13 (34%) were unemployed, and 10 (26%) were stay-at-home mothers.
- Twelve (21%) mothers reported a lack of social supports.
- 23 (41%) were paid, 20 (53%) were low birth weight (<2500 grams), 27 (47%) were hospitalized in the newborn intensive care unit, and 6 (21%) had chronic feeding difficulties.

Discussion

- We used mixed linear regression models to estimate the effects of a NBO-based intervention on parents’ perception of the quality and content of EI home visits.
- There were no differences between the NBO or control groups with regard to maternal or socio-demographic characteristics.
- Parents of infants in the NBO group demonstrated more favorable perceptions of their home visitor’s advice (mean difference = 2.24, 95% CI [-0.16, 5.64]) and engagement/support (mean difference = 0.29, 95% CI [-1.16, 1.73]).

- Parent-infant interaction sub-scale (n=58) contains 6 items including:
  - “My home visitor helped me understand my baby,” “I have learned to see small behavioral changes in my baby,” and “I am confident that I can teach my baby things.”