Behavioral Intervention with Maternal Participatory Guidance Improves Preterm Infant Outcomes

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Challenges that Premature Infants Face

- Communicating via Social Behaviors and Social Interaction
- Successful Oral Feeding
- Growth
- Motor, Language, and Social Development
- Optimal Health
Determine how a maternally administered behavioral intervention improves premature infant social behavior, mother-infant interaction, oral feeding, growth, development, and health.
Distribution of Infant Behavioral State by Group at Baseline - 35 Weeks - Stable Infants

- Quiet Sleep
- Active Sleep
- Drowsy
- Quiet Alert
- Active Alert
- Cry

Experimental vs. Control
Distribution Of Infant Behavioral State By Group Immediate Post-Intervention

- Quiet Sleep
- Active Sleep
- Drowsy
- Quiet Alert
- Active Alert
- Cry

Experimental
Control
Distribution Of Infant Behavioral State By Group At Baseline 33 Weeks – Stable Infants

*P < .20
Distribution Of Infant Behavioral State By Group Immediate Post-Intervention

*P < .0001
Mean Proportion of Time Spent in the Alert Behavioral State - Immediate Post-Intervention

![Graph showing the mean proportion of time spent in the alert behavioral state for H-HOPE and control groups over days, with H-HOPE showing an increasing trend.]
<table>
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<th>ATVV *</th>
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</tbody>
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* Mean
Maternal and Infant Behavior During Feeding

- **Routine Care**
  - Maternal Behavior: 39.091
  - Infant Behavior: 13.455

- **Talking**
  - Maternal Behavior: 39.818
  - Infant Behavior: 16.091

- **ATVV**
  - Maternal Behavior: 45.545
  - Infant Behavior: 17.636

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Percent of Dyads with High Responsiveness During Play

- H-HOPE Intervention (n = 66): 67.6%
- PEP Control (n = 77): 58.1%

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Mean Count of Total Orally Directed Behaviors One Minute After ATVV – Prior to Feeding

![Graph showing the mean count of total orally directed behaviors one minute after ATVV for H-HOPE and Control groups over 14 days.](image-url)
Number of Sucks Estimates across Time by Group

- **Experimental Group**
- **Control**
- **H-Hope**

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Mean Number of Sucks Per Burst

Mean number of sucks per burst Estimates across Time by group

- **Experimental Group**
- **Control**
- **H-Hope**

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Mean Adjusted Maximum Pressure

Mean adjusted max pressure Estimates across Time by group

Time

Mean adjusted max pressure

Experimental Group  Control  H-Hope

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Weight Gain Over Time by Group

Time (day)

- Attention Control
- H-Hope Intervention

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Growth in Length by Group

- Attention Control
- H-Hope Intervention
• Significantly shorter stay for Group E when compared with Group C infants ($p = 0.050$).

• Group E infants discharged ~ 2 weeks earlier than Group C infants (36.54 vs. 38.19 weeks GA; $p = 0.043$).
Percent of Infants Utilizing Health Care Visits, by Type

- All Recommended Well Child Visits
- Acute Care*
- Special Services
- Readmission

H-HOPE vs Control

*p < .05
Future Research

• Implementation of the ATVV/H-HOPE Intervention as the Standard of Care at CHW, Nationally, and Globally
“The study made me more aware as a mother of what my child may like or dislike and how to recognize the difference.”