Neurodevelopmental Supportive Care in South African NICUs – An Essential Change of Attitude

Lizelle Jacobs (PhD candidate)
OUTLINE AND INTRODUCTION

- Preterm Infant and NDSC
- Implementation Research
- Methodology
- Results and Discussion
- Conclusion
- Next Phases
NEURODEVELOPMENTAL SUPPORTIVE CARE (NDSC) (1)

“Developmental care is a broad category of interventions that is designed to minimize the stress of the NICU environment” (2 p. 3)
## BENEFITS OF NDSC (2-9)

### Medical Benefits
- ↑ Physiological regulation
- ↑ Oxygenation
- ↑ Ventilation and weaning from supplemental oxygen
- ↑ Weight gain, height and head circumference
- ↑ Medical status with fewer complications
- Quicker transition to oral feeding

### Cost Effectiveness
- Discharged sooner
- ↓ Critical care cost
- ↓ Cost of hospitalisation

### Improved Growth and Development
- ↑ Neurobehavioural developmental outcomes e.g. vital signs, growth measure, posture
- ↑ Attachment and bonding
- ↑ Family outcomes
• World Health Organization: Bridge the gap between research and practice
• Contributes to the process of applying evidence-based practice
• Considers real-life issues preventing successful implementation
• Identifies contextual facilitators and barriers

AIM: To describe the process of implementation of a NDSC training programme for multi-disciplinary teams, who provide services in two academic public hospital NICUs in South Africa
METHODOLOGY

• Multi-phase design, mixed method
• Total population sample: MDT members
• Phase 1 Aim:
  To investigate the current practice of neurodevelopmental supportive care in the NICU
### RESULTS AND DISCUSSION

#### SURVEY

<table>
<thead>
<tr>
<th>Positive Aspects</th>
<th>High Risk Areas</th>
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</thead>
<tbody>
<tr>
<td>Family-centred care</td>
<td>NICU design</td>
</tr>
<tr>
<td>▪ Parents are involved in care</td>
<td>Individualised care</td>
</tr>
<tr>
<td>▪ Breastfeeding or expressing</td>
<td>Family-centred care</td>
</tr>
<tr>
<td>Positioning</td>
<td>▪ Privacy</td>
</tr>
<tr>
<td>▪ Nesting</td>
<td>▪ Siblings visiting</td>
</tr>
<tr>
<td>Light</td>
<td>▪ Parent support groups</td>
</tr>
<tr>
<td>▪ Phototherapy - eye protection</td>
<td>▪ Physiological flexion</td>
</tr>
<tr>
<td>Knowledge of infant development</td>
<td>Handling techniques</td>
</tr>
<tr>
<td>▪ MDT approach</td>
<td>Sound</td>
</tr>
<tr>
<td></td>
<td>Light</td>
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<tr>
<td></td>
<td>Pain management</td>
</tr>
<tr>
<td></td>
<td>Knowledge of infant development</td>
</tr>
<tr>
<td></td>
<td>▪ NDSC training</td>
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<td></td>
<td>Feeding</td>
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<td></td>
<td>▪ Non-nutritive sucking</td>
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**Note:**
- MDT: Multi-disciplinary Team
- NICU: Neonatal Intensive Care Unit
- NDSC: Neonatal and Developmental Support Courses
RESULTS AND DISCUSSION

SITUATIONAL ANALYSIS

Neurodevelopmental Supportive Care Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>% Adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICU Design</td>
<td>25</td>
</tr>
<tr>
<td>Individualised Care</td>
<td>25</td>
</tr>
<tr>
<td>Family Centred Philosophy</td>
<td>38</td>
</tr>
<tr>
<td>Positioning</td>
<td>8</td>
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<tr>
<td>Handling Techniques</td>
<td>21</td>
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<tr>
<td>Environmental Manipulation</td>
<td>34</td>
</tr>
<tr>
<td>Pain Management</td>
<td>25</td>
</tr>
<tr>
<td>Knowledge of Infant Development</td>
<td>40</td>
</tr>
<tr>
<td>Feeding</td>
<td>25</td>
</tr>
</tbody>
</table>
RESULTS AND DISCUSSION (11)

READINESS TO CHANGE

**Change Commitment**

- People who work here are committed to implementing this change
- People who work here will do whatever it takes to implement this change
- People who work here want to implement this change
- People who work here are determined to implement this change
- People who work here are motivated to implement this change

**Change Efficacy**

- People who work here feel confident that they can handle the challenges that might arise in implementing this change
- People who work here feel confident that they can keep track of progress in implementing this change
- People who work here feel confident that they can coordinate tasks so that implementation goes smoothly
- People who work here feel confident that the organisation can support people as they adjust to this change
- People who work here feel confident that they can manage the politics of implementing this change
NEXT PHASES

PHASE 1
Exploration

PHASE 2
Develop and Implement

PHASE 3
Post-Implementation
‘Developmental care will make the biggest difference and be most successful in the most challenged settings with little resources’12,13
Supervisor: Prof Daleen Casteleijn (University of the Witwatersrand)  
Co-supervisor: Prof Welma Lubbe (North-West University)

How to change the world

#1 Believe that you can

THANK YOU!
1. Lubbe W. Best practice guidelines for neurodevelopmental supportive care of the preterm infant (Doctoral dissertation, North-West University)


REFERENCES


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