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Music Therapy in Preterm Infants in the NICU

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Purpose

The purpose of this literature review was to examine whether adding music therapy (MT) during care of preterm infants in the NICU will have a positive effect on physiological outcomes of the infants and their families during their hospital stay.

Introduction

- When a family has to admit their neonate into a NICU, it is considered to be one of the most stressful times of the parents' and infant's lives.
- The infant admitted is considered to be in a state of "failure to thrive."
- During this time, parents and infants are at risk for attachment issues. Forming a solid attachment is crucial in the first few weeks of the newborn's life.
 - Parents, especially overwhelmed mothers, are less in tune to the child's communicative cues
 - Disruptive attachment may have psychological repercussions in the infant for future healthy relationships
 - Stress and anxiety tend to break family relationships and create a rift in the support system needed
- Sense of hearing was developed in the mother's womb.
 - The infant goes from the soothing sound of mom's voice to the extreme overstimulation and sensory deprivation
 - It is overwhelming and may cause the infant to digress instead of improve
- One way to decrease anxiety of preterm infants and their parents is to add music therapy during the daily NICU care.
- Many studies have shown that infants who have the addition of music in their daily care have significantly better outcomes than infants who do not receive music therapy.

PICOT Statement

- **Population:** Preterm infants & their parents in the NICU
- **Intervention:** Use of music therapy during care
- **Comparison:** No use of music therapy during care
- **Outcome:** Faster discharges & positive changes in VS in neonates, decrease anxiety/stress in parents
- **Timeline:** 2-3 days a week during hospital stay

Interventions/Method

- Mark Ettenberger conducted a study in Colombia where MT was introduced to infants during the process of kangaroo care with the mother.
- Leila Taheri lead a similar study where infants heard MT through a headphone from a music player device during daily care.
- Both studies focused on the outcomes of how infants reacted before, during, and after the therapy.
- In all the research studies, there was a control group and an intervention group.
 - Control group (CG): received standard NICU care
 - Intervention group (IG): receive standard NICU care with the addition of music therapy
- 2-3 days a week, the intervention samples will have a music therapy session
 - Music added to the setting during kangaroo care/headphones on the infant's head
 - Parents choose genre of music or song
 - Despite song choice, the music had a slow tempo and soft beat
 - Most frequently chosen: nursery rhymes, lullabies, religious songs, country, pop
- During the MT, infants will be connected to pulse ox, HR, and respirations will be counted
- It is recommended that parents are present during all MT sessions so they have the opportunity to benefit from the therapy as well

Results/Conclusion

- With the addition of music therapy into daily NICU care, there were some significant outcomes.
- In most cases, infant heart rate was reduced and oxygen saturation was increased, as well as more stable breathing patterns.
- Infants expended less calories which resulted in increased weight.
- Stay of hospitalization was shorter in the intervention group vs the control group.
 - Rehospitalization rates were also lower in the IG compared to the CG
- Parents reported feeling less stress and more relaxed
 - IG parents also reported better bonding patterns than CG parents



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