Kangaroo Care: A Catalyst for Bonding Between the Mother-Premature Infant Infant Dyad

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Introduction

❖ Preterm (PT) neonates are at higher risk for both health and psychosocial problems (Feldman, 2004)

❖ **Standard care in NICU (current):** swaddled and confined in incubators for most of the day (Young, 2013).

❖ **Kangaroo Care (KC):** Unclothed PT infants are placed in the kangaroo position, upright on mother’s bare chest between her breasts (Veras & Traverso-Yepez, 2011).

➢ Thermal control & bonding promoted through KC in first use of KC in Colombia (1979)

❖ Despite research exhibiting the strong correlation between KC and bonding, KC is **still NOT** being implemented as a standard intervention in the NICU (Flacking et al., 2012).
Question of Interest:

In PT neonates, how does KC compared with the standard care of PT neonates in the NICU, affect different aspects of mother-infant bonding during the first year of life?

Influence of KC Technique on 3 Outcomes:

❖ Improved breastfeeding
❖ Maternal psychosocial well-being
❖ Mother-infant bonding
Literature Review: KC Improves Breastfeeding and Bonding

❖ Hake-Brooks & Anderson (2008): KC dyads breastfed almost three months longer and 100% breast milk exclusively longer than the control dyads.

❖ Flacking, Ewald & Wallin (2011): Very preterm (VPT) infants (<32 gestational weeks) that breastfed at 1, 2, 5, and 6 months had spent MORE time in KC than those not breastfeeding at those periods; significance at 3 & 4 months.

➢ No significant association between duration of KC and exclusive breastfeeding duration in the PT dyads.
KC Improves Breastfeeding Continued:

❖ Gregson & Blacker (2011): Increase in exclusive breastfeeding rates upon discharge from hospital in the KC group (All PT infants were from diabetic mothers and/or of low birthweight).

➢ No significant results at 6-month evaluation but mother satisfaction scores about KC were high

❖ These studies offer support to mothers feeling empowered as their able to do something for their PT infants through confidence in handling and feeding their infants (Nyqvist et al., 2010)
Literature Review: Maternal Psychosocial Well-Being & Bonding

- **Holditch-Davis et. al (2013):** By mothers taking a vital part in their infants caretaking with KC and awareness of the KC’s benefits to their newborn, maternal distress was reduced; this led to better parents and bonding overall.

- **Kearvell & Grant (2010):** several studies documented that KC provided mothers of PT infants with an intense feeling of connectedness; this made them feel that they personally nurtured their infants which further enhanced their confidence.
Literature Review: KC & Bonding

- **Gregson & Blacker (2011):** Bonding was one of the main themes and accounted for greatest number of comments in the parents’ KC diaries.

- **Feldman, Rosenthal & Eidelman (2013):** KC PT neonates showed more physiological improvements & more reciprocal mother-child relationships longitudinally than the control study.
  
  - Positive maternal postpartum repertoire possibly induced by the oxytocin released during dyad contact from KC.
Neu & Robinson (2010): KC dyads exhibited more coregulation behaviors during play than control dyads.

➢ Coregulation: “Important quality of interaction during which dyad functions as an integrated entity to regulate each other’s behavior” (Fogel, 2011).

These findings support previous literature on how PT neonates that received early KC displayed more optimal dyadic interactions and bonding than dyads that did not receive KC (Neu & Robinson, 2010).
Clinical Implications

❖ More education/knowledge of KC intervention is required
❖ Option of KC should be common knowledge to parents so they can request providing STS contact to their PT infants.
❖ Allocate public funds/awareness work and training of NICU nurses (Feldman, 2004):
  ➢ KC experts report: most-effective method is when 1 nurse is in charge of introducing/supervising KC intx to staff and parents.
❖ Funds to train special nurses and maintain forums of supervision, communicating knowledge, and answering on-site problems involving KC (Feldman, 2004).
Clinical Implications Continued:

❖ Nurses have the unique opportunity and role to initiate, educate, and promote the bonding process and potentially shape the future of these families (Husmillo, 2013).

❖ Utilizing KC in the NICU to promote a more family-centered form of care in this setting.

❖ Implement strategies in NICU to facilitate closeness and privacy to increase KC comfortability and opportunity.
Potential Barriers & Ethical Concerns

❖ Time management issues: Finding time to schedule KC education to NICU nurses
❖ Maternal mood and postpartum depression influences on KC
❖ Cultural differences about STS contact
❖ Safety, staff shortage, staff reluctance, lack of organizational support, insufficient education (Valizadeh, 2013).
❖ Ethical concerns:
  ➢ Staff and parent: participation and informed consent
    ■ Minor, mentally ill, postpartum depressed mothers
  ➢ Ensuring that PT neonates are medically stable enough to engage in KC with mother to maintain safety
Expected Outcomes/Mode of Measurement

❖ Hypothesis: Positive outcomes of mother-infant bonding identified as: breastfeeding, maternal psychosocial well-being, and bonding behaviors like coregulation, will improve in PT neonates provided with KC more than in PT neonate groups that received standard NICU care.

➢ Future research: Qualitative measures of bonding (E.g., maternal surveys, journals etc.) through a pretest/post-test comparative design (before and after KC implementation)

- Does length of KC duration offered impact bonding behaviors?
- Longitudinal effects of bonding from KC—Longitudinal study
- Correlation between bonding and KC by fathers
- How structural, cultural, and socioeconomic factors affect KC
- Nurse’s attitudes about KC
Conclusion

❖ KC is an affordable and easy intervention that greatly influences the vital physical and emotional bond that exists between mother and infant.

❖ By providing STS contact to PT infants that are deprived of this experience in the NICU environment, mothers can create a lasting impact on the PT infant’s physiological and psychosocial growth and development (Husmillo, 2013).

❖ *It is thus imperative that nurses integrate KC for parent-PT infant dyads and thereby facilitate a change in the NICU infrastructure and policy:*
  - Increase privacy in NICU
  - Promote education and training of NICU nurses in KC


