

of the axillary temperature target (36.5° - 37.5°) was 7.4±13.5 and 19.7±27.8 min during Skincubator and T-SSC respectively (p=0.002). Initial temperature drop during Skincubator care was smaller than in t-SSC (0.2°±0.1 vs 0.5°±0.3 P<0.001 n=35).

Six babies had PICC lines or umbilical venous catheters, and one received phototherapy during Skincubator care. No line dislodgment occurred. No baby had moderate hypothermia during Skincubator care. Five babies experienced moderate hypothermia of 35.5-35.9 during 6 t-SSC sessions.

Relevance to NIDCAP

The Skincubator may promote early SSC for very and extreme

preterm newborns, aligning with the principles of NIDCAP by providing individualized, developmentally supportive care in the NICU.

Conclusions

The Skincubator can effectively create a humidified and warm environment on the human body for PN. The Skincubator seems to be safe and may be superior to t-SSC in maintaining PN temperature, this may be clinically significant for extreme PN. Further research is needed to validate these promising results and assess the long-term benefits of the Skincubator in improving outcomes for premature neonates.

Historical Roots of Developmental Care in Newborn Infants: A Bibliometric Analysis Using Reference Publication Year Spectroscopy

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DOI 10.14434/do.v17i1.37077

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Currently, some kind of developmental care is to be found in most Neonatal Intensive care Units (NICU), and the presence and participation of the parents are considered fundamental by neonatologists worldwide. The history of developmental care has rarely been studied. Bibliometrics as a quantitative method is not only useful for research assessment purposes, but also for analyzing the history of science. Reference Publication Year Spectroscopy (RPYS) was proposed to objectively analyze the roots of a research field.¹ RPYS has been used for example for neonatal pain.²

Aim

We investigated the historical origins of developmental care in newborn infants using RPYS to reveal the most important publications for the evolution of this research field and to evaluate their relative importance within the field.

Methods

A Web of Science search query combining infant- and intervention-related synonyms was performed on February 2, 2022. The search retrieved 5,633 papers containing 7,248 distinct cited references. RPYS analysis was performed on this dataset to identify the most referenced historical publications for developmental care in newborn infants. Median deviation analysis identified peak publication years including the most cited historical references. Landmark papers were defined as those belonging to the top 10% of the most frequently referenced publications for longer than 20 years.

Results

The RPYS peaks showed an early phase (1936-1986), during which infant development was studied and analyzed, leading to a conceptualization of developmental care for newborn infants. The following years (1986-2015) showed an explosion of interest in developmental care, highlighting two main programs: the Newborn Individualized Developmental Care and Assessment Program (NIDCAP) and the Infant Health and Development Program (IHDP) with many publications during those years striving to demonstrate the evidence of their clinical benefits.

Relevance to NIDCAP

A major turning point was the conceptualization of the Synactive Theory of Development by H. Als in 1982. NIDCAP (and the IHDP) provided the basis of the broad concept of infant and family-centered developmental care, implemented at various levels in most NICUs since the turn of the century.

Conclusion

Developmental care has become increasingly important through the implementation of two programs: NIDCAP and IHDP.

Published 2024, Acta Paediatrica <https://doi.org/10.1111/apa.16996>

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