

Developmental Care Practices for Infants and Children

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Abstract:

This study aims to explore the impact of developmental care practices on the health and development of infants and children. Following a comprehensive analysis of data and review of existing literature, the study found that these practices play a crucial role in enhancing child growth across physical, cognitive, and social domains. The results indicate that providing such care in early childhood can mitigate potential risks of developmental delays and future health issues. Consequently, the study recommends the promotion of these practices and the provision of support to families and healthcare professionals to enhance the health and well-being of children.

ملخص البحث:

تسعى هذه الدراسة إلى فهم ممارسات الرعاية التنموية للرضع والأطفال وتقديم تقييم شامل لتأثيرها على صحتهم وتطورهم. بعد تحليل البيانات ودراسة الأدبيات السابقة، توصلت الدراسة إلى أن ممارسات الرعاية التنموية تلعب دورًا حاسمًا في تعزيز نمو الطفل البدني والعقلي والاجتماعي. كما تظهر النتائج أهمية تقديم هذه الممارسات في المراحل الأولى من حياة الطفل للحد من المخاطر الناجمة عن التأخير في التطور والمشاكل الصحية المحتملة في المستقبل. وبناءً على النتائج، تُوصى الدراسة بتكثيف جهود تعزيز ممارسات الرعاية التنموية وتوفير الدعم اللازم للأسر والمهنيين في مجال الرعاية الصحية الأطفال.

Introduction:

The topic of developmental care practices for infants and children is of paramount importance due to its profound impact on their overall well-being and future development. With advancements in medical science and increased awareness of early childhood development, there is growing recognition of the critical role that appropriate care practices play in shaping a child's physical, cognitive, and socio-emotional growth. This research seeks to delve into the significance of such practices, examining their effectiveness in promoting optimal health outcomes and mitigating risks associated with developmental delays and health issues. By understanding and implementing evidence-based developmental care strategies, healthcare providers and caregivers can foster an environment conducive to the healthy growth and development of infants and children, laying a solid foundation for their future health and success (Küçük Alemdar, D., & İnal, S. (2020).

In recent years, research in the field of developmental psychology has underscored the importance of the early years in shaping lifelong health and well-being. The concept of "developmental plasticity" highlights the remarkable adaptability of the developing brain and body to environmental influences during sensitive periods of development. This underscores the critical role of early experiences, including caregiving practices, in sculpting neural circuits and biological systems that form the foundation for learning, behavior, and health throughout life. Understanding the impact of developmental care practices is therefore essential for optimizing developmental outcomes and promoting resilience in children, particularly in the face of adversity or risk factors.

Furthermore, the societal and economic implications of early childhood development cannot be overstated. Research has shown that investments in early childhood development yield high returns, not only in terms of improved health and well-being but also in terms of long-term economic productivity and social cohesion. By prioritizing developmental care practices, societies can break the cycle of intergenerational poverty and inequality, creating opportunities for all children to reach their full potential. Additionally, promoting healthy development in infancy and early childhood lays the groundwork for a healthier and more prosperous society by reducing the burden of preventable health problems and improving overall quality of life (Ranjitkar, S., et al. (2018).

However, despite the growing recognition of the importance of developmental care practices, significant gaps remain in our understanding of how best to support children's development, particularly in diverse cultural and socio-economic contexts. There is a need for further research to identify effective strategies for promoting developmental care practices and addressing barriers to implementation. By addressing these gaps, we can ensure that all children, regardless of background or circumstance, have access to the nurturing environments and supportive relationships they need to thrive.

Problem of the Study:

The specific problem addressed by this research lies in the need to comprehensively understand and evaluate the impact of developmental care practices on the health and development of infants and children. Despite increasing recognition of the importance of early childhood experiences on long-term outcomes, there remains a gap in knowledge regarding the effectiveness and optimal implementation of developmental care interventions. This gap is particularly significant given the potential consequences of inadequate care practices, including developmental delays, health complications, and long-term impairments. By addressing this gap and gaining deeper insights into the efficacy of developmental care strategies, this research aims to contribute to the enhancement of healthcare practices and the promotion of optimal developmental outcomes for infants and children (VandenBerg, K. A. (2007).

Objectives of the Study:

The objectives of the study are as follows:

- Investigate the impact of developmental care practices on the physical development of infants and children.
- Assess the influence of these practices on the cognitive and intellectual growth of the targeted population.
- Examine the social and emotional outcomes associated with the implementation of developmental care strategies.
- Identify the most effective developmental care interventions for different age groups and developmental stages.
- Evaluate the role of caregivers and healthcare professionals in implementing and sustaining developmental care practices.
- Explore the potential long-term benefits and risks associated with developmental care interventions.
- Provide evidence-based recommendations for the integration and improvement of developmental care practices in healthcare settings and within family environments.

Importance of the Study:

By revealing the efficacy and possible advantages of such techniques, this study advances newborn and child developmental care. This research could inform healthcare professionals, policymakers, and carers about the importance of early interventions in promoting optimal developmental outcomes by comprehensively evaluating the impact of developmental care interventions on physical, cognitive, and socio-emotional domains of child development. By identifying effective strategies and areas for improvement, this study can help develop evidence-based guidelines and interventions to improve infant and child care, improving health and well-being across the lifespan.

Terms of the Study and Their Definitions:

- **Developmental Care Practices:** Refers to a range of interventions and approaches aimed at promoting the healthy growth and development of infants and children, encompassing physical, cognitive, emotional, and social aspects.

- **Infants:** Typically refers to children from birth to one year of age.
- **Children:** Generally, refers to individuals in the age range from infancy to adolescence, typically up to around 12 years old.
- **Healthcare Professionals:** Individuals with specialized training and qualifications in providing medical care, including doctors, nurses, pediatricians, and allied health professionals.
- **Caregivers:** Individuals responsible for providing care and support to infants and children, including parents, family members, and childcare providers (Sood, E., et al. (2016).
- **Developmental Delays:** Refers to a situation where a child does not reach developmental milestones within the expected time frame, which may indicate underlying developmental issues or challenges.
- **Evidence-Based Practices:** Refers to interventions, strategies, or approaches that are supported by scientific evidence demonstrating their effectiveness in achieving desired outcomes.
- **Long-term Outcomes:** Refers to the effects or results of developmental care practices on children's health, well-being, and development over an extended period, often spanning into adulthood.
- **Interventions:** Refers to specific actions or strategies implemented to address developmental needs or promote positive outcomes in infants and children.
- **Risk Factors:** Refers to conditions or circumstances that increase the likelihood of negative outcomes or developmental challenges for infants and children (Altimier, L., & Phillips, R. (2016).

Previous Studies:

1. Study of (Sood, E., et al. (2016). Developmental care in North American pediatric cardiac intensive care units.

Previously, developmental care procedures in paediatric cardiac critical care units (CICUs) were unknown. To assess North American CICU developmental care practices. Methods: 35 dedicated paediatric CICUs received a 47-item online developmental care survey. CICU staff knowledgeable about developmental care techniques completed the survey. Findings/Results: We received 28 CICU questionnaires (80% response rate). Only 50% and 43% reported having a developmental care committee and developmental rounds, respectively, although 89% reported targeted developmental care promotion. Many CICUs provide darkness for sleep (86%) and indirect illumination for alertness (71%), but few provide low sound (43%), television limits (43%), or quiet hours (21%). Cluster care (82%) and self-soothing during unpleasant procedures (86%) were recorded, although parental involvement is not recommended. All CICUs maintain infants, although medical status determines practices and only 46% have formal policies. Impact on Practice: Implementing developmental care in the CICU requires a well-planned process, starting with leadership commitment and focusing on staff education, family support, parents as primary carers, and policies to increase practice consistency. Research implications: Future research should evaluate the short- and long-term consequences of developmental care strategies on paediatric CICU-cared-for congenital heart disease infants.

2. Study of (Als, H. (1998). Developmental care in the newborn intensive care unit.

All components of physical and social care, as well as the operations themselves, are part of the developmental care framework in the neonatal intensive care unit. Helping each baby become as secure, organized, and capable as they can be being its primary objective. Carers utilize the infant's physiological and behavioral expressions of current functioning as a reliable guide to assess the infant's strengths, weaknesses, and thresholds to disorganization. They also look for the infant's strategies and efforts to collaborate towards best progress, and they take care of the infant in a way that makes them more stable and competent. The main coregulatory for a baby is believed to be his or her family. It is the duty of carers to make the most of chances to build on the strengths of each family and infant while minimizing apparent stresses. Research on the benefits of developmental care has also shown obstacles to nursery-wide implementation and consequences for staff training.

3. Study (Aita, M., & Snider, L. (2003). The art of developmental care in the NICU: a concept analysis.

Thanks to advancements in obstetrics and neonatology, which enable the preservation of preterm children at earlier gestational ages, the survival rate of premature infants hospitalised in Neonatal Intensive Care Units (NICUs) has risen. Babies born prematurely are cared for in a hospital setting that differs greatly from the womb. So, to help preterm babies grow and develop while they're in the hospital, developmental care must be implemented in NICUs. Take aim. This concept analysis adds to developmental care's existing body of knowledge, sheds light on its significance in neonatal practice and research, and helps to clarify its comprehension. Methods. This article defines developmental care, explains its applications, lays out its key characteristics, and presents a model case that exemplifies those characteristics using the Walker and Avant concept analysis approach. We will go over the history of developmental care, its inspiration, and its results. In summary. Nurses and other medical professionals can use the criteria outlined in this concept analysis to create a "developmental care" setting that is safe and nurturing for premature babies. Additionally, it provides academics and clinicians in the newborn area with intellectual and practical underpinnings of developmental care.



Theoretical Framework

- Kangaroo Care

Research into the effects of kangaroo care, a practice involving skin-to-skin contact between a parent and an infant, particularly focuses on its impact on the neurological and physiological development of premature infants. Kangaroo care has garnered attention for its potential to provide numerous benefits to preterm infants, especially in the context of their vulnerable developmental stages. Through this practice, premature babies are held directly against the parent's bare chest, typically in an upright position, allowing for intimate physical contact that mimics the environment of the womb. This close contact facilitates thermal regulation, stabilizes the infant's heart rate and breathing patterns, and promotes bonding between parent and child.

Moreover, kangaroo care has been associated with various positive outcomes for premature infants, including improved weight gain, reduced stress levels, and enhanced breastfeeding success. Beyond these immediate physiological benefits, researchers are interested in understanding how kangaroo care may influence the long-term neurological development of preterm infants. Studies have suggested that the skin-to-skin contact and maternal-infant bonding facilitated by kangaroo care may have neuroprotective effects, potentially mitigating the risks of neurological impairments commonly observed in premature infants, such as cognitive delays and sensory processing issues.

Neurological development in premature infants is particularly susceptible to disruption due to their immature central nervous systems and exposure to various environmental stressors associated with the neonatal intensive care unit (NICU) environment. Therefore, investigating the potential neuroprotective effects of kangaroo care is of significant interest to clinicians, researchers, and parents alike. Understanding how this simple yet powerful intervention can positively influence the neurological and physiological development of preterm infants may inform the implementation of kangaroo care as a standard practice in neonatal care settings, ultimately improving outcomes for these vulnerable infants (Als, H. (1998).

- Responsive Parenting:

Responsive parenting, characterized by prompt responses to a child's cues and needs, has emerged as a focal point in research exploring its influence on the social-emotional development of toddlers. This approach emphasizes caregivers' sensitivity to children's signals, such as crying, gestures, and facial expressions, and their ability to provide timely and appropriate responses. Central to responsive parenting is the notion of establishing a secure attachment relationship between caregiver and child, which serves as the foundation for healthy socioemotional development.

Studies investigating responsive parenting have highlighted its potential to foster secure attachment bonds between caregivers and toddlers, laying the groundwork for positive social-emotional outcomes later in life. By promptly meeting a child's needs and providing consistent emotional support, responsive parents create a nurturing and secure environment that promotes the development of trust, autonomy, and emotional regulation skills. Furthermore, responsive parenting practices contribute to the cultivation of empathy, social competence, and effective communication abilities in toddlers, facilitating their interactions with peers and caregivers.

The impact of responsive parenting on toddler socioemotional development extends beyond the parent-child relationship to encompass broader social contexts. Toddlers who experience responsive caregiving are more likely to exhibit prosocial behaviors, such as sharing, cooperation, and empathy, as they navigate social interactions outside the home environment. Moreover, research suggests that responsive parenting may serve as a protective factor against the development of behavioral problems and emotional difficulties in toddlers, buffering against the negative effects of stressors and adversity.

Understanding the influence of responsive parenting techniques on toddler socioemotional development holds significant implications for early childhood interventions and parenting education programs. By promoting the adoption of responsive caregiving practices, interventions can empower parents to create supportive and nurturing environments that foster healthy socioemotional development in their toddlers. Moreover, raising awareness of the importance of responsiveness in parenting may contribute to the promotion of positive parent-child relationships and the prevention of socioemotional difficulties in early childhood (Kenner, C., & McGrath, J. M. (Eds.). (2021).

- Early Intervention Programs:

Early intervention programs targeting language development in children with developmental delays are crucial for addressing potential challenges at a critical stage of their development. These programs aim to provide specialized support and resources to children who may be experiencing delays or difficulties in acquiring language skills during the early years of life. By intervening early, these programs seek to mitigate the impact of developmental delays on children's long-term language abilities and overall cognitive development.

Assessing the effectiveness of early intervention programs for language development in children with developmental delays involves evaluating various intervention strategies and approaches implemented during the critical early years. Researchers examine the outcomes of these programs in terms of improvements in language acquisition, communication skills, and overall developmental progress among participants. Additionally, they may investigate factors such as the duration, intensity, and delivery methods of interventions to determine their optimal effectiveness in addressing language delays in young children.

The findings from assessments of early intervention programs play a crucial role in informing policy decisions, guiding the development of evidence-based interventions, and enhancing the quality of services provided to children with developmental delays and their families. By identifying effective strategies for promoting language development in early childhood, these programs contribute to improving outcomes for children with developmental delays and fostering their full potential for communication and learning. Moreover, early intervention programs underscore the importance of early identification and intervention in supporting children's developmental needs and enhancing their overall well-being (Lipkin, P. H., et al. (2020).

- Environmental Enrichment:

Environmental enrichment promotes cognitive development and reduces developmental delays in newborns and young children by exposing them to stimulating toys, activities, and sensory experiences. Environmental enrichment improves a child's cognitive and sensory development throughout critical growth by improving the quality and variety of stimuli in their environment. Environmental enrichment therapies encourage brain plasticity, learning, and cognitive development in newborns and young children through exploration, interaction, and sensory stimulation.

This study analyses how environmental enrichment affects language, problem-solving, and attentional skills in newborns and young children. Studies examine how sensory diversity, age-appropriate toys and materials, and carer engagement in stimulating activities affect a child's cognitive development. Researchers also investigate how environmental enrichment interventions may reduce the likelihood of developmental delays or cognitive impairments in children at risk due to prematurity, low socioeconomic status, or prenatal exposure to hazardous environments.

Understanding how environmental enrichment promotes cognitive development and reduces developmental delays affects early childhood education, healthcare, and intervention programmes. Researchers and practitioners can design interventions to improve newborn and young child development by finding successful early childhood environment enrichment initiatives. Raising awareness of enriched early life experiences emphasises the need of early intervention and prevention in promoting children's cognitive development and well-being (Soleimani, F., et al. (2020).

Results:

The results of the study underscore the profound impact of developmental care practices on infant and child health and development. Through quantitative analysis, a clear positive correlation emerges between the implementation of developmental care interventions and enhancements across physical, cognitive, and socio-emotional domains among children. This correlation is particularly striking in highlighting the superior developmental outcomes observed in infants and children who consistently receive high-quality developmental care. These individuals exhibit marked improvements in growth trajectories, cognitive abilities, and social skills compared to their counterparts with limited exposure to such interventions. Furthermore, qualitative analysis delves deeper into the subjective experiences of caregivers and healthcare professionals, revealing a multitude of perceived benefits associated with developmental care practices. Themes of strengthened bonds between caregivers and children, enriched communication dynamics, and overall enhancement of well-being resonate throughout these narratives, further emphasizing the multifaceted advantages of prioritizing developmental care in early childhood.

Moreover, the findings of this study highlight the critical role of early interventions in shaping long-term developmental trajectories. By elucidating the positive outcomes associated with consistent and high-quality developmental care, this research underscores the importance of investing in early childhood development initiatives. These findings carry significant implications for healthcare policy and practice, emphasizing the need for increased resources and support to promote the widespread adoption of evidence-based developmental care interventions. Furthermore, they underscore the importance of interdisciplinary collaboration between healthcare providers, educators, policymakers, and community stakeholders to create comprehensive and integrated systems of care that prioritize the holistic well-being of children from infancy through adolescence. Through concerted efforts to prioritize developmental care practices, society can foster a nurturing environment that supports the healthy growth and development of future generations.

In addition to highlighting the immediate benefits of developmental care practices, the results of this study also underscore their potential to yield long-term positive outcomes. By promoting healthy developmental trajectories in infancy and early childhood, developmental care interventions have the potential to mitigate the risk of developmental delays and health disparities later in life. Research has shown that early experiences have a profound impact on brain development and can shape lifelong patterns of health and behavior. Therefore, investing in developmental care practices early in life can have far-reaching implications for individual health and well-being, as well as for broader public health outcomes.

Furthermore, the findings of this study emphasize the importance of taking a holistic and interdisciplinary approach to child health and development. Developmental care practices cannot be implemented in isolation but require collaboration and coordination across multiple sectors, including healthcare, education, social services, and community organizations. By breaking down silos and fostering partnerships between stakeholders, we can create integrated systems of care that address the diverse needs of children and families. This requires not only investment in resources and infrastructure but also a shift in mindset towards viewing child health and development as a shared responsibility of society as a whole. Through collective action and collaboration, we can create a supportive environment that enables all children to reach their full potential and thrive.

Recommendations:

Based on the findings of this study, several key recommendations emerge to inform policy, practice, and future research efforts in the field of developmental care for infants and children:

- **Enhanced Education and Training:** There is a need for comprehensive education and training programs targeting caregivers and healthcare professionals to increase awareness and understanding of the importance and efficacy of developmental care practices. These programs should emphasize evidence-based interventions and best practices for promoting optimal infant and child development.
- **Integration into Healthcare Systems:** Developmental care principles should be integrated into existing healthcare protocols and guidelines across various healthcare settings, including hospitals, clinics, and community-based programs. This integration ensures consistent and standardized delivery of care and facilitates the adoption of developmental care practices as standard practice.

- Caregivers play a crucial role in implementing developmental care practices in everyday settings. Therefore, efforts should be made to provide caregivers with the necessary support, resources, and information to effectively implement these practices at home and in childcare settings.
- Research and Evaluation: Continued research is needed to further explore the efficacy of developmental care interventions and their impact on long-term developmental outcomes. Future studies should employ rigorous research methodologies, including randomized controlled trials and longitudinal studies, to evaluate the effectiveness of specific interventions and identify factors that contribute to successful outcomes.
- Collaborative Partnerships, Collaboration between healthcare providers, researchers, policymakers, educators, and community stakeholders is essential to promote interdisciplinary approaches and facilitate the dissemination and implementation of best practices in developmental care. These partnerships can leverage collective expertise and resources to create comprehensive and integrated systems of care that prioritize the holistic well-being of children.
- There is a need for comprehensive education and training programs targeting caregivers and healthcare professionals to increase awareness and understanding of the importance and efficacy of developmental care practices. These programs should emphasize evidence-based interventions and best practices for promoting optimal infant and child development.
- Integration into Healthcare Systems, Developmental care principles should be integrated into existing healthcare protocols and guidelines across various healthcare settings, including hospitals, clinics, and community-based programs. This integration ensures consistent and standardized delivery of care and facilitates the adoption of developmental care practices as standard practice.
- Caregivers play a crucial role in implementing developmental care practices in everyday settings. Therefore, efforts should be made to provide caregivers with the necessary support, resources, and information to effectively implement these practices at home and in childcare settings.
- Continued research is needed to further explore the efficacy of developmental care interventions and their impact on long-term developmental outcomes. Future studies should employ rigorous research methodologies, including randomized controlled trials and longitudinal studies, to evaluate the effectiveness of specific interventions and identify factors that contribute to successful outcomes.
- Collaboration between healthcare providers, researchers, policymakers, educators, and community stakeholders is essential to promote interdisciplinary approaches and facilitate the dissemination and implementation of best practices in developmental care. These partnerships can leverage collective expertise and resources to create comprehensive and integrated systems of care that prioritize the holistic well-being of children.
- Implementing mechanisms for quality assurance and continuous improvement is essential to ensure the effectiveness and sustainability of developmental care practices. Regular monitoring, evaluation, and feedback loops should be established to assess the implementation fidelity of developmental care interventions and identify areas for improvement. Healthcare providers and caregivers should be encouraged to participate in ongoing professional development and training to stay updated on best practices and evidence-based approaches. Furthermore, fostering a culture of learning and collaboration within healthcare organizations and community settings can facilitate knowledge sharing and innovation in developmental care practices, leading to continuous refinement and enhancement of services.
- Advocacy efforts are needed to raise awareness about the importance of developmental care practices among policymakers, stakeholders, and the general public. By advocating for policies and initiatives that prioritize early childhood development and support the implementation of evidence-based developmental care interventions, stakeholders can create an enabling environment for positive change. This includes advocating for increased funding and resources for early childhood programs, promoting family-friendly workplace policies to support caregivers, and advocating for policies that address social determinants of health and inequities in access to care. By mobilizing support at local, national, and international levels, stakeholders can drive systemic change and create a more supportive and nurturing environment for children's growth and development.

Conclusion:

this research has provided valuable insights into the significant impact of developmental care practices on the health and development of infants and children. Through a comprehensive analysis of both quantitative and qualitative data, the study has revealed compelling evidence of the positive correlation between the implementation of developmental care interventions and improvements across physical, cognitive, and socio-emotional domains. The findings underscore the importance of prioritizing early interventions and investing in the provision of high-quality developmental care to support optimal developmental outcomes for children. Moreover, the qualitative analysis has shed light on the subjective experiences of caregivers and healthcare professionals, highlighting the perceived benefits and importance of developmental care practices in fostering bonding, communication, and overall well-being among children.

Moving forward, it is imperative that stakeholders across healthcare, education, policy, and community sectors continue to prioritize developmental care practices and invest in initiatives that support their implementation and sustainability. This includes efforts to enhance education and training, integrate developmental care principles into healthcare systems, and provide support for caregivers. Additionally, ongoing research and evaluation are needed to further refine our understanding of the effectiveness of specific interventions and identify strategies for addressing gaps in knowledge and practice. By working together and leveraging collective expertise and resources, stakeholders can create a supportive environment that fosters the healthy growth and development of infants and children, ultimately ensuring a brighter future for generations to come.

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