



Contents lists available at ScienceDirect

Journal of Pediatric Nursing



The Impact of Kangaroo Care on Premature Infant Weight Gain

Melvina Evereklian^{a,b,*}, Bobbie Posmontier^b^a Shady Grove Medical Center, Rockville, MD, United States^b Drexel University, Philadelphia, PA, United States

ARTICLE INFO

Article history:

Received 6 July 2016

Revised 3 February 2017

Accepted 4 February 2017

Available online xxxx

Keywords:

Kangaroo care

Kangaroo mother care

Skin-to-skin care

Premature infants

Preterm infants

Weight gain

Body weight

ABSTRACT

Background: Preterm births occur among 11.4% of all live infant births. Without steady weight gain, premature infants may experience lengthy hospitalizations, neurodevelopmental deficits and hospital readmissions, which can increase the financial burden on the health care system and their families. The total U.S. health-related costs linked to preterm infant deliveries are estimated at \$4.33 billion. Kangaroo care is a feasible practice that can improve preterm infant weight gain. However, this intervention is utilized less often throughout the U.S. due to numerous barriers including a lack of consistent protocols, inadequate knowledge, and decreased level of confidence in demonstrating the proper kangarooing technique. An integrative review was conducted to evaluate the impact of kangaroo care on premature infant weight gain in order to educate nurses about its efficacy among preterm infants.

Data Sources: A literature search was conducted using CINAHL, PubMed, Cochrane Reviews, ClinicalKey and Google Scholar. Large volume searches were restricted using appropriate filters and limiters.

Conclusions: Most of the evaluated studies determined that weight gain was greater among the kangarooing premature infants. Kangaroo care is a low-tech low-cost modality that can facilitate improved preterm infant weight gain even in low-resource settings. Despite its current efficacy, kangaroo care is not widely utilized due to several barriers including an absence of standardized protocols and a lack of knowledge about its benefits. Kangaroo care can become a widespread formalized practice after nurses and parents learn about the technique and its numerous benefits for premature infants, including its association with improved weight gain.

© 2017 Elsevier Inc. All rights reserved.

Contents

Background	0
Search Methods	0
Efficacy of Kangaroo Care on Infant Weight Gain	0
Discussion of Evaluated Studies	0
Conclusions	0
References	0

The preterm infant birth rate within the United States is rising every year (Ahmed & Sands, 2010) and premature infants represent approximately 11.4% of the delivered infant population (McCabe, Carrino, Russell, & Howse, 2014). Within the United States, the expenditures linked to the delivery of premature infants are estimated to be \$4.33 billion and approximately \$760 million of this cost has been allocated

towards the health-related expenses of premature infant patients (Trasande, Malecha, & Attina, 2016).

Although preterm birth is linked to a higher incidence of infant mortality (Ahmed & Sands, 2010), the extent of morbidity is reduced among surviving infants with greater birth weights (Horbar et al., 2012). In addition, daily infant weight gain is also associated with decreased hospital readmissions, cerebral palsy and neurodevelopmental deficits (Ehrenkranz et al., 2006). To promote weight gain among preterm infants and reduce the onset of health complications, various low-tech

* Corresponding author at: 2 Shakespeare Court, Germantown, MD 20876, United States.

E-mail address: mse36@drexel.edu (M. Evereklian).

Table 1
Evidence evaluation table.
Author design sample setting.

Author/year	Participants	Methods	Findings	Level of evidence (Melnyk & Fineout-Overholt, 2011)	Limitations
Acharya et al.	N = 126 intervention group = 63; control group = 63; setting: nursery in Dharan, Nepal	Randomized controlled trial; descriptive statistics	On a daily basis, premature infants in the kangaroo care group gained 10 g while infants in the control group gained 7 g. The average weight gain among infants in the kangaroo care group was 12.11 ± 9.04 g and among control group infants, the resulting weight gain was 3.29 ± 15.81 g ($P < 0.001$). The infant scale was calibrated with a precision of 10 g.	Level II	Enrollment weight of the intervention and control group infants were not comparable.
Bera et al.	N = 500 intervention group = 300; control group = 200; setting: Neonatal unit at the SSKM hospital in Kolkata, India	Controlled trial; student's unpaired <i>t</i> -test	Once the premature infants reached their 3–6 month corrected gestational age, the average weight gain of kangaroo care infants was 7111.8 ± 1017.64 g and the control group infants' weight gain was 5668.4 ± 1101.46 g ($P < 0.001$).	Level III	No randomization; potential for selection bias when allocating infants to each study group; 10% of subjects left study because it was difficult for some mothers to carry out the appropriate kangaroo care technique.
Conde-Agudelo et al.	N = 2751; setting: Multiple international neonatal settings including Aligarh, India; Providence, United States; Kebangsaan, Malaysia; Addis Ababa, Ethiopia; Yogyakarta, Indonesia; Merida, Mexico; Bogota, Columbia; Bali, Indonesia; Rohtak, India; Hyderabad, India; Mumbai, India; Mahajanga, Madagascar; Aurora, United States; New Delhi, India; Darwin, Australia; Connecticut, United States; Quito, Ecuador and London, United Kingdom	Systematic review of randomized controlled trials; Review Manager Software	Each day, the average weight gain of kangaroo care infants was greater than the control group infants. Kangaroo care infants gained 3.7 g on a daily basis (CI 95%, 1.9–5.6) ($P < 0.001$).	Level I	Lack of researcher or subject blinding; some of the studies had unreported or high attrition data.
El Moniem et al.	N = 100 intervention group = 50; control group = 50; setting: Neonatal units at Ain Shams University and Cairo University hospitals, Egypt	Non-randomized controlled trial	Among kangaroo care infants, the amount of weight gain was 723.6 ± 117.7 g while control group infants gained substantially less weight, 401 ± 68.7 g ($P < 0.0001$).	Level III	No randomization
Gathwala et al.	N = 100 intervention group = 50; control group = 50; setting: Neonatology section of a Pediatrics Department located at Pt BD Sharma PGIMS, Rohtak, India	Randomized controlled trial	Chi-square and unpaired <i>t</i> -tests. The mean weight gain among infants randomly recruited into the kangaroo care group was 16.23 ± 0.49 g/day while the weight gain acquired by infants in the control group was 14.10 ± 52 g/day ($P < 0.05$).	Level II	Kangaroo care sessions were not consistently carried out throughout the duration of the entire study.

Download English Version:

<https://daneshyari.com/en/article/5570151>

Download Persian Version:

<https://daneshyari.com/article/5570151>

[Daneshyari.com](https://daneshyari.com)