



Kangaroo Mother Care: A method for protecting high-risk low-birth-weight and premature infants against developmental delay

Réjean Tessier^{a,*}, Marta B. Cristo^b, Stella Velez^b, Martha Giron^b,
Line Nadeau^a, Zita Figueroa de Calume^b, Juan G. Ruiz-Palález^c,
Nathalie Charpak^b

^a School of Psychology, Laval University, Laval, Qué., Canada G1K7P4

^b Kangaroo Mother Care Program, Children's Clinic, Colombian Social Security,
Kangaroo Foundation, Bogotá, Colombia

^c Clinical Epidemiology Unit, Faculty of Medicine, Javeriana University, Bogotá, Colombia

Received 25 November 2002; received in revised form 27 January 2003; accepted 12 February 2003

Abstract

Aim: The purpose of this study was to examine the relationship between intervention with Kangaroo Mother Care (KMC) and the subsequent mental development of the infants. In this prospective study, 431 low-birth-weight and premature infants (≤ 1801 g) were assigned randomly to KMC or Traditional Care. Of these, 336 (78%) received the Griffiths test at 12 months of corrected age. **Results:** After control for the infant's health at birth, family socioeconomic status and mother labor and delivery characteristics, the KMC infants had a higher IQ than those given traditional care (TC). The difference was most highly significant for infants who were more premature (30–32 weeks of gestational age), had required intensive care, and had a diagnosis of doubtful or abnormal neurological development at 6 months. The main impact of KMC was on the development of personal relations and on planning functions related to brain developmental stage at birth. **Discussion:** The KMC intervention can be viewed as a developmentally supportive care, in which parents are guided in managing their biological parenting abilities and which provides "brain care" during a highly sensitive period of a preterm infant's neurological development. © 2003 Elsevier Inc. All rights reserved.

Keywords: Kangaroo Mother Care; Low-birth-weight; Prematurity; Mental development; Developmental care

* Corresponding author. Tel.: +1-418-656-7180.

E-mail address: rtessier@psy.ulaval.ca (R. Tessier).

1. Kangaroo Mother Care (KMC)

A method for protecting high-risk low-birth-weight (LBW) and premature infants against developmental delay.

Low-birth-weight is a world wide health-related problem and is associated with high neonatal infant mortality and morbidity rates. Infants weighting less than 2000 g at birth account for 2.6% of all live births and for over 80% of all neonatal deaths in most of industrialized countries. In developing countries it accounts for 10% of all live births and for 50% of all neonatal deaths. This differential survival rate in different countries is mostly attributable to accessibility to sophisticated technology for neonatal care developed during the last 40 years, and to the availability of intensive care in nurseries. However, these survival rates are accompanied by ongoing concern about subsequent health problems especially in the very low-birth-weight infants where more than 40% of the survivors are burdened with long-term sequelae (Greene, 2002). Extreme morbidity (5–10% of LBW live births) sometimes occurs rapidly in the early neonatal stages, and is often the consequence of major neonatal complications such as grade 3 or 4 intraventricular hemorrhage, hypoglycemia, leucomalacias, and neonatal seizures. In general, however, morbidity is slow to emerge and its diagnosis requires long-term observation over a period of years. Several reviews and meta-analyses have summarized the results of outcome studies (Aylward, Pfeiffer, Wright, & Verhulst, 1989; Escobar, Littenberg, & Petitti, 1991) and concluded that LBW premature children have poorer cognitive function, academic performance, lower academic achievement (Hack, Flannery, Schluchter, Cartar, Borawski, & Klein, 2002), deficits in the ability to sustain and shift attention (Rose, Feldman, McCarton, & Wolfson, 1988), and less social competence than normal birth-weight controls (Hoy, Sykes, Bill, Halliday, McClure, & McC. Reid, 1992; Nadeau, Boivin, Tessier, Lefebvre, & Robaey, 2001).

A clear delineation of modifiable factors affecting outcomes might offer opportunities to improve prognosis after discharge and positive long-term outcome. Recent interventions aimed at providing a more appropriate environment in the neonatal intensive care unit (NICU) have demonstrated positive effects (Symington & Pinelli, 2001). These interventions are guided by a neurodevelopmental framework based on animal models that provide evidence for a fine-tuned environmental input for normal cortical development (Als & Gilkerson, 1997). They are designed to reduce the physiological stress in the NICU environment and short term outcomes such as poor weight gain, length of hospital stay, length of mechanical ventilation, and other iatrogenic effects. Als's Newborn Individualized Developmental Care and Assessment Program (NIDCAP) is a convincing examples of this new tradition of interventions focused on developmental supportive care as compared to specialized medical–technical care. This program encompasses all care procedure as well as social and physical aspects in the NICU, and supports the parents' involvement as the first infant's primary coregulator (Lawhon, 1997). NIDCAP like three other major developmental care interventions have been reported in a Cochrane review (Symington & Pinelli, 2001) as demonstrating evidence of short-term growth outcomes, decreased respiratory support, decreased length and cost of hospital stay, and improved neurodevelopmental outcomes to 24 months corrected age.

Although it is recognized that developmental cares promotes infant's physiological stability and general development, catch up mechanism remains unclear. The most frequently suggested

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات