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PREVALENCE OF POSTPARTUM DEPRESSION AND THERAPEUTIC USE OF KANGAROO CARE

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Postpartum depression refers to the temporal relationship between the onset of emotional or mental symptoms and delivery post effects. The prevalence of Postpartum Depression from western studies indicated about 8-15% while in India the reported prevalence is about 11% - 23%. In 2007 a study published in the Oxford Tropical Paediatrics from researchers at the Instituto Materno Infantil in Brazil concluded Kangaroo Mother Care proved helpful in warding off postpartum depression. Researchers evaluated mothers at the beginning of NICU care and at the end of their Kangaroo Mother Care no mother developed depression during and after KC.

In 2007 a study published in the Oxford Tropical Pediatrics from researchers at the Instituto Materno Infantil in Brazil concluded Kangaroo Mother Care may prove helpful in warding off postpartum depression. Researchers evaluated mothers at the beginning of NICU care and at the end of their Kangaroo Mother Care. NO mother developed depression during their Kangaroo stay.

Kangaroo Care is not a new phenomenon. Kangaroo Care has been studied in depth since 1983 when neonatologists Edgar Rey and Hector Martinez first implemented it in Bogota, Columbia. In many cultures, till today babies are cradled on their mother's bare chest, without any clothing, right immediately after delivery. Historically, this was necessary for the baby's survival. In recent times, more babies are born in hospital and are separated or dressed before being given to their mothers. It has been suggested that in industrialized societies, these hospital routines may significantly disrupt early mother-infant interactions and have harmful effects. In mammalian biology, maintenance of the maternal milieu following birth is required to elicit innate behaviors from the neonate and the mother that lead to successful breastfeeding, and thus survival. Separation from this milieu results in immediate distress cries (Alberts,1994) and "protest-despair" behavior. Skin to Skin Care through sensory stimuli such as touch, warmth, and odor is a powerful vigil stimulant, which among other effects releases maternal oxytocin (Uvnas-Moberg, 1998; Winberg, 2005).

Today skin-to-skin touch to a newborn or Kangaroo Mother Care (KMC) is gaining acceptance as a standard of care in neonatal intensive care units (NICUs) throughout the world. In India although the importance of KMC is being considered but is still not recommended at medical level.

In two studies (Christensson 1992; Mazurek 1999), infant blood glucose was examined at 75 minutes - two hours postbirth. Blood glucose was higher in SSC infants (WMD10.56mg/dl, 95%CI 8.40 to 12.72) and this result was statistically significant. The study population included 177 low-income mothers with their preterm infants. Validated Portuguese version of the Postpartum Depression Screening Scale for the assessment of maternal depression was used. The mothers were evaluated twice, at Neonatal Intensive

Care Unit admission and at KMC discharge. 66 mothers (37.3%) with depression and it decreased to 30 (16.9%) after KMC intervention; $p < 0.0001$. None developed PPD during the Kangaroo stay (de Alencar Andréa Echeverria Martins Arraes).

Mothers who held their infants SSC displayed less state anxiety day three postbirth (WMD -5.00, 95% CI -9.00 to -1.00) (Shiau 1997) The effects of early SSC may be attenuated over time. Data were obtained on two discrete affectionate behaviors (en face and kissing the infant) during a play observation three months postbirth in two studies (Curry 1982; De Chateau 1977) and their results were combined for meta-analysis. Early SSC did not increase the amount ofmaternal en face (SMD2.07, 95%CI -1.34 to 5.48) or kissing behavior (SMD 0.28, 95% CI -0.93 to 1.48) at this time. Carfoot 2004 and Carfoot 2005 found that infants held SSC were more than twice as likely to breastfeed successfully during their first feeding postbirth than those who were held swaddled in blankets by their mothers (OR 2.65, 95% CI 1.19 to 5.91). These findings were obtained using a modification of (Matthews 1988; Matthews 1991).

A number of studies have investigated the physiological effects of KC when used with premature infants. Findings have shown that during and after KC the heart rate, respirations and oxygen levels of the neonate remain within normal limits (Messmer et al 1997; Legault and Goulet 1995). KC is also considered a safe practice when used with ventilated (Ludington-Hoe et al 1998; Gale et al 1993) and very low birth weight infants (Bauer et al 1996; Bosques et al 1995). Positive effects of KC include fewer episodes of idiopathic apnoea (Hadeed et al 1995), improved sleep patterns (Ludington-Hoe et al 1999; Messmer et al 1997) and better thermoregulation (Hadeed et al 1995) for the neonate, enhanced lactation in breastfeeding mothers (Hill et al 1999) and a decrease in maternal depression (Dombrowski et al 2001).

A number of studies (Roberts et al 2000; Neu 1999; Smith 1996) have reported skin-to-skin holding provided mothers with a greater sense of wellbeing, personal and confidence in taking care of their infant. Likewise fathers, although more reticent than mothers, commented positively on the experience (Moran et al 1999; Neu 1999). However, as noted by Neu (1999) and Moran et al (1999), parents need support from nursing staff to allay their anxiety about handling the infant and to promote confidence in using KC.

The main advantage of Kangaroo Care is the increased production of Oxytocin ("cuddle" or "love hormone") initiated through skin-to-skin contact with an infant which may help new mothers to adjust to their maternal status, facilitating the initiation and establishment of breastfeeding, There was a lack of powerful and reliable equipments and Kangaroo Care was found to be an inexpensive and very beneficial experience to babies in Bogota. The mortality rate fell from 70 % to 30 % Physiological evidence.

Babies spend more time in quiet sleep (Acolet et al., 1989) and this result persists after 6 months (Gale et al., 1993). Longer alert states and less crying at 6 months (Whitelaw et al., 1988). Their heart rate is lower and more stable (Ludington et al., 1996). Apnea and bradycardia decreases (Fohe et al., 2000). Body temperature is maintained and oxygenation and gas exchange improves (Fischer et al, 1998; Ludington & Golant, 1993; Acolet et al., 1989; Bauer et al., 1996; Fohe et al., 2000). Improvement of arousal regulation and stress reactivity (Michelsson et al., 1996; Mooncey et al., 1997). Analgesic effect during painful medical procedure (Gray, Watt, & Blass, 2000). Prolonged and augmented breastfeeding rates (Charpark, Figueroa, & Ruiz, 1998; Ramanathan et al., 2001). Faster growth rates and earlier discharge from hospital (Kambrani, Chdede, & Kowo, 1999).

Psychological evidence

Mothers have positive feelings towards the baby and lower maternal stress (Tallandini & Scalembra, 2006). Mother have a better sense of their parenting role (Affonso et al.,1993). Mothers are less depressed. Perceive their infant as less abnormal). Increases maternal behaviour during hospitalisation period (Feldman, 2002). Mothers feel more confident and competent in meeting their baby's needs (Tessier et al., 1998). Babies are more alert and more responsive (Feldman et al., 2002; Tessier et al., 1998). Babies have higher developmental rates (Feldman et al., 2002). Babies improve their abilities to make understandable requests and to make appropriate responses to maternal stimulation (Tallandini & Scalembra, 2006). Mother and father are more sensitive and less intrusive, the family style is more cohesive positive (Feldman et al., 2003).

Other than this after birth, premature infants need a high level of medical treatments for their survival in the neonatal intensive care unit (NICU). This separation deprives mothers of the chance to initiate an attachment process. Kangaroo care (KC) can be one of the ways to reunite mothers and their infants in the NICU and improve their health.

These are extremely compelling reasons to encourage individuals and hospitals to encourage the practice of KMC immediately after birth.

Kangaroo Mother Care (KMC) is widely considered to be the most feasible, readily available and preferred intervention for decreasing neonatal morbidity and mortality in developing countries. We conducted a prospective study to assess the effect of KMC on PPD. The study population included 177 low-income mothers with their preterm infants. We used the validated Portuguese version of the Postpartum Depression Screening Scale for the assessment of maternal depression. The mothers were evaluated twice, at Neonatal Intensive Care Unit admission and at KMC discharge. We found 66 mothers (37.3%) with depression and it decreased to 30 (16.9%) after KMC intervention; $p < 0.0001$. None developed PPD during the Kangaroo stay. We concluded that KMC may lessen maternal depression. Further studies, may be required to clarify these preliminary findings (Andréa Echeverria Martins Arraes de Alencar, 2008)

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In order to explore the impact of KC on Postpartum depression, the study was conducted on 60 Primiparous women above 18 years (with PPD) in Jaipur city in various hospitals i.e. Maternity wards of Saket Hospital, Curewell Hospital and Mahila Chikitsalaya, with no acute illness, complication of pregnancy and delivery affecting health at present. Postpartum scale was produced by the investigator to check for the prevalence of postpartum depression. Also, the factors /variables (mother`s age, occupational status, ordinal position, level of education) affecting postpartum depression were analysed statistically. The Postpartum Depression scores were divided into three categories i.e. Baby blues, postpartum depression and Postpartum psychosis. The mean scores of 75% of mothers in the baby blues category was 16.5 before providing Kangaroo Mother Care which decreased up to 11.8 after providing kangaroo care, showing improvement in lowering down the PPD. The difference between 16.5 and 11.8 with standard deviations of 4.57 and 4.63, respectively, significant difference at the 5% level. The value of the t-statistic for this test was 5.22. The mean scores of 19.23% of mothers in the Postpartum depression category was 17.3 before providing Kangaroo Mother Care which tremendously decreased down also showing improvement in bonding between mothers and infants. The difference between 17.3 and3.71 with standard deviations of 5.11 and 3.18, respectively, significant at the 5% level. The value of the t-statistic for this test was 16.3. The mean scores of 5.76% of mothers in the postpartum psychosis category was 12.2 before providing Kangaroo Mother Care which decreased up to 0.404 after providing kangaroo care. The difference between12.2 respectively, significant at the 5% level. The value of the t-statistic for this test was 28.2. and 0.404 with standard deviations of 2.96 and 0.634, Hence Kangaroo Care worked wonders in removal of symptoms related to postpartum depression.