



**Karolinska
Institutet**

Institutionen för kvinnors och barns hälsa

PRETERM BIRTH – Parents' experiences, affect, stress and inflammatory markers

AKADEMISK AVHANDLING

som för avläggande av medicine doktorsexamen vid Karolinska
Institutet offentligen försvaras i Skandiasalen, Astrid Lindgrens
barnsjukhus

Onsdagen den 29 februari 2012 kl 09.30

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Stockholm 2012

ABSTRACT

Preterm birth (PTB), before 37 completed weeks of gestation, is the principal risk factor for neonatal morbidity and mortality. In Sweden about 5.6% of women deliver preterm. The etiology of PTB is not fully understood, but it has been suggested that the mechanisms could have both biological and psychosocial origins. Parents' health and experiences in association with PTB have been quite overlooked, particularly those of the fathers and of parents of infants born late preterm. However, stress in parents could influence the parent's caregiving capacity. The aim of this thesis was to gain further understanding of the psychosocial contribution to the etiology of PTB, of a possible inflammatory pathway for the psychosocial contribution and of the consequences of PTB for parents' health and experiences of caregiving.

Study I is a population-based study where the association between antenatal scores of depressive symptoms and PTB was investigated. The results show that depressive symptoms contribute to increased risk for PTB, also after adjusting for other known risk factors for PTB.

In Study II it was investigated if affectivity differs between mothers with PTB and mothers with term birth and if maternal and umbilical cord serum cytokines differ between these groups. Further, if there are associations between mothers' emotions and maternal and cord cytokines at preterm and term birth. The findings indicate associations between negative emotions and both maternal and neonate immune activity in PTB.

Study III is an interview study of first-time parents' experiences of early and late PTB. The findings show hindering and facilitating factors in the development of parents' caregiving. Hinders for mothers and fathers in both groups were attributed both to physical hinders, such as separation from the infant and to emotional hinders, such as fear, worry or few cues from the infant. Hinders were also attributed to the clinical practices. Facilitating factors were mental or physical closeness to the infant, being together as parents as well as support from the staff.

Study IV aimed at investigating levels of and associations between perceived stress and an inflammatory marker, comparing parents of preterm and full term infants at two time-points. Mothers of infants born preterm showed higher stress levels early post partum, compared to the term group. The stress declined over time and was comparable to levels in the term group at infant age four months. Subgroup analyses showed greater stress in mothers of infants born early preterm at both time-points compared to the term group. In fathers, no differences in stress levels were found between the preterm and term groups but fathers of infants born early preterm reported higher stress levels early post partum than fathers of infants born late preterm. No associations were found between stress levels and the inflammatory marker. In parents of preterm infants, high levels of stress at infant age four months were predicted by stress levels early post partum.

The results support the notion of psychosocial contribution to the etiology of PTB via an inflammatory pathway. Future studies in this area should preferably include both psychological and biological markers. The findings also reveal hindering and facilitating factors to parents' early caregiving after PTB and elevated stress levels, particularly in parents of infants born early preterm, suggesting a further need to support these parents.