

# POSTERIOR PERINEAL INJURIES

## Midwives' Management and Experiences of the Second Stage of Labour in Relation to Perineal Outcome

Akademisk avhandling

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### The thesis is based on the following four papers

- I. Edqvist M, Blix E, Hegaard H.K, Ólafsdóttir O.A, Hildingsson I, Ingversen K, Mollberg M, Lindgren H. Perineal injuries and birth positions among 2992 women with a low risk pregnancy who opted for a home birth. *BMC Pregnancy and Childbirth*. 2016;16(1):196.
- II. Edqvist M, Lindgren H, Lundgren I. Midwives' lived experience of a birth where the woman suffers an obstetric anal sphincter injury – a phenomenological study. *BMC Pregnancy and Childbirth*. 2014;14:258.
- III. Edqvist M, Hildingsson I, Mollberg M, Lundgren I, Lindgren H. Midwives' Management during the Second stage of Labor in Relation to Second-Degree Tears – An Experimental Study. *Birth*. 2016 44(1):86-94.
- IV. Edqvist M, Rådestad I, Mollberg M, Lindgren H. Directive, Supportive or both – Practices used by Midwives during the Second Stage of Labor to Facilitate Birth. *Manuscript*.

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## Midwives' Management and Experiences of the Second Stage of Labour in Relation to Perineal Outcome

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### Abstract

Women commonly sustain some form of perineal and vaginal injury when giving birth. Posterior perineal injuries have short- and long-term consequences for women which may lead to reduced quality of life.

**AIM:** The aim of this thesis was to investigate midwives' management and experiences of the second stage of labour in relation to perineal injuries of different severity. Furthermore, the aim was to evaluate whether an intervention based on woman-centred care reduces second-degree tears in primiparous women.

**METHODS:** **Study I**, a population-based cohort study of planned home births in four Nordic countries (n=2992). The aim was to assess whether birth positions with flexibility in the sacro-iliac joints defined as flexible- or non-flexible sacrum positions were associated with perineal trauma. To explore midwives' experiences of a birth where the woman sustains severe perineal trauma (**Study II**), in-depth interviews were conducted with 13 midwives. A phenomenological reflective lifeworld design was used. **Study III** is an experimental intervention study using a cohort design to reduce second-degree tears, in which 597 primiparous women participated. A multifactorial intervention consisting of 1) spontaneous pushing, 2) flexible sacrum positions, and 3) a two-step head-to-body birth was compared to standard care. **Study IV** explores the relationship between directed practices used during the second stage of labour and perineal trauma, using data from 704 primiparous women participating in the intervention study. For the quantitative studies (**I, III, IV**) bivariate analysis and multivariable logistic regression adjusting for risk factors were used to analyze the data.

**RESULTS:** The majority (65.2%) of women in **Study I** gave birth in flexible sacrum positions and these positions were not associated with severe perineal trauma. The experience of being a midwife when the woman sustains severe perineal trauma (**Study II**) was expressed as being caught between an accepted truth and a more complex belief. The accepted truth is that a skilled midwife can prevent severe perineal trauma while the more complex belief suggests that these injuries cannot always be avoided. Balancing between the two created a deadlock for the midwives which was difficult to resolve. The results from **Study III** showed that fewer women in the intervention group sustained a second-degree tear. The intervention remained protective even after adjusting for potential confounders and known risk factors (adj. OR 0.53; CI 95% 0.33–0.84). The most common practices used in **Study IV** were directed pushing (57.1%) and digital stretching of the vagina (29.8%). None of the practices used were associated with perineal trauma.

**CONCLUSIONS:** Flexible sacrum positions were not associated with severe perineal trauma in the home birth setting. A multifactorial woman-centered intervention reduced second-degree tears in primiparous women and was possible to implement without having negative side effects for women and their babies. Moreover, the directed practices midwives use during the second stage of labour were not associated with perineal trauma. Midwives experience various conflicting emotions when the woman suffers severe perineal trauma.

**Keywords:** Perineal trauma, Midwifery, Woman-centred care, Second stage of labour, Intervention study, Phenomenology