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# Hands-poised technique: The future technique for perineal management of second stage of labour? A modified systematic literature review

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## ABSTRACT

**Background:** vaginal birth is often accompanied with perineal trauma that affects postpartum morbidity. There are many techniques for protecting the perineum from injury during childbirth. The Hands-On or Hands Poised (HOOP) study (McCandlish et al., 1998) was the first trial that compared different techniques of perineal protection during the second stage of labour with very little research subsequently being undertaken.

**Objectives:** to systematically review all available literature that compares the hands-on and hands-poised techniques of perineal management during the second stage of labour.

**Methods:** using the principles of a modified systematic literature review, quantitative, comparative and primary research studies were selected. These were assessed for quality using the Critical Appraisal Skills Programme (CASP) framework including a data extraction form. The results were reported narratively.

**Main results:** five studies were included and outlined the importance of both techniques. The hands-poised technique appeared to cause less perineal trauma and reduced rates of episiotomy. The hands-on technique resulted in increased perineal pain after birth and higher rates of postpartum haemorrhage. **Conclusion:** as the five studies selected for this review have widely differing variables, comparisons that have been drawn must be viewed with caution. Evidence would suggest that the hands-poised technique is a safe and recommended technique for perineal management and discussions of such a technique should be included in all midwifery education and training programmes.

The challenge for midwives is how to support women in making informed choices about perineal management during childbirth. Until there is conclusive evidence, the choice of the hands-on or hands-poised technique will ultimately be determined by the clinical judgment of the individual midwife at the time of birth.

Further research is recommended. Thorough conclusions could significantly impact on reducing postpartum morbidity and improving women's sexual health and well-being in the long term, throughout the world.

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## Introduction

Childbirth is a frequent event worldwide, as more than 130 million births take place annually worldwide (Albers, 2003; Berghella et al., 2008). Bick et al. (2012) reported that approximately 70% of women sustain perineal trauma during vaginal birth. This can occur from spontaneous perineal tear, episiotomy or both (Royal College of Midwives [RCM], 2012).

Perineal trauma is highly associated with pain, urinary or faecal incontinence and dyspareunia (McKinnie et al., 2005; Andrews et al., 2006; RCM, 2012). There are many techniques for protecting the perineum from injury during the second stage of labour. However the majority of these methods are not practised in Slovenia, which is the author's country of origin, despite the wealth of evidence available. In Slovenia, women give birth exclusively in hospitals, predominantly in supine or semi-recumbent positions. However, women who give birth in upright positions experience less perineal trauma (Kettle and Tohill, 2011). Another factor that can lead to severe perineal trauma is fundal pressure, where the pressure towards the vagina increases and the forced expulsion can cause severe perineal rupture (Murray and Huelsmann, 2009). On the other hand, the use of warm compresses during labour contributes to a significant reduction of third and fourth degree tears (Aasheim et al., 2012). Beckmann and Garrett (2006) showed that antenatal massage of the perineum has a beneficial effect on the perineum, as it enables the perineal tissue to expand easily. Although Kettle and Tohill (2011) did not find any effectiveness of water birth on perineal outcome, it can be assumed that the water has a 'buffer effect' that enables the baby to gently emerge through the birth canal rather than being forced out with maternal pushing. Nevertheless, Kettle and Tohill (2011) reported that continuous support of the woman during labour reduces the rate of instrumental births and subsequent perineal trauma. Acknowledging this finding, midwives can have an influence on reducing perineal trauma by providing individual care and continuous support to labouring women. In the past, there was a belief that performing an episiotomy would prevent severe perineal and rectal trauma (Aytan et al., 2005). However, the literature does not support its use because it predisposes the perineum to tear towards the rectum and cause severe perineal lacerations (Berghella et al., 2008; Helwig et al., 1993; Hartmann et al., 2005; Kettle and Tohill, 2011).

Many authors have questioned the effectiveness of hands-poised and hands-on techniques in the second stage of labour (McCandlish et al., 1998; Albers et al., 2005; Foroughipour et al., 2011). This was first compared in a randomised controlled trial (RCT), conducted in the United Kingdom (UK) by McCandlish et al. (1998). The authors of the hands-on or hands-poised (HOOP) trial defined the hands-on technique as a method in which the midwife uses her hands to put pressure on the baby's head to facilitate its slow birthing. Moreover, the birth of the shoulders is supported by the use of lateral flexion. On the other hand, in the hands-poised or hands-off technique, the midwife does not support the perineum with her hands or touches the baby's head, but rather keeps her hands poised. The shoulders are born spontaneously (McCandlish et al., 1998).

The study by McCandlish et al. (1998) has aided reconsideration of second stage of labour management within UK midwifery

practice. However, it did not make significant changes in other countries, such as Slovenia, where midwives practise exclusively the hands-on approach. According to the Royal College of Obstetricians and Gynaecologists [RCOG] (2007) as well as the National Institute for Health and Clinical Excellence [NICE] (2007) either the hands-on or hands-poised technique of protecting the perineum can be used in facilitation of spontaneous birth.

## Aim of the modified systematic literature review

The aim of this review was to compare the outcomes found in contemporary studies using hands-on and hands-poised techniques of perineal management during the second stage of labour. The author was particularly interested in the number of women with an intact perineum and the incidence as well as degree of perineal trauma in both methods of perineal management.

## Methods

A modified systematic review was chosen as it presents an efficient method for appraising best available evidence and can provide more definitive answers to clinical questions than single studies (Garg et al., 2008; Khan et al., 2011). Due to the chosen methodology of the enquiry being a systematic review, ethics approval was not required.

A search of the literature for this systematic review was performed in July 2013. The search strategy included the following electronic databases: Web of Science, The Joanna Briggs Institute Clinical Online Network of Evidence for Care and Therapeutics [JBI CoNNECT], Cumulative Index to Nursing and Allied Health Literature [CINAHL], Embase (Ovid), Medical Literature Online [Medline] (Ovid) 1948–Present, Maternity and Infant Care (Ovid), The Cochrane Library. Apart from these sources, unpublished studies were searched through the grey literature databases: Open Grey, Networked Digital Library of Theses and Dissertations [NDLTD]. Moreover, key midwifery journals were hand searched and reference lists of any relevant papers examined. The search terms included: *hands-off birth, hands-poised birth, hands-on birth, perineal techniques during labour, perineal management, methods of protecting perineum*.

**Table 1**  
The PICOT strategy.

PICOT	Inclusion criteria
Participants of interest	Healthy, low risk, primiparous women, pregnant with single fetus, who had normal vaginal birth
Intervention	Hands-poised technique
Comparison intervention	Hands-on technique
Clinical Outcomes	1. Intact perineum 2. Incidence and degree of perineal trauma after birth
Time frame	Period after second stage of labour, after birth

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