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What is known about the experiences of women receiving hands-on perineal interventions in the second stage of labour – a scoping review.

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Abstract

Background: Perineal damage affects 77 per cent of Australian women birthing vaginally with many women perceiving this as an expected outcome of vaginal birth. Evidence regarding effective interventions in the second stage of labour for reducing perineal damage is lacking. There is also some disagreement about appropriate methods of providing perineal care in the second stage of labour. The quantitative nature of current evidence regarding perineal care in labour undervalues women's psychosocial health which may have negative impacts on women's experiences.

Aim: To determine the scope and nature of evidence regarding perineal care in the second stage of labour.

Methods: A scoping review was conducted using Arksey and O'Malley's (2005) five-step framework whereby the review question was identified, relevant studies sourced and selected and data charted and synthesised. Systematic and replicable searches of the Cochrane Database of Systematic Reviews, CINAHL Complete, MEDLINE, PsycInfo, MIDIRS Maternity & Infant Care (MIC) database, Google Scholar, Google and NICE guidance were performed using combinations of key words related to the review aim in combination with Boolean operators AND and OR. A scoping review methodology allowed for the inclusion of both published and grey literature, including clinical guidelines.

Findings: The literature search resulted in four articles consistent with the review criteria. As this is a scoping review, formal critical appraisal was not conducted, however a PRISMA charting exercise was performed to ensure pertinent information in each data source was accurately identified (full details of the PRISMA charting exercise will be provided in the final paper).

Australian and international literature were represented giving a global perspective and both qualitative and quantitative data were included. Analysis of data from sources retained for review highlights a maternity care culture which values the physiological outcomes of birth, while paying little attention to the potential psychosocial implications of hands-on perineal interventions, such as manual perineal support and the use of warm compresses.

Conclusions: Future research investigating women's views about, experiences of, and preferences regarding intimate aspects of birth care is required to better inform clinical practice guidelines. Further, education pertaining to the provision of trauma and violence informed care (TVIC) may be of benefit to maternity care providers.

Keywords: perineal pain, perineal interventions, perineal damage, labour, women's experiences, trauma and violence informed care, birth experiences, Evidence Based Midwifery

Introduction

Perineal injury is a common outcome for women giving birth vaginally (Australian Institute of Health and Welfare (AIHW) 2020). The perineum comprises the tissues between the vagina and anus, including the muscles of the pelvic floor (see Table 1)

(Tortora & Derrickson 2012). Damage occurs either spontaneously as the tissues stretch during birth, or due to episiotomy.

In Australia, in 2018, almost half of women experiencing a vaginal birth sustained first- or second-degree tears, with a further three per cent suffering more serious third- or fourth-degree tears (AIHW 2020). These can cause significant morbidity including urinary and anal incontinence, and sexual dysfunction (Dahlen & Priddis 2019).

Table 1. Classification of perineal tears.

First-degree	Damage to perineal skin <i>and/or</i> vaginal mucosa
Second-degree	Damage to perineal muscles, <i>not</i> involving the anal sphincter
Third-degree:	Damage to perineum <i>and</i> anal sphincter complex
3a	<i>Less</i> than 50% of external anal sphincter (EAS) damaged
3b	<i>More</i> than 50% of EAS damaged
3c	<i>Both</i> EAS and internal anal sphincter (IAS) damaged
Fourth-degree	Damage to perineum including EAS, IAS <i>and</i> anal mucosa

Source: Royal College of Obstetricians and Gynaecologists (RCOG) 2015.

As perineal damage carries the potential for negative short- and long-term outcomes (Dahlen & Priddis 2019), maternity care providers attempt to prevent its occurrence in a variety of ways. This may involve manually supporting the perineum during crowning and birth of the fetal presenting part, and/or warm compresses applied to perineal tissues (Aasheim et al 2017, Bulchandani et al 2015, Dahlen 2012, Kopas 2014, Newman 2017).

The aim of these interventions is to reduce perineal trauma and increase maternal comfort (Aasheim et al 2017, Dahlen et al 2007), however, their use is inconsistent amongst midwives, as are the techniques themselves (Begley et al 2019, Healy et al 2020).

Clinical guidance related to intrapartum perineal management, both in Australia and internationally, is provided in a recent Cochrane review which states the

interventions described earlier as being supported by moderate quality evidence (Aasheim et al 2017, Queensland Health (QH) 2018, World Health Organization (WHO) 2018).

These interventions are supported and encouraged, however, the guidance fails to recognise their potential impacts on maternal satisfaction and mental health (Lewis et al 2016, Maimburg & De Vries 2019, Reed et al 2017). This, together with the fact that, anecdotally, explicit consent to apply these interventions is not always gained from women is concerning. Having one's perineum touched without express permission has the potential to psychologically traumatise women, or to re-traumatise those with a history of being sexually violated.

Informed consent from women prior to any intervention is understood as foundational to midwifery practice (International Confederation of Midwives (ICM) 2014) and is particularly pertinent given one in six women over the age of 15 has experienced sexual violence (AIHW 2018). The re-traumatisation of women with a lived experience of sexual violence during their pregnancy, birth and the postpartum period is often inadvertently triggered by care providers and has adverse maternal and neonatal impacts, including impaired bonding and attachment (Sobel et al 2018, Sperlich et al 2017, Montgomery 2013). Thus, it is critical that maternity care providers acknowledge the inherently intimate nature of routine interactions (Montgomery et al 2015).

The review of literature aimed to explore what is known about the experiences of women receiving hands-on perineal interventions in the second stage of labour, which was not addressed in the recently published systematic review by Aasheim et al (2017). This information is included in the methods section.

Methods

An approach drawn from the works of Arksey & O'Malley (2005), Levac et al (2010), and Peters et al (2020) was used for this review of literature in which the following framework was followed:

- Identify the research question
- Identify relevant studies
- Study selection

- Charting data
- Collating, summarising and reporting results

Search strategy

The search strategy was adapted from that described by Douma et al (2020) in order to obtain both published research and grey literature, including clinical practice guidelines. A pilot search was not carried out, however the author worked with a specialist librarian to create the search terms.

The search terms outlined in Table 2 were derived from the population (women) and concept (experiences of perineal care in second-stage labour) in focus for this review and were used to search the eight databases listed below. Sources of evidence retrieved from the initial database searches with titles reflecting the review topic were retained and the full text read to assess relevance for inclusion. The inclusion of grey literature ensured applicable evidence which may not be available through databases was also included.

A systematic search was completed in the Cochrane Database of Systematic Reviews, CINAHL Complete, MEDLINE, PsycInfo, MIC and Google Scholar. A grey literature search was performed in Google and NICE guidance online. All search terms including keywords, Boolean operators and truncation are outlined in Table 2.

Table 2. Search terms.

OR	Concept 1	Concept 2	Concept 3	Concept 4	Concept 5
<p>■</p> <p>AND</p> <p>■</p>	Wom*n OR "Wom*ns experienc*" OR "Wom*ns thoughts" OR "Wom*ns think*" OR OR "Wom*ns feel*" OR OR "Matern*comfort" OR OR "Wom*ns satisf*" OR OR "Matern* satisf*" OR OR "Wom*n cent*" OR OR "Wom*ns views"	"Hands on" OR Support* OR "Manual support" OR Care* OR "Pressure app*" OR OR "Guard*perine*" OR OR "Control* birth*"	Birth* OR Crown* OR "Physiological birth*" OR "Vaginal birth*" OR "Natural birth*" OR OR Vagin* OR "Second stage labou*" OR Pushing OR "2 nd stage labo*" OR Labour OR Labor OR "Preserv* perine*" OR Deliver* OR Childbirth OR Perine* OR "perine* outcomes"	"Heat pack" OR "Warm compress*" OR OR "Hot pack" OR Compress* OR OR Heat* "warm pack*"	Interven* OR Technique* OR Manage* OR Prevent*

Sources of information on the topic of interest written in English and published from 1995–2020 were sought. These date parameters were selected to capture the seminal 'Hands On or Poised' (HOOP) trial (McCandlish et al 1998). No geographical limitations were imposed to ensure a global perspective. Both qualitative and quantitative data were pursued, including those included in systematic reviews to ensure as broad a range of information as possible was included. Forward and backward citation chaining and pearl growing were utilised as these techniques have been shown to be effective complementary literature search strategies (Booth 2008).

Articles were included for review if they were written in English, published from 1995–2020, and were concerned with the topic of interest after title, abstract and full text were reviewed. Articles that did not meet these criteria were excluded at either the title review, abstract review or cursory full text review stage.

As this is a scoping review, formal critical appraisal of the included evidence was not conducted (Levac et al 2010), however, a charting exercise was performed to capture pertinent information in each data source.

Results/findings

The total number of data sources identified through the database searches as potentially relevant for inclusion, based on their titles, was 344. Complementary search strategies provided one further publication.

After a cursory full read of each source, 341 were found not to meet the inclusion criteria, leaving four articles for review. One of these was unavailable, and emails to the author were unreturned, resulting in three articles for inclusion. The Cochrane review by Aasheim et al (2017) was included. This inclusion brought the total to four.

Google produced 14 relevant hits, including current clinical guidance from WHO (2018), QH (2018), and RCOG (2015) among others.

Evidence sources were included for review if they were written in English, were published between 1995–2020 and investigated the use of perineal interventions in the second stage of labour. Quantitative data via a systematic review were included as these inform current practice guidelines both locally and globally.

The systematic review by Aasheim et al (2017) reports reductions in third- and fourth-degree tears with the use of warm compresses, but is inconclusive regarding manual perineal support, even when reporting increases in episiotomy rates in included studies. Of the remaining three studies, one was a randomised controlled trial (RCT), one was a non-RCT, and one was a qualitative study in conjunction with the included RCT.

In the study by Essa & Ismail (2016) conducted in Egypt, a numerical pain scale, and modified behavioural pain scale were used to determine women's comfort during the application of warm compresses to the perineum. This behavioural scale saw scores assigned to women's behaviour during labour based on the clinician's perception of the amount of noise and grimacing displayed, muscle tension and restlessness, so a true indication of women's experiences is not represented. These authors did not

consider the views of women during the intervention, however reductions in pain are reported with use of warm compresses in this study.

Almost 10 years prior to Essa & Ismail's (2016) study, Australian researchers Dahlen et al (2007) conducted a randomised controlled trial to determine the effect of warm compresses applied to the perineum in the second stage of labour on perineal outcomes and maternal comfort. Women were asked to complete a pain scale immediately after giving birth to rate their pain during the intervention, followed by a more in-depth questionnaire within the first day postpartum regarding their experience of pain reduction and comfort and thoughts on acceptability of the intervention. Findings were reported in Dahlen et al (2007) and a subsequent paper published by the same team (Dahlen et al 2009). Dahlen et al's intervention was associated with a reduction in pain and increased maternal comfort and the results, unlike those reported by Essa & Ismail (2016), were obtained from data collected directly from women.

Discussion

The majority of literature included in this review focuses on physiological outcomes, including degree of perineal damage and suturing requirements, with only one study reporting data directly obtained from women. Furthermore, clinical guidance supported by the Cochrane systematic review conducted by Aasheim et al (2017) encourages the use of these now routine interventions, proposing it is '*therefore likely that women will value any technique that may limit perineal trauma*' (WHO 2018:142).

This focus on anatomy and physiology further highlights a birth culture which does not take into consideration the experiences of women. Limited high-quality evidence exists to support the use of manual perineal support as a means of protecting the perineum, and it is acknowledged this intervention may cause more damage to multiparous women and increase episiotomy rates (Aasheim et al 2017).

Warm compresses are supported by moderate quality evidence in reducing third- and fourth-degree tears, and some women may experience decreased pain and increased comfort with their application (Dahlen et al 2009), however their preparation and use is not homogenous across maternity settings. It has been

suggested that coaching a slow birth and appreciating the mechanisms by which birth occurs may be a more appropriate way to reduce perineal trauma while respecting women's autonomy (Maimburg & De Vries 2019).

Conclusion

The aim of this review was to determine the scope and nature of evidence regarding perineal care in the second stage of labour. Limitations include the omission of online discussion forums as a data source and not completing a pilot search.

It is evident from this review that insufficient research exists about women's experiences of perineal interventions during the second stage of labour. This is concerning given the prevalence of perineal interventions in clinical practice, and the prevalence of women who have experienced sexual violence (AIHW 2018, Maimburg & De Vries 2019). Maternity care providers are tasked with providing evidence-based care aimed at improving outcomes for women (ICM 2014). However, many barriers to implementation exist, including lack of organisational support or individual attitudes of clinicians (Greenhalgh 2016).

Maternity care providers are accountable to women and have a responsibility to implement evidence-based practice, individualise care, and uphold women's autonomy in order to engender positive maternity care outcomes (ICM 2014). Embracing a TVIC approach may promote this by facilitating the provision of sensitive and equitable maternity care for all women (Sperlich et al 2017).

Although maternity care providers may view an intervention as sufficiently evidence-based to be considered 'routine', the individual needs and preferences of women must be respected (Maimburg & De Vries 2019). There is, at the time of reporting, a dearth of information about women's own views and experiences of perineal interventions. Studies examining the voices of women are essential to making recommendations for care practices and providing clinical guidance, thus further research is needed to understand the wants and needs of women during the second stage of labour.

Studies examining women's experiences of current care practices may assist in the formation of updated guidelines as, although these guidelines ask care providers to seek consent and individualise care, this often does not occur (Reed et al 2017). A

paradigm shift in maternity services which incorporates TVIC principles may support this process. TVIC acts to protect vulnerable women with a history of sexual trauma from re-enactment (Montgomery et al 2015), though it may also enhance the provision of sensitive, respectful maternity care for *all* women.

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Supplementary information

Details of the search strategy and the charting exercise will appear in the final paper.

Post-Print