

Midwifery RESEARCH REVIEW™

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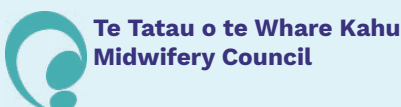
Issue 25 – 2021

In this issue:

- Impact of stress during pregnancy on childhood diseases
- Can assessment of fear of childbirth predict use of obstetric interventions?
- Management of childbirth-related labial trauma in the UK
- A qualitative study of women's experiences of elective late-term IOL
- Women's preferences for IOL or expectant management in late-term pregnancy
- Pregnancy outcomes in women taking ondansetron vs alternative antiemetics
- Breastfeeding and the risk of childhood cancer
- A comparison of 10 different intrapartum fetal surveillance methods
- Healthcare workforce education in spiritual care related to childbirth
- Why do women choose homebirth in Australia?

Abbreviations used in this issue

IOL = induction of labour
DHB = District Health Board
NHS = National Health Service
NZCOM = NZ College of Midwives
OR = odds ratio
RCT = randomised controlled trial



**Te Tatau o te Whare Kahu
Midwifery Council**

Midwifery Research Review is approved as continuing midwifery education by the Te Tatau o te Whare Kahu Midwifery Council

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Welcome to the latest issue of Midwifery Research Review.

In this issue, studies on chronic stress during pregnancy and impact on the baby, a simple assessment of fear of childbirth to predict non-urgent obstetric intervention in labour, and women's experiences of late term induction of labour are worth reading. Also in this issue, a recommendation for an RCT to enhance evidence on management of labial tears, recognising one size does not fit all in relation to IOL or expectant management, use of ondansetron vs alternative antiemetic, breastfeeding and link to childhood cancer, usefulness of intermittent auscultation for fetal surveillance, importance of spiritual care and education, and an Australian survey on homebirths.

We hope you find the selected papers of interest, and look forward to hearing your comments, feedback and suggestions.

Kind regards,

Nimisha Waller

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Stress during pregnancy and the development of diseases in the offspring

Authors: Caparros-Gonzalez RA et al.

Summary: This systematic review and meta-analysis evaluated whether high maternal stress during pregnancy is associated with the development of paediatric pathology. A search of various databases identified 42 studies (65,814,076 women) that were suitable for inclusion. Meta-analysis of the data revealed that high levels of maternal stress during pregnancy were associated with overall paediatric pathology (OR 1.24, 95% CI 1.11–1.39; $p < 0.01$), psychiatric disorders (OR 1.28, 95% CI 1.06–1.56; $p < 0.02$) and autism spectrum disorder (OR 1.45, 95% CI 1.24–1.70; $p < 0.01$). High levels of maternal stress during pregnancy were also associated with infant obesity and infantile colic; the highest effect size was found for the first trimester.

Comment: The physiology around how the placenta protects the unborn infant and how the hypothalamic-pituitary-adrenal axis is responsible for stress response, as well as the effect of stress on brain pathways and neural circuits is worth reading unless you have read this before. A majority of women are likely to feel stressed during pregnancy. It is important to inform women that everyday stressors experienced during pregnancy do not typically impact on women and their baby. It is chronic/high level stress that affects maternal health and hence impacts on baby's development. Incorporating strategies that can help to relieve and manage stress ensures healthy pregnancy and outcome. Hence, pregnant women should be asked about stress during antenatal visits, including the coping strategies they use to reduce stress. There is a suggestion that forming a close bond with baby or sensitive mothering during the early months of life can have a buffering effect and help improve the health of the following generation.

Reference: *Midwifery* 2021;97:102939

[Abstract](#)



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Postponed to Friday 05 – Saturday 06 November 2021



Can a simple assessment of fear of childbirth in pregnant women predict requests and use of non-urgent obstetric interventions during labour?

Authors: Veringa-Skiba IK et al.

Summary: This study determined whether 2 tools for measuring fear of childbirth effectively predict requests for non-urgent obstetric intervention in pregnant women. 401 self-selected pregnant women from midwifery care settings were assessed for fear of childbirth using the Wijma Delivery Expectation Questionnaire (W-DEQ-A) and the 1-item Fear of Childbirth-Postpartum-Visual Analogue Scale (FOCP-VAS). Two outcomes were measured: requests for non-urgent obstetric interventions during pregnancy, and receipt of non-urgent obstetric interventions during labour. High fear of childbirth measured with the FOCP-VAS (score ≥ 5) predicted requested and received non-urgent obstetric interventions better than high fear of childbirth measured with the W-DEQ-A (score ≥ 66).

Comment: Fear of childbirth can have a significant impact on a woman's view of her pregnancy, birth and her recovery post birth. Early identification is paramount to ensure that women's needs are recognised so that appropriately tailored care can be provided in pregnancy. The study highlights fear of childbirth as being highly prevalent and not being recognised and treated in midwife-led practices. The findings show that the 1-item FOCP-VAS assessment is a strong identifier of non-urgent obstetric intervention in pregnant women. The authors strongly recommend implementing the FOCP-VAS as a first step in screening for fear of childbirth in midwife-led and obstetrician-led practices and to study the relation between fear of childbirth, size of midwifery practice, and non-urgent obstetric interventions in pregnant women. Have you had women with fear of childbirth and have you used FOCP-VAS in your practice?

Reference: *Midwifery* 2021;97:102969

[Abstract](#)

Childbirth related labial trauma management in the UK

Authors: Sanders J et al.

Summary: This brief report discussed the management of childbirth-related trauma in the UK. Three NHS organisations were surveyed over a 5-week period in 2019; data were collected for 332 vaginal births. 47.3% of the women sustained labial trauma, of whom 29.3% had trauma involving both skin and underlying tissues (76% of these injuries were sutured).

Comment: A brief report highlights the survey undertaken in the UK to see if it would be feasible to have an RCT assess the effectiveness and cost-effectiveness of suturing labial trauma compared to conservative management. At present there is a lack of current evidence, variation in practice in managing labial tears, and lack of understanding of women's wellbeing when they experience labial tears. The survey suggests that clinicians would have been prepared to offer randomisation if labial tears were not bleeding, and were not too superficial to suture or too severe to leave unsutured. The authors suggest that 508 women would need to be recruited and should incorporate qualitative stream to explore the experiences of women and the impact of trauma management. The NZ and Australian textbook 'Midwifery – preparation for practice' (2019) defines first degree tears as injury to the perineal skin and/or vaginal mucosa, and states that labial lacerations are classified separately as grazes or tears. However, a DHB guideline defines first degree tear as tear of fourchette (i.e skin tear – no mention of vaginal mucosa), and labial trauma with no bleeding as tears that are not possible to suture as there is no substantial flesh to bite into. No specific data on the incidence of labial tears are available/reported in NZ nor how these tears (especially bilateral labial tears, deep labial tears and those that do not oppose well) are managed. A time to reconsider?

Reference: *Midwifery* 2021;97:102950

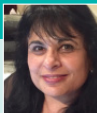
[Abstract](#)



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Independent commentary by Nimisha Waller RGON, RM, ADM, Dip. Ed, MM, DHSc

Dr Nimisha Waller is a Senior Lecturer in the Department of Midwifery, Faculty of Health and Environmental Science at AUT University. She has practised midwifery in tertiary units and as an LMC. She has been a supervisor and a member of the competency review panel for MCNZ, reviewer for NZCOM Midwifery Standards Review, NZCOM educator for the Midwifery First Year Practice (MYFP), an expert advisor and an Academic member/Deputy Chair on the MOH Compliance panel that monitors the Code in New Zealand (Breastfeeding). Nimisha has a particular interest in maternal wellbeing, diabetes and obesity, newborn, postnatal distress, traumatic birth and PTSD. Her doctoral study is titled 'How are post-birth reflective conversations experienced by those involved?'. 

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“I guess baby was just too comfy in there...”: A qualitative study of women’s experiences of elective late-term induction of labour

Authors: Lou S et al.

Summary: This qualitative study explored women’s experiences of elective late-term IOL. 23 women with uncomplicated pregnancies who underwent late-term IOL at 2 Danish hospitals that offered an outpatient induction regimen were interviewed 4–8 weeks after birth. Thematic analysis of the responses showed that all women had hoped for a spontaneous birth. They understood that prolonged pregnancy meant the body/baby was “not ready”, but generally were not worried. Most of the women felt adequately informed about the reasons for IOL, and considered IOL to be both an offer and a recommendation. One-third of the women were initially hesitant but underwent IOL because of weariness from pregnancy and the impatience to deliver a healthy child. Outpatient induction was generally appreciated as it allowed the women to continue everyday activities while waiting for labour to begin. 19 out of 23 women reported having a good birthing experience, but 2 of them felt that their negative birthing experiences were related in part to IOL.

Comment: For some women the perception of IOL may not be positive. Previous negative experiences with IOL, concerns about the medicalisation of pregnancy or desires for a home birth may all influence a pregnant woman’s decision to postpone or decline late-term IOL. According to the authors, to respect and acknowledge these concerns (even if one personally disagrees) is part of a shared decision-making process that allows women to make decisions in accordance with their values and preferences. The vast majority of women in the study readily accepted the offer/recommendation for IOL without much discussion or hesitation. However, some would have liked a more thorough presentation of the alternatives and more time to think of the offer/recommendation being presented. Commencing IOL at home allowed the women to continue everyday activities while waiting for labour to begin. The authors feel a measure of informed choice would have added value to this study and the experiences and concerns of women who decline IOL should be addressed in future research, because their perspectives on risk, choice and clinical communication may provide new and valuable insights. A must read!

Reference: *Women Birth* 2021;34(3):242-9

[Abstract](#)

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What women want and why. Women’s preferences for induction of labour or expectant management in late-term pregnancy

Authors: Keulen JKJ et al.

Summary: This study evaluated women’s preferences for IOL at 41 weeks or expectant management until 42 weeks in low-risk late-term pregnancy. 782 obstetrically low-risk women with an uncomplicated pregnancy filled in questionnaires on quality of life (QoL) and anxiety when they reached 41 weeks’ gestation; 604 (77.2%) women responded. 44.7% of women preferred induction at 41 weeks, 42.1% preferred expectant management until 42 weeks, and 12.2% did not have a preference. Women preferring induction had more QoL issues and were more anxious than women preferring expectant management ($p < 0.001$). The main reasons for preferring IOL were feeling safe, the pregnancy taking too long, and knowing what to expect. The main reason for preferring expectant management was the wish to give birth as naturally as possible.

Comment: The findings from the [INDEX](#) and [SWEPIS](#) trials may influence the change in guidelines of actively offering the option of IOL at 41 weeks to women with otherwise low-risk pregnancies. Hence this study is timely as it provides a broad insight into the motivations behind women’s preference for IOL and expectant management. Women who preferred IOL have higher anxiety and the authors feel that providing adequate information and involving women in the process of shared decision-making may help to reduce their anxiety. The information from the study helps practitioners who have to counsel women regarding timing of the birth in late-term pregnancy. Being aware of variation in women’s preferences and the motivations behind their decisions (one size does not fit all) should help practitioners to ensure shared decision-making occurs. A must read to ensure there is provision of appropriate information to ensure informed choice and consent.

Reference: *Women Birth* 2021;34(3):250-6

[Abstract](#)

Comparison of pregnancy outcomes of patients treated with ondansetron vs alternative antiemetic medications in a multinational, population-based cohort

Authors: Dormuth CR et al., for the CNODES Investigators

Summary: This large, multicentre cohort study investigated the association between ondansetron exposure during pregnancy and the risks of spontaneous abortion, stillbirth, and major congenital malformations. Data from nearly half a million pregnancies that ended in spontaneous abortion, induced abortion, stillbirth, or live birth in Canada, the US, and the UK in 2002–2016 were analysed. Fetal death occurred in 7.9% of 163,810 pregnancies exposed to ondansetron and 5.7% of 306,766 pregnancies exposed to other antiemetics. For ondansetron versus other antiemetics, adjusted hazard ratios were 0.91 (95% CI 0.67–1.23) for fetal death, 0.82 (95% CI 0.64–1.04) for spontaneous abortion, and 0.97 (95% CI 0.79–1.20) for stillbirth. For major congenital malformations, the estimated odds ratio was 1.06 (95% CI 0.91–1.22).

Comment: Nausea and vomiting affects 7 out of 10 women and for most women improves or disappears by the end of the first trimester of pregnancy. Hyperemesis affects 1% of women and although symptoms may improve around 20 weeks of pregnancy, it may not disappear completely till the birth of the baby. The use of ondansetron (Zofran® or Onrex®) during the first trimester of pregnancy is increasing. There are various reports including [Medsafe \(2020\)](#) that suggest a small increase in risk of oral cleft defects, and other reports suggest increases in the risk of cardiac malformations. This study did not observe an increased risk in cardiac malformations among pregnancies exposed to ondansetron; however, their analysis lacked sufficient power to examine other malformations. Huybrechts et al. (2020) reported that intravenously administered ondansetron was not associated with an increase in the risk of cardiac malformations, oral clefts, or congenital malformations overall. This study did not find credible association between exposure to ondansetron during pregnancy and increased risks of fetal death, spontaneous abortion, stillbirth, or major congenital malformations compared with exposure to other commonly used antiemetic drugs. Please see the Medsafe (2020) section on clinical implications if you are prescribing ondansetron in your practice.

Reference: *JAMA Netw Open* 2021;4(4):e215329

[Abstract](#)

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Research Review publications are intended for New Zealand health professionals.

Breastfeeding and the risk of childhood cancer

Authors: Su Q et al.

Summary: This systematic review and meta-analysis evaluated the association between breastfeeding and childhood cancer risk. A search of PubMed and Embase identified 45 articles (n=475,579) that were suitable for inclusion. Meta-analysis of data from 33 studies showed that breastfeeding had a protective effect against childhood leukaemia; pooled risk estimates for childhood leukaemia were 0.77 (95% CI 0.65–0.91) for ever vs non/occasional breastfeeding groups and 0.77 (95% CI 0.63–0.94) for longest vs shortest breastfeeding duration groups. The most protective effect was seen at a breastfeeding duration of 9.6 months (OR 0.66, 95% CI 0.62–0.70). In 4 studies that examined the association between breastfeeding and childhood neuroblastoma, significant inverse associations were seen for ever vs non/occasional breastfeeding (OR 0.59, 95% CI 0.44–0.81) and for longest vs shortest breastfeeding duration (OR 0.61, 95% CI 0.44–0.83). There were no associations between breastfeeding and any other cancers.

Comment: Globally, the prevalence of exclusive breastfeeding varies widely. Countries from Asia and the Pacific region have moderate to high rates of exclusive breastfeeding, while the rate of exclusive breastfeeding is lower in Europe and America. World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) developed the global strategy for infant and young child feeding that infants should be exclusively breastfed for the first 6 months of life to achieve optimal growth, development and health. In the current study, the authors found that breastfeeding duration of 6 months could reduce the risk of childhood leukaemia by 20%. The present study also provides suggestive evidence of an inverse association between breastfeeding and risk of neuroblastoma. In addition, given that the role of breastfeeding for the risk of childhood leukaemia and lymphoma may be region-specific, further analyses are warranted to provide insights into the strategy of breastfeeding advocacy. What is the commitment/investment for breastfeeding in these regions? The authors have provided several potential explanations why breastfeeding may decrease the risk of childhood leukaemia which is worth a read. Including information of breastfeeding pattern in future studies, such as exclusive breastfeeding and partial breastfeeding, may help to evaluate the association between breastfeeding pattern and the risk of childhood cancer.

Reference: *BMC Med* 2021;19(1):90

[Abstract](#)

Effectiveness of intrapartum fetal surveillance to improve maternal and neonatal outcomes

Authors: Al Wattar BH et al.

Summary: This systematic review and meta-analysis evaluated the effectiveness of 10 different types of intrapartum fetal surveillance. A search of MEDLINE, Embase and CENTRAL identified 33 RCTs (n=118,863) that evaluated a total of 10 fetal surveillance methods, including intermittent auscultation, cardiotocography (CTG) alone or in combination with computer-aided cardiotocography, fetal scalp blood lactate sampling, fetal scalp blood pH sampling (CTG-FBS), fetal pulse oximetry, fetal heart electrocardiogram (STAN-CTG), and other combinations. Intermittent auscultation reduced the risk of emergency caesarean deliveries compared with other types of surveillance, except STAN-CTG-FBS. Intermittent auscultation also reduced caesarean deliveries for suspected fetal distress. None of the evaluated methods affected the risk of neonatal acidaemia, neonatal unit admissions, Apgar scores or perinatal death.

Comment: This systemic review and meta-analysis is a must read if you have not read it before as it evaluates 10 fetal surveillance methods. It is also available on the [NZCOM website](#). It shows intermittent auscultation reduced caesarean section deliveries for suspected fetal distress. It is important to also look at the [guidance on intermittent auscultation](#) on the NZCOM website if you have not had a chance before. Great reminder that the advancement in technology does not mean we abandon the skill of intermittent auscultation introduced 5 decades ago!

Reference: *CMAJ* 2021;193(14):468-77

[Abstract](#)

Characteristics of existing healthcare workforce education in spiritual care related to childbirth

Authors: Prinds C et al.

Summary: This systematic review evaluated educational initiatives for improving competencies in spiritual care related to childbirth. Seven databases were searched for studies of spiritual care education in maternity care settings. From 235 eligible studies, only 2 were found that described spiritual care education in maternity care settings. Most of the studies about spiritual care were not related to childbirth, but instead focussed on loss, sickness and bereavement.

Comment: Holistic care interlinks the physical, psychological, social and spiritual dimensions of the women we are involved in care of, i.e. there is interlinking of mind, body and spirit. However we may overlook spiritual dimension of care. According to [Crowther and Hall \(2015\)](#) the spiritual guidelines developed appear not to acknowledge the lived experiences of childbirth as being spiritually meaningful. Promoting spiritual wellbeing supports women/whānau in their journey to find meaning at the time of birth. The preparation of midwives for the spiritual aspects of care deserves much more attention than what has been identified in this research by the authors. It is important that any education material developed is meaningful and does not just tick the box of being covered/addressed within midwifery curriculum or with midwives following registration. The authors suggest 4 aspects to consider when planning educational activities of spiritual care for maternity care providers – focus on philosophical perspectives on childbirth and maternity care; facilitate spiritual reflection as a sustainable professional competency; provide knowledge of spiritual and religious values and practices, in particular related to reproduction and childbirth; and have overall attention towards the inclusion of teaching approaches underpinning competencies in being reflective, accepting and authentic as a provider of maternity care. It's time for us to reflect on what is provided and how, as well as does anything need changing? Does it just tick the box or is it meaningfully threaded through the curriculum and hence midwifery practice?

Reference: *Midwifery* 2021;97:102974

[Abstract](#)

Why do women choose homebirth in Australia? A national survey

Authors: Sassine H et al.

Summary: This national survey explored the characteristics, needs and experiences of women choosing to have a homebirth in Australia. 1681 survey responses were analysed. Most of the women wanted to give birth at home with a registered midwife. However, if a midwife was not available, half of the women said they would give birth without a registered midwife or find an unregistered birthworker, and a further 30% said they would give birth at a hospital or birth centre. The women chose a homebirth to avoid specific medical interventions and the medicalised hospital environment (32% of women described their previous hospital experience as traumatic). Nearly 60% of women had ≥1 risk factor that would have excluded them from a publicly funded homebirth programme.

Comment: The homebirth rate in NZ is 4% while 0.3% of Australian women choose to birth at home. This large national survey targeted well-resourced women who access homebirths, hence the voices of Indigenous women and women with lower socioeconomic status are absent in this survey. The study highlights that having a registered midwife at homebirth is difficult hence women (including those with risk factors) seek homebirth with an unregistered birth worker or freebirth as the current maternity services are unable to meet their needs. The majority of women in this study had experienced homebirth with a private practising midwife rather than through a publicly funded homebirth service. Rates of babies born before arrival have increased, suggesting that women may be freebirthing and arrive at hospital to register the baby or for postnatal care. The authors acknowledge that the survey presents a one-sided view. A must read, especially sections relating to the human rights of childbirth, women considering previous experience as traumatic, why women are avoiding the system, a need for collaboration between practitioners, and the implications and recommendations. As the authors suggest, it is important to humanise the current service provision and prevent driving homebirth underground.

Reference: *Women Birth* 2021;34(4):396-404

[Abstract](#)