Midwifery Research Review™

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Issue 8 – 2015

In this issue:

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CONGRATULATIONS TO

Jacqui Adair

who won the iPad mini 3 by taking part in our recent Subscriptions Update promotion. Jacqui is a Clinical Nurse Specialist at Middlemore Hospital in Auckland.

Welcome to the latest issue of Midwifery Research Review.

The first article looks at caseloading midwifery care for socially disadvantaged women in the UK. The findings are not unexpected. Next is an interesting metasynthesis of studies of first time mothers' experiences of labour, followed by an Australian investigation into how women get information about foetal movements. The next two articles relate to fathers' experiences of childbirth, followed by a study of the effect of routine complementary formula feeding on breastfeeding of late preterm infants. After that are two studies related to third and fourth degree tears and faecal incontinence. This selection is rounded out with a study about the relationship of severe fear of childbirth and caesarean section, and an examination of the effects of non-pharmacological and pharmacological methods for managing pain in labour.

I hope you enjoy the selected studies and look forward to any feedback you may have.

Kind regards,

Jackie Gunn

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An investigation of the relationship between the caseload model of midwifery for socially disadvantaged women and childbirth outcomes using routine data

Authors: Rayment-Jones H et al.

Summary: This study compared childbirth outcomes and processes for women with complex social factors who received caseload midwifery care versus standard maternity care in the UK. Data were collected from computerised records for 194 women with complex social factors who presented for maternity care; 96 received standard care and 98 received caseload care. Women receiving caseload care were significantly more likely to experience spontaneous vaginal childbirth (80% vs 55%), use water for pain relief (32% vs 10%), birth in the midwife led centre (26% vs 13%), be assessed by 10 weeks gestation (24% vs 8%), have a shorter postnatal stay (1 vs 3 days), and know their midwife (90% vs 8%). More women in the caseload group were referred to multidisciplinary support services, and they had fewer neonatal unit admissions.

Comment: This research undertaken in England examines the effect of caseloading midwifery care for socially disadvantaged women. Much of the research to date, that has shown that continuity of midwifery care has beneficial effects of on both birth and neonatal outcomes, has been with women who have low obstetric risk and who meet criteria for primary maternity care. This study shows that the benefits extend to socially vulnerable women. The midwifery caseloading service was set up to improve accessibility to midwifery care for vulnerable women, and the midwives in the service worked with a backup partner in a similar fashion to New Zealand lead maternity carers (LMCs) providing individualised care. Additionally, the caseload midwives had direct referral access to the mental health services as well as additional training in mental health assessment. This may have influenced the results related to referrals to the mental health services. Even though this is a non-randomised retrospective study, it has been very carefully designed and carried out. The comparison and statistical processes have been fully reported (including the missing data). Conclusions and recommendations are congruent with the results. The outcomes show no harm for women and babies in the caseload group and several benefits. The smaller rate of admission to the neonatal unit seen in the caseload group compares with a similar finding by Davis et al. (2011) in a low risk New Zealand population. Importantly, women in the caseloading group were significantly more likely to have been assessed by 10 weeks of pregnancy. It is also noted that the midwives providing continuity of care for women with high social needs and social/medical referral requirement carried a caseload of 35 women per annum.

Reference: Midwifery 2015;31(4):409-417

Abstract

Independent commentary by Jackie Gunn MA *Massey* BHSC Ng *C.Sturt* RGON RM

Jackie is a Senior Lecturer in the Dept of Midwifery, Faculty of Health and Environmental Science at AUT University. She has been involved in leadership of midwifery education at AUT University for more than two decades and has practised midwifery in tertiary and primary maternity units and as an LMC midwife. She is a foundation member of the New Zealand College of Midwives. Jackie has a particular interest in midwifery practices that support physiological pregnancy, childbirth and transition to parenthood processes, midwifery education, and development of midwifery practice.

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A balancing act in an unknown territory: a metasynthesis of first-time mothers' experiences in early labour

Authors: Eri T et al.

Summary: This study integrated the findings of 11 previous qualitative studies to assess the experiences of first-time mothers in early labour. 11 studies were included (2 from the USA, 4 from the UK, and 5 from Scandinavia) comprising a total of 231 women; all of the studies were conducted in hospital-based maternity care. The main results were that women have to make significant decisions when going into labour for the first time and encountering the maternity care system. They have to decide whether labour really has started and subsequently when to go to the hospital. A key challenge is to balance the arrival on the labour ward at the 'right' time. Arriving at the right time leads to a positive experience, while arriving too soon might lead to a cascade of negative experiences.

Comment: This metasynthesis of qualitative studies from the USA, Scandinavia and the UK is included for three reasons. There are not many metasyntheses in the literature as yet. Firstly, it is an opportunity to look at how qualitative studies can be collectively analysed. Secondly, the findings are pertinent for midwives who care for women in a fragmented care system that does not enable an early labour home visit and thirdly, it reinforces the benefits of the lead maternity carer (LMC) model that enables a home visit during early labour, or at the very least a telephone conversation with a known midwife that can allay some of the uncertainties expressed in this study.

Reference: Midwifery 2015;31(3):e58-e67
Abstract

How pregnant women learn about foetal movements: sources and preferences for information

Authors: McArdle A et al.

Summary: This study investigated the ways pregnant women receive information about foetal movements. 526 pregnant women at ≥34 weeks' gestation who were attending the antenatal clinic of a large metropolitan maternity hospital were surveyed. 67% of them reported receiving information about foetal movements. Sources included midwives (80%), family (57%), friends (48%) and their own mother (48%). Midwives were the most preferred source of information. 52% of the women used the internet for information but only 11% said it was their preferred source.

Comment: There are two reasons this smallish Australian study is of interest. Firstly, the surprisingly low percentage of women who reported receiving information about foetal movements and secondly, that although 'Dr Google' may be referred to, women still want the information from a health professional. It seems unlikely, but it would be interesting to know if the percentage of New Zealand women who report not receiving information about foetal movements would be similar to this study. In this day and age when 'everyone has access to everything about everything' and people come to health professionals armed with an internet search, it may support health professional's confidence that they are still regarded as trustworthy sources of information.

Reference: Women Birth 2015;28(1):54-59
Abstract

The phenomenon of intrapartum transfer from a Western Australian birth centre to a tertiary maternity hospital: the overall experiences of partners

Authors: Kuliukas L et al.

Summary: This study from Western Australia described the experiences of partners during intrapartum transfer from a low risk midwifery-led, woman-centred unit to an obstetric unit. 15 male partners were interviewed in the first 8 weeks postpartum to determine their experience of the intrapartum transfer. Five main themes emerged: (1) it was an emotional roller coaster for them; (2) their role in changing circumstances was uncertain; (3) they had to adapt from an inclusive nurturing and continuity model to a medicalised model; (4) they had to adapt from feeling comfortable in the familiar birth centre to going to the place where 'things go wrong'; and (5) they had to alter their expectations of the labour and birth experience.

Comment: There is an increasing body of research relating to fathers' experiences during the pregnancy and childbirth of their partners. This study uses in-depth qualitative analysis of the experience of 15 men whose partners were transferred to a tertiary obstetric unit from an 'alongside' birthing centre. Transfer is known to be a difficult passage for women to navigate on physical, emotional and mental levels. The research findings provide an insight into men's experiences on those levels as well. In particular, that there are significant internal ups and downs while staying outwardly calm and supportive of their partners. The results highlight the need for good communication and support as well as recognition of their understanding of their partner's reserves.

Reference: Midwifery 2015;31(5):e87-e93
Abstract

Italian fathers' experiences of labour pain

Authors: Tarlazzi E et al.

Summary: This study examined Italian fathers' experiences of labour pain. Six fathers who were with their partners during labour underwent in-depth interviews. Strategies for increasing trustworthiness were used, such as member checking, peer examination, and code and recode procedures. Five main themes emerged to describe their experiences: 1) they felt that labour pain was something you have to go through; 2) they felt they needed to be a silent presence that gives courage; 3) they hoped they could stay until the end of the birth; 4) they didn't realise 'that' would happen; and 5) they felt they needed to recharge their batteries.

Comment: A similar qualitative methodology was used in this Italian research that explored fathers' experience of the labour pain. This study has a useful review of recent literature in the area. The discussion section relates the findings of this study back to the literature very clearly. While the main focus was to describe the fathers' experiences of labour pain, the findings say so much more. In particular, anxiety that they may not be 'up to' supporting their partners as the 'silent presence that gives courage' to the woman. The authors draw the conclusion that preparation and anticipatory guidance are important, but as in the Western Australian study above, the need to feel that midwives recognised their role and deep knowledge of the woman's capacity were discussed. Finally, in relation to the need to recharge their batteries, fathers stated that midwives need to acknowledge this might be needed and 'give permission' for the men to leave the room at times.

Reference: Br J Midwifery 2015;23(3):188-194
Abstract

Healthy late preterm infants and supplementary artificial milk feeds: effects on breast feeding and associated clinical parameters

Authors: Mattsson E et al.

Summary: This study investigated the impact of supplementary artificial milk feeds on breastfeeding in healthy late preterm infants. Parents of 77 late preterm infants (whose mothers intended to breastfeed) completed a diary during the infants' hospital stay. Infants who received regular supplementary artificial milk feeds had a longer delay before initiation of breastfeeding. They were also breastfed less frequently and had longer hospital stays than infants who were breastfed exclusively from birth. Exclusively breastfed infants experienced more weight loss than infants who received regular artificial milk supplementation. All infants were breastfed to some extent at discharge, with almost half (43%) being exclusively breastfed.

Comment: This prospective, comparative study of healthy late preterm infants in Sweden sought to compare the influence of supplementary feeding on breastfeeding with exclusively breastfed infants. Although the sample size is small and the authors acknowledge there are areas the study design did not explore that may have strengthened the results, there are some important clinical indications to be considered and that would benefit from further research. Routine supplementation with formula for late preterm infants from birth was policy in the unit where the study was conducted. The results show that routine practice of this nature is a barrier to the establishment of breastfeeding for these infants. While the exclusively breastfed infants lost more weight than the supplemented babies, the weight loss does not generally appear to be excessive. Exclusively breastfed infants were no more jaundiced than the supplemented infants. Barriers and enablers to establishing breastfeeding for healthy preterm infants could benefit from further study.

Reference: Midwifery 2015;31(4):426-431
Abstract

Obstetric anal sphincter injury and anal incontinence following vaginal birth

Authors: LaCross A et al.

Summary: This systematic review and meta-analysis evaluated the relationship between obstetric anal sphincter injury and anal incontinence in parous women. A search of PubMed, Ovid (MEDLINE), Cochrane Trials, and Cumulative Index to Nursing and Allied Health Literature identified 8 studies (n=2929) that assessed the relationship between episiotomy and anal incontinence, and 12 studies (n=2288) that examined the relationship between third or fourth degree perineal laceration and anal incontinence. Pooled analysis showed a significant association between episiotomy and anal incontinence (odds ratio 1.74; 95% CI 1.28–2.38) and between third or fourth degree perineal laceration and anal incontinence (odds ratio 2.66; 95% CI 1.77–3.98).

Comment: This recent systematic review and meta-analysis has been included as a reminder that episiotomy is a procedure that is used in response to clinical indication, not as a routine practice. Nonetheless, there are still different levels of practice in different clinical communities. The evidence supporting restricting use of episiotomy to when clinically necessary is strong and is not new. This article also refers to the recent Cochrane review that identifies warm perineal compresses as protective against third and fourth degree tears.

Reference: J Midwifery Womens Health 2015;60(1):37-47
Abstract

Influence of the duration of the second stage of labor on the likelihood of obstetric anal sphincter injury

Authors: Aiken C et al.

Summary: This study examined the impact of the duration of the second stage of labour on the risk of obstetric and sphincter injury in nulliparous women. The retrospective cohort included 4831 women at a UK obstetric centre. 325 (6.7%) of the women sustained sphincter injuries. In spontaneously delivering women, there was no association between duration of the second stage and the likelihood of sphincter injury. In these women, factors associated with sphincter injury included older age, higher birthweight, and Southeast Asian ethnicity. In contrast, a longer second stage was associated with an increased sphincter injury risk in women undergoing instrumental delivery.

Comment: This is a carefully designed and conducted retrospective 5-year cohort study conducted in a UK obstetric centre which has both a tertiary birthing suite and a midwifery-led low risk birthing centre. The findings are interesting, but taken at face value could have significant implications for women who experience prolonged second stage of labour and require instrumental assistance to give birth. While the study has shown that the length of second stage of labour is not an independent risk factor for anal sphincter injury, other risk factors identified in the study need to be borne in mind. In particular, clinical identification of prolonged second stage of labour that requires an obstetric assessment remains as important as ever. What is clear in this study is that once prolonged second stage occurs, delay significantly increases the risk of anal sphincter injury.

Reference: Birth 2015;42(1):86-93
Abstract

Fear of childbirth and risk of cesarean delivery

Authors: Ryding E et al.

Summary: This cohort study in 6 European countries assessed the association between fear of childbirth and cesarean delivery. The cohort comprised 6,422 pregnant women from Belgium, Iceland, Denmark, Estonia, Norway, and Sweden. Fear of childbirth was measured using the Wijma Delivery Expectancy Questionnaire and linked to obstetric information from hospital records. Severe fear of childbirth increased the risk of elective cesarean in primiparous women (odds ratio 1.66) and multiparous women (odds ratio 1.87). A dose-effect pattern was observed between level of fear and risk of emergency cesarean in both groups. Indications for cesarean were more likely to be reported as 'nonmedical' among those with severe fear of childbirth.

Comment: This multinational longitudinal cohort study of over 6000 women (approximately half primigravida and half multipara) has found an association of severe fear of childbirth with elective caesarean section, particularly for multiparous women. The validated questionnaire used identified lack of positive anticipation of the birth as an important dimension of the fear. Midwives may explore a perceived lack of positive anticipation more closely to identify if referral to other support agencies is warranted.

Reference: Birth 2015;42(1):48-55
Abstract

Use of pharmacological and non-pharmacological labour pain management techniques and their relationship to maternal and infant birth outcomes

Authors: Adams J et al.

Summary: This study investigated the use of pharmacological and non-pharmacological labour pain management techniques in relation to birth outcomes. A nationally representative sample of 1835 pregnant women was selected from the Australian Longitudinal Study on Women's Health. Use of water for labour pain management was found to reduce the likelihood of the baby being admitted to special care nursery (odds ratio 0.42; p<0.004) whereas an epidural increased this likelihood (odds ratio 3.38; p<0.001) and the likelihood of instrumental childbirth (odds ratio 7.27; p<0.001). Epidurals and the use of pethidine decreased the likelihood of continuing breastfeeding whereas the use of breathing techniques and massage for pain control increased the likelihood of continuing breastfeeding.

Comment: This Australian Study examined data as a sub-survey of a nationally representative sample of pregnant women from the Australian Longitudinal Study on Women's Health. It is notable in that it examines relationships between both non-pharmacological and pharmacological techniques of pain management in labour with selected birth and neonatal outcomes. Any practice that reduces the need for babies to be admitted to special care nursery is beneficial and the benefits identified here have been reported from other studies. However, it is the identification of the association of pain management practices with continuation and duration of breastfeeding that is of particular clinical interest. Recent research identifies significant non-nutritive benefits from breastfeeding and associations have been made between the duration of breastfeeding and infant growth and development. Further research to strengthen the evidence base related to the effect of breathing techniques and massage that are reported here is warranted.

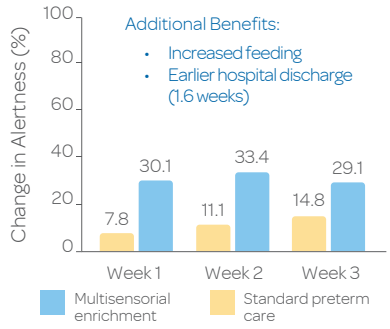
Reference: Midwifery 2015;31(4):458-463
Abstract

EXPLORING THE SCIENCE OF THE SENSES™ IN HEALTHY BABY DEVELOPMENT

A strong body of foundational and emerging research suggests that multisensorial stimulation—or the concurrent stimulation of tactile, olfactory, auditory, and/or visual stimuli—benefits the social, emotional, cognitive, and physical development of babies.

A baby's brain creates up to 1.8 million new synaptic connections per second between 2 months of gestation and two years after birth, and a baby's experiences will determine which synapses will be preserved.[1] Multisensorial stimulation—what a baby feels, smells, hears, and sees—helps promote the long-term survival of synaptic connections.[1] Stimulation is essential early in development; within the first 3 years of life, there is rapid development of most of the brain's neural pathways supporting communication, understanding, social development, and emotional well-being.[2]

Multisensorial Enrichment Increases Alertness in Preterm Infants[6]



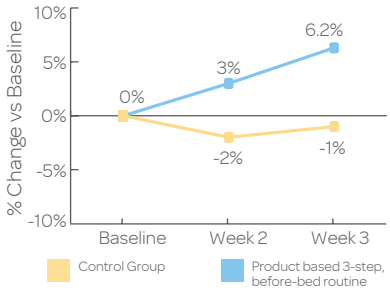
Adapted from White-Traut, et al. 2002

Stimulating multiple senses sends signals to the brain that strengthen the neural processes for learning. Through consistent multisensorial experiences, research shows that babies gain healthy developmental benefits, such as reduced stress in healthy and preterm infants[3,4] and better quality and quantity of sleep in healthy babies,[5] as well as improved weight gain which led to earlier hospital discharge in preterm infants.[6]

Multisensorial stimulation—what a baby feels, smells, hears, and sees at every moment—helps promote the long-term survival of synaptic connections during brain development.[1]

Everyday experiences in a baby's life can develop and stimulate his or her senses and provide parents an opportunity to nurture their baby's ability to learn, think, love, and grow. A simple ritual of bath time and massage is an ideal opportunity to create a multisensorial experience. Bath time provides an opportunity for increased skin-to-skin contact (touch stimulation)[7] and direct eye contact,[8] as well as the introduction of new textures, sights, sounds, and smells that can stimulate a baby's tactile, visual, olfactory, and auditory senses. The sense of smell, in particular, is directly linked to emotional memory,[9] a mother's scent can help soothe a crying baby;[10] while a pleasant scent during bath time is shown to promote relaxation in both baby and parent.[7]

Making Bath Time Part of a Routine Improves Sleep[5]



Adapted from Mindell, et al. 2009

A ritual that includes a warm bath followed by massage with a gentle skin moisturiser and quiet activities is a scientifically supported and simple behavioral intervention for improved quality and quantity of sleep in babies.[5]

Bath time provides an ideal opportunity to create an enriched multisensorial experience.

When bath time is part of an everyday ritual, the benefits have been shown to help generate a predictable and less stressful environment for the baby and parents.[5]

Although science has made advances in understanding the long-term benefits of multisensorial stimulation, there is more to be done to translate this research into everyday practice. By encouraging parents to view everyday rituals, such as bath time and massage, as opportunities for multisensorial stimulation, experiences can be created that can contribute to a lifetime of healthy development.

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