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EVIDENCE BASED MIDWIFERY

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Editorial

COVID-19 birth memories: *'It was like going into a war zone where there was an unknown, invisible and deadly enemy waiting for you …'*

Keywords: COVID-19, lockdown, memories, Evidence Based Midwifery

As a midwife, I have been greatly privileged to be with many women who have given birth in many different circumstances, the majority of which were beautifully normal with healthy babies, happy parents and fulfilled midwives. However, some were very complex and even tragic. Reflecting on these birth memories can bring a mixture of joy, sadness and, in some situations, pain.

For me, the factors impacting on the births were natural physiological events and not disasters or epidemics like COVID-19. For example, I can still see Serena begging me to call the doctor so that she could go home late Friday night from the maternity ward where she felt she was 'imprisoned' due to a threatened miscarriage of twins. This was her second pregnancy and the first miscarried at 18 weeks. She was now 22 weeks and so happy to be feeling so well with stabilised blood pressure but her heart was breaking. The social distancing and isolation from her husband was just too much for her. As an English army wife living in Northern Ireland during the 1980s, she had major issues with simply being able to see her husband as officers from the army or police visiting family or friends was a known high-risk activity. After eight weeks of 'deprivation' as she put it, she just had to escape home to the barracks to be with him. She wanted to sign herself out and I can remember the doctor explaining to her that this was against medical advice but she ordered the taxi and was away in a flash at 11 o'clock that night. I will never forget her desperation and no amount of pleading from me was going to make any difference. I do not think it is possible for any one of us to fully comprehend the lifeworld of a soldier's wife in time of war when the desire for loving arms is a real dilemma because of the threat to life. In this particular situation her husband was putting his life on the line as the threat of attack was imminent and she knew if he came to the hospital he could be ambushed or shot in cold blood on the ward. This situation was further compounded by the fact that the life of her twins was also on the line and she had been told she was going to stay on the ward for a long time. I tried everything I could to keep her from signing out but she could not stay. I finished night duty that night and thought of her many times over the next few days. When I returned on Monday at lunchtime I was given the bad news, Serena returned on Sunday night and there was no fetal heart. She was devastated and so was I. When we met we both just cried and hugged each other for a long time. It was a heart-breaking and soul-crushing experience without the anticipated and expected repetitions of *what if* and *if only*. Somehow, these words never came out and yet they were internally palpable. Serena had asked specifically for me to be with her when she was giving birth to her twin girls and they were born two days later. Memories of her pain and sorrow and quiet acceptance will always be with me.

Thinking about the tough decisions we have to make with COVID-19, led me to share this story as it was a true tragedy and a reminder that we can only do our best no matter what choices and dilemmas force us to stand at the crossroads. Lockdown can challenge us all to break the rules or take risks and we need to be prepared to live with the outcome regardless of whether it is good or bad. COVID-19 has been so difficult for so many mothers, midwives, partners and family members. The isolation, social distancing, mask wearing and forced separation have been heart-wrenching to watch. I cannot help myself as I wonder how we will remember these births and

tell their stories. Having listened to several mothers who recently gave birth during COVID-19 and their partners, I found myself struck by the hidden traumatic impact they had experienced and this was eloquently described by one father when he told me that going to the maternity unit was quite a terrifying experience '*… it was like going into a war zone where there was an unknown, invisible and deadly enemy waiting for you to walk into the trap!*' The description haunted me for days and I found myself reflecting on this war against the unseen virus and remembered what it was like going back to being a junior midwife in the 1980s, in Northern Ireland, when the country was a war zone and maternity units and hospitals were dangerous places to be. Many attacks took place in units, hospital grounds or on routes to hospitals. I felt there was a symbiosis in the impact of the unseen enemy that was worth sharing with you. The familiarity of working in a world where the enemy was always hiding, waiting for a weak moment, lurking with a treacherous intent to harm and appearing veiled in many disguises was a real threat to life then and still is today. I must be honest and tell you that in those dark days, we did not talk about it, as fear was not permitted to have a voice. Talking was a dangerous activity and self-protection was never even considered. Our focus was primarily on the safety of the mother and her baby.

Midwives cared for every woman with the same respect and dignity and hushed voices and whispers were the unspoken norm when caring for the captain's wife/partner or the senior police officer's or the prisoner's. The one thing that would not change was the gift of being in the privileged position of being a midwife, trained and trusted to be the custodian of precious life. The memories of the atmospheric change that was evident for a little while after the births, when the fighting and hatred and pain were suspended, is still crystal clear! Transitory peace and joy were short-lived in a safe space. New life is, and was, and still is, precious, and birth was as remarkable then as it is now.

Today, with COVID-19, our maternity care is under threat again from an unknown enemy but we have the safety net of putting on the armour of PPE to fearlessly face the enemy with our shielded faces, rubber gloves and plastic aprons. In following the rules of safe practice and engagement, we respect the enemy and take every precaution to keep ourselves and the women and babies we care for safe. Our outer layers of PPE enable us to continue to care with loving hearts for those women and babies and families who need us to be there for them.

Colleagues, please continue to be courageous, cautious and, most of all, be midwives!

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Evidence Based Midwifery

A qualitative study exploring women's experiences of conversations with maternity professionals when home birth is not recommended

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ORIGINAL

Background: Home birth is a safe option for healthy women with a low-risk pregnancy. Some women who have medical or pregnancy-related risk factors still feel that home birth is the best option for them, based on their own personal circumstances, ethos and perception of risk. When there is a mismatch in these perceptions between the woman and her maternity professionals, conflict can sometimes ensue leading to disempowering conversations, a breakdown in the professional relationship and, occasionally, disengagement from maternity services.

Aim: The purpose of this study was to explore women's experiences of conversations with maternity professionals when they are choosing to give birth at home against professional recommendation, in order to identify both positive and negative experiences.

Methods: Using narrative inquiry, data were collected from five participants through semi-structured interviews.

Women were self-selected via an advertisement on social media aimed at providing peer support to women through pregnancy and birth.

The data were analysed thematically using the participants' own words to name the themes. The analysis was independently verified by the second author to ensure trustworthiness.

Ethics: Ethical approval was obtained via a higher education institute ethics committee: ID 20193 on 6 July 2018.

Findings: Thematic narrative analysis of the data highlighted five main themes:

1. 'A battle on my hands'
2. 'You haven't even seen me'
3. 'I had done all the research'
4. 'It's making me feel guilty'
5. 'But they are not allowed to stop me?'

Discussion and conclusion: The women's stories demonstrate that making choices that do not align with current recommendations can result in disempowering and disrespectful conversations that undermine women's trust in maternity services and sometimes their own faith in their ability to give birth. Conversely, respectful and empowering conversations that provide a courteous exchange of unbiased information improve women's confidence and experience of maternity services.

Keywords: home birth, guidance, recommendations, shared decision making, respectful maternity care, evidence based midwifery

Introduction

Saxbe (2017) described childbirth as a 'biopsychosocial' process whereby the successful interplay of the hormones involved in labour and childbirth is inextricably linked to the woman's psychological and social well-being. Some have described childbirth as a 'rite of passage' whereby a woman makes both a physical and spiritual transition to motherhood (Jacinto & Buckey 2013). The way in which individuals choose to experience this can vary and may depend on whether they consider birth a natural and normal event where intervention can lead to unnecessary risks (Boucher et al 2009), or frightening and risky requiring monitoring and active management by professionals (Lundgren 2010, Coxon & Sandall 2014).

This pendulum of views has arisen following the transition from a social to a medical model of childbirth over the last 50 years in the UK, notably since the Peel Report announced that hospital was the safest place to give birth (Department of Health and Social Security 1970). The safety culture evident in UK healthcare today strives to minimise the risk of a poor outcome, attributing it to poor risk management (van Teijlingen 2005). However, this culture impacts on the choices that are made available to women (MacKenzie Bryers & van Teijlingen 2010). This risk-averse approach to childbirth is not unique to the UK and is reflected in maternity policies on home birth throughout Western society (Roome et al 2015, American College of Obstetricians and Gynecologists (RCOG) 2017).

In recent years there has been a policy drive towards 'shared decision making' to ensure users of healthcare systems are central to the decisions that are made about their care (Coulter & Collins 2011). The latest national maternity care review in England found that information sharing is central to ensure women are able to make choices and decisions that meet their individual needs (NHS England 2016). However, shared decision making may expose women to facts, figures and statistics to help them navigate choices that they may never have had to consider before. In fact, pregnancy care is often dominated by 'risk talk', which Van Wagner (2016) found could contribute to a woman's anxiety around childbirth with a responsive leaning towards the medical model of care.

A mismatch in risk perception between the mother and the maternity professional can give rise to discord (Jenkinson et al 2017) with the subsequent discourses resulting in the women feeling coerced and bullied (Diaz-Tello 2016, Kotaska 2017). Research conducted across 34 different countries identified the use of coercive and disrespectful practices towards women making alternative choices to those recommended (Vedam et al 2017). Dagustun (2012) coined the term 'playing the dead baby card', whereby maternity professionals use fear to elicit a preferred decision by the mother, often by over-emphasising risk and using socially constructed views that home birth is an unsafe option, to get her to conform with recommendations. An example of how this view is perpetuated through the media can be seen in *The Independent*'s report on a study conducted by obstetricians stating that 'Home births could be as dangerous as "driving without putting your child's seatbelt on"' (Cooper 2014). This presented a clear message that home birth is an irresponsible choice and evidence of a culture that is unlikely to change overnight. It is unsurprising then that, despite strong evidence suggesting home birth is a safe viable option for many women (Hollowell et al 2011, Scarf et al 2018), the home birth rate in the UK remains low at just 2% of births (Office for National Statistics (ONS) 2019).

Hollander et al (2018) found that conflict during negotiation of the birth plan impacted on women's trust of maternity services and sometimes inclined the woman to choose a birth setting outside current recommendations and guidance. Women who comply with recommendations that are incongruous with their wishes can feel out of control of their birth (Stramrood & Slade 2017). This potentially impacts on their birth experience and transition to motherhood, rendering them more susceptible to postnatal depression (Bell & Andersson 2016), and/or post-traumatic stress and maternal attachment disorders (Dekel et al 2017). This makes the concept that social and emotional risk should be considered equally with clinical risk more compelling (Barclay et al 2016, Downe et al 2018).

It is unsurprising that this complex landscape of decision making can lead to maternity professionals finding themselves in a quandary as to how to discuss the evidence relating to risk in a balanced and acceptable way, without allowing the influence of their own perceptions and values to influence that discussion (Jenkinson et al 2017). Fear of repercussions such as litigation (Kruske et al 2013, Jenkinson et al 2016), guilt and feeling responsible for a poor outcome in the absence of professional error (Schrøder et al 2017), or a mindset that they have a moral obligation towards the unborn fetus (Chervenak et al 2013) can all contribute to negative conversations.

Aim

The aim of this research was to explore how discussions with maternity professionals around a woman's choice of home birth when this is not recommended are received by women, how these made them feel, and how those conversations could be improved. An initial literature review only identified five papers specifically addressing women's experience of communication with health care professionals in relation to birth preferences. Two

papers were excluded as they focused more on the decision-making process rather than interactions with health professionals. The remaining three papers identified themes relating to respect for women's autonomy, medical hegemony, and feminism (Coxon et al 2014, Lee et al 2016, Vedam et al 2017). This reflected the experiences of the author who is a practising consultant midwife, specialising in complex birth plans for women with alternative birth preferences to those being recommended. The users of this service often present having been significantly affected by the conversations they have had during their pregnancy with healthcare professionals that did not appear to support their decisions. These experiences were often related to 'how' information was provided rather than the information itself.

Funding

Funding was awarded by the National Institute of Health Research and was supported by an academic mentor from a local higher education authority.

Methods

Narrative inquiry is a research approach that uses storytelling to attempt to illuminate the meaning behind the personal stories of the participants (Wang & Geale 2015) enabling them to be shared with a wider and focused audience (Riessman 2007). It fits well with the holistic view that childbirth is a biopsychosocial event and allows for context which may uncover underlying social or psychological factors that influence the decisions that women make and how they respond to advice from maternity professionals. While narrative inquiry has been described as '*highly exploratory and speculative*' (Freeman 2004:74), it was considered the most appropriate method to explore the psychological, social and cultural meanings and values of the participants involved to elucidate their individual experiences of shared phenomena. This method also contextualises and preserves the women's individual stories which was considered central to the principles of this research. Wang & Geale (2015) suggested that the purpose of narrative inquiry is not to seek to provide truth or fact that can be generalisable, but to reveal individual meaning relating to an experience that can then sensitise others to such possibilities.

Following ethical approval from a higher education ethics committee (ID 20193) and permission from the site owners, an advertisement was placed on UK social media aimed at providing peer support to women through pregnancy and birth inviting them to email the researcher if they would like to participate. Women were included if they had given birth to a live baby in the previous two years and had sought support from maternity services to have a home birth when risk factors had been identified in their pregnancies. Women who had birthed longer than two years ago were excluded in order to reflect a current perspective following the most recent maternity services report in England (NHS England 2016).

All interviews were carried out by the main author. A 'narrative-eliciting' question was asked:

'Thinking back to when you were having conversations with maternity professionals about your plans to have a home birth, can you tell me your experience relating to what was said, how you interpreted that and how that made you feel?'

Participants were encouraged to 'tell their story'. Prompts were used, such as '*And how did that make you feel?', or 'And how did you interpret that comment?*' if the woman demonstrated a reaction (either positive or negative) to a particular recollection. Interviews were digitally recorded and transcribed verbatim.

Transcripts were coded using Braun & Clarke's six steps to thematic analysis (Braun & Clarke 2006). The themes were generated using the women's own words to support the themes identified. The themes were reviewed by the researcher's supervisor for accuracy and agreement.

Results

Five women were identified as eligible to take part and were interviewed in their own homes at a time convenient to them. The small sample is in keeping with qualitative research design and allows for rich data to be collected and for the researcher to immerse themselves in the individual experiences of participants who share a common social situation, but who may react and live these experiences in a different way (Crouch & McKenzie 2006). With consent, demographic details were collected prior to the interview to include age, parity prior to the birth of this child, highest educational achievement and ethnicity. These are presented in Table 1.

All five women requested support with a home birth against advice as they had one or more identified risk

Table 1. Demographic details.

Age at birth of this child	
25–30	3
31–40	1
41–45	1
Parity prior to the birth of this child	
0	1
1	3
2	1
Highest education	
Secondary school education – GCSEs	1
College – A levels	1
University graduate	3
Ethnicity	
White British	5

Table 2. Maternal risk factors as defined by NICE.

Risk factor/s identified *(multiple risk factors identified for some women)*	Number
On selective serotonin reuptake inhibitors (SSRIs) antidepressant medication	1
Single previous caesarean section	1
Hypertension <150/100	1
Previous postpartum haemorrhage	1
Raised body mass index	2
Maternal age >40	1
Large for dates fetus	2
Previous premature birth	1
Unstable lie in current pregnancy	1
Epilepsy	1

factor in this or a previous pregnancy placing them outside the generally accepted 'low risk' category in the UK (National Institute for Health and Care Excellence (NICE) 2014). These risk factors are set out in Table 2.

Context

The reporting of the analysis begins by putting the women's stories into context. Pseudonyms have been used to provide anonymity. All the women naturally started their narrative by explaining their past experiences of life and childbirth which they felt influenced their decision to birth at home.

Louise has a history of absent seizure epilepsy and an increased BMI. During her first pregnancy Louise had hoped for a water birth but accepted an induction of labour for a 'prolonged' pregnancy. Following a lengthy induction, including IV oxytocin access and continuous fetal monitoring, she gave birth in hospital. She found this a highly medicalised and disempowering experience and was determined that next time she would listen to her body and plan a water birth at home.

Angela recalls her previous births positively despite her first child being born by emergency caesarean section under general anaesthetic for undiagnosed breech presentation in labour. She planned a home birth with her second birth but did not feel supported with this decision and was persuaded to opt for a hospital birth. This third pregnancy was unplanned but very much wanted and she wasn't going to have '*anyone telling me I couldn't do it again*', so she planned a home water birth.

Chloe was studying at university when she became pregnant. Chloe has a history of childhood sexual abuse, anxiety and depression. She describes a complete belief in her body's ability to give birth naturally. Due to having a raised BMI and this being her first pregnancy, Chloe was advised to give birth in hospital.

Helen planned to give birth in a midwife-led unit with her first baby but she went into premature labour and her baby was born in hospital with medical complications that required multiple surgeries. Helen also experienced a postpartum haemorrhage (less than 1000mls). As such, her subsequent pregnancy was considered 'high risk' and she was recommended to give birth in hospital. Helen was determined that this time her experience would '*be the exact opposite*' to her first and she felt strongly that hospital would not be the right place for her to achieve this.

Rachel has suffered with anxiety since being a teenager. Her first baby was born in a freestanding midwifery unit and she recalls being very aware of how busy the service was during this birth. This impacted on her birth experience as the discharge felt hurried and made her feel like she was an '*inconvenience*'. She planned a home birth this time, but this recommendation was withdrawn when her anxiety required medication.

Analysis

Following analysis of the data, five main themes were identified and the participants' own words were used to name them. The themes identified were: '*A battle on my hands*'; '*You haven't even seen me*'; '*I had done all the research*'; '*It's making me feel guilty*'; and '*But they are not allowed to stop me?*'. While the quotes have been edited to ease reading, care was taken to ensure the meaning has not been lost.

Theme 1

'A battle on my hands'

This was a strong theme with all five participants using terminology relating to a 'battle' or a 'fight' to get support for their birth place wishes. This 'battle' included fear-inducing language, lack of resources and an overplaying of risks perceived as coercive methods to get them to give up their hopes of a home birth.

Louise:

'I'd also booked to use a doula as well because I knew that I was going to be facing a battle in terms of being allowed a home birth'

Angela:

' … it made me feel like I may have to fight, it made me feel like I might have to argue'

Chloe:

'They said, "I hate to be the bearer of bad news but we probably won't have any ambulances to support this home birth if anything goes wrong"

'"60% or something of home births end up in hospital anyway" … just another example of the scaremongering that I got'

Helen:

'The line said, "Er, we're just at the end of shift

handover and we're a bit busy so we're not going to be able to send somebody out"'

Louise:

'Because of the size of the baby it was likely that the baby would get stuck … I wanted to know how likely, but she said it was likely that the baby would get stuck and it could be that the baby would die inside me before the midwife had time to call an ambulance'

However, positive interactions with clinicians were also described:

Angela:

'She said, "I've got to tell you these … statistics, but we'll go through them one by one"… she said "The best sign is that you've had a previous birth without any rupture" ... I came out of that elated, I mean literally on proper cloud nine, it was such a different feeling'

Theme 2

'You haven't even seen me'

This theme focuses on respect and being recognised as an individual. All participants contributed to this theme:

Angela:

'He didn't even look up, he didn't even look up from his paperwork ... not once, and I thought, "You haven't even seen me, you don't even know who I am"'

Rachel:

'It's annoying because it's like, you don't know me, like I'm just a person on a piece of paper with my medical history in front of her, but she doesn't know, you know, nobody knows, other than me and the people who live with me'

There were also positive experiences:

Louise:

'She basically said to me, "It's not something I would advise, but it's your choice" … she just treated me like a person rather than just another patient and I left there feeling absolutely elated, I think that was my forty-week appointment and I'd gone in there expecting a battle again and I was so relieved not to have it ... [The midwives] were so respectful of me, of my choices. They read through absolutely everything, they asked me questions about things that they weren't really sure about that were in my notes, and that just made the world of difference actually, having people that spent time getting to know me, spent time understanding where I was coming from and why things were so important to me'

Theme 3

'I had done all the research'

Most of the participants refer to having 'done the research'.

Louise:

'And again, because I'm quite a research-based person I'd done a lot of research into large babies and read that there's no need for induction if the only reason is a large baby … and actually the risks, because I didn't have gestational diabetes, I knew that the risks were lower … I was a bit wary about going to growth scans because I knew how inaccurate they could be ... and I wish that I was spoken to like an educated woman rather than someone who was just carrying a baby because I am someone who does research'

Helen:

'So he decided to write "risk of death" very clearly in my notes, which obviously was terrifying, but also I felt really like I'm being treated a bit like a child, because I'd done all the research, I knew the risks around home birth, I'd … you know I'd done the research papers, I'd been reading books … I felt really informed and then this one consultant came in and just ... made me feel like I was being stupid'

Theme 4

'It's making me feel guilty'

This theme is concerned with conversations that made the women feel guilty or irresponsible for wanting to birth at home and highlights the social perpetuation of the concept that home birth is unsafe or a selfish choice. The partipants recall the following comments made to them:

Rachel:

'"You're having a home birth? Does this not put you off? I mean, you wouldn't have access to this care"'

Rachel discussed this further with her community midwife because it was:

'Making me feel guilty, like I'm putting myself first and not the baby'

Louise:

'I just burst into tears because it made me feel that I was doing something wrong, for him, and I never ever; I still get upset by it now, because I never wanted to put anyone at risk, I wasn't doing it to be stubborn … it was quite coercive and emotive language that was used, which made me feel that I would be making decisions of feeling rather than fact, it was just emotive blackmail really'

Chloe:

'"You shouldn't really have a home birth for your first one"'

Rachel:

'Her face like dropped and she was like "And you had a home birth?" so I was like "Yes"

"Well that's very unusual. I'm not sure how … you were allowed to do that" … I felt like … I'd done something silly'

Louise recalls being told:

'"Well you do realise the risk of stillbirth is a lot lot higher and it's a really silly choice to be making to expose yourself to that risk" … Being called "silly" for making a choice wasn't very respectful'

Theme 5

'But they are not allowed to stop me?'

This theme relates to issues surrounding control and whether it is in the hands of the woman or the professional to make the decision.

Angela recalls her initial conversation with her midwife regarding her home birth wishes and being told that:

'You might not be allowed to have a home birth … it made me feel a bit sad, it made me feel like somebody was allowed to stop me … it made me feel a bit cross'

Louise's midwife stated that she:

'"Would have to have conversations with other people"'

Helen's midwife told her that:

'"I don't think they'll let you go into a birthing unit, they won't admit you"'

Rachel recalls her midwife appointment after attending the GP for anxiety:

'You won't be able to have a home birth anymore because you're on medication.'

And when she asked what would happen if she still planned a home birth the midwife replied:

'"I don't know … I've never really had anyone go against that advice before, if we tell you that you can't do it"'

Rachel's midwife warned her to:

'"Be prepared that when you ring up … [you'll] *probably come up against some resistance again" which I did!'*

Discussion and conclusion

A limitation to using narrative inquiry is that the researcher relies on the participant's perception of a conversation rather than observation of the actual discourse that takes place. However, Wang & Geale (2015) suggested that the purpose of narrative inquiry is to reveal individual meaning relating to an experience and it does not seek to provide a truth or fact that is generalisable. In the context of this study, while the stories may not be a true reflection of the conversations that took place, they reflect each woman's version of what they heard and how they interpreted it.

The findings from this study are consistent with similar research; their participants were identified as feeling coerced into decisions and disrespected by maternity professionals who resorted to 'shaming and condescension' to women's suggestions of alternative birth plans (Happel-Parkins & Azim 2016). Sjöblom et al (2012) also reported on the impact of socially constructed views of home birth as a dangerous choice that is selfish and irresponsible, and that fear was used to influence alternative decisions.

Clinical guidelines have a valuable role to play in raising standards of care and supporting evidence-based decision making; however, Frohlich & Schram (2015) identified how they can be used to regiment and dictate care and be seen as a replacement for expert clinical decision making based on the women's individual values and circumstances. This may be an obstacle to midwives feeling able to advocate for women making alternative choices that stray from these guidelines.

The latest national review of maternity services in England, *Better births* (NHS England 2016), stated that the process of decision making should fully involve the woman and her personal preferences; this requires a relationship of trust and mutual respect to enable her to make empowered decisions and to feel respectfully supported by maternity professionals. This is further emphasised by version two of *Saving babies' lives* (NHS England 2019) which asserted that, while the best care should be available to all women, their choice to accept or decline such care should be respected. The Regulation and Quality Improvement Authority (RQIA) in Northern Ireland has recently published guidance on home birth (RQIA 2019). This guidance reflects the spirit of *Better births* in that, by providing evidence-based information to women and following a 'balanced' discussion around pros, cons, and individual preferences, home birth becomes a viable and attractive option to all women regardless of their pregnancy risk factors. In view of these perspectives, it is encouraging that influential organisations are beginning to challenge the belief set out by the Peel Report (Department of Health and Social Security 1970) that hospital is the safest place to birth.

Strengths and weaknesses

The feedback from the women in this study gives the practitioner insight into how the language

they use can impact on women's experiences of maternity services, particularly when their birth choices are outside current guidance. It reiterates how practitioners should use guidelines to offer recommendations, not to limit well-informed choices.

This was a small study involving five women of a similar ethnic background. It is acknowledged that the women were self-selecting and therefore may have been interested in taking part in the study due to a particular perception of the experience they had encountered and wished to share. Hearing stories from women who shared more positive recollections of their discussions would have added to the richness of the data collected and subsequent analysis. A more diverse ethnic group of women may also have provided a different perspective.

In the time frame available for the study it was not possible to interview the healthcare professionals with whom the women had these discussions, hence it could be argued that this is a 'one-sided' story. Further research should include stories from midwives and obstetricians who are involved in discussions with women to understand their perception of events.

This research could complement the findings of this study to inform the basis of a training package aimed at multi-disciplinary maternity teams, enabling them to challenge their pre-existing beliefs and values and explore how their communication style could impact, either positively or negatively, on the families in their care.

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Positioning and attachment interventions for nipple pain: a systematic review

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ORIGINAL

Background: Nipple pain is a common difficulty experienced by breastfeeding mothers, with negative impacts on breastfeeding duration and experience. Previous systematic reviews, focusing mainly on various topical treatments, dressings and protective devices for nipple pain, concluded there was insufficient evidence to recommend any of these interventions, advocating correct positioning and attachment for the prevention of pain and trauma. Achieving optimal positioning and attachment forms the basis of management advice for nipple pain.

Aim: The aim of this review was to collate and synthesise current evidence for the effectiveness of positioning and attachment interventions for the prevention and/or management of nipple pain in breastfeeding mothers. Other outcomes included identifying factors associated with effective intervention design and also examining the effectiveness of positioning and attachment interventions for nipple pain on breastfeeding duration.

Methods: The scope of the review was defined using the PICOS tool. Literature searches were conducted on the following databases: MEDLINE, Embase, PsycInfo, CINAHL, Proquest Academic Complete, Web of Science and the Cochrane Central Register of Controlled Trials (CENTRAL). A search of the grey literature was also undertaken. A risk of bias analysis was completed for included studies.

Results: Following the search and having removed duplicates, 163 records were screened by title and abstract. 152 studies were excluded for reasons including: non-experimental study design, the testing of interventions outside the scope of this review or interventions targeted at dyads who may find breastfeeding more challenging. Of the 11 full text articles assessed for eligibility, three studies involving 489 participants met the full inclusion criteria. Owing to the low number of studies, variations in design and conflicting results, there is insufficient evidence to determine the effectiveness of positioning and attachment interventions for nipple pain. Subsequently, there is not enough information to recommend any specific intervention study design or to determine the impact on breastfeeding duration.

Conclusion: This review highlights the need to invest in further research focused on positioning and attachment interventions for nipple pain. Further studies will help identify factors associated with effective intervention delivery and consider if these interventions improve breastfeeding technique. Studies should also examine pain severity through the use of measurement tools and include a thorough pain assessment, prior to intervention delivery, to determine intervention effectiveness.

Key words: breastfeeding, positioning and attachment, intervention, nipple pain, duration, systematic literature review, evidence based midwifery

Background

Description of the condition

Breastfeeding is considered the optimum source of infant nutrition, with the recommendation that infants should be exclusively breastfed for the first six months of life, and thereafter receive complementary foods along with breastfeeding until the age of two years or beyond (World Health Organization 2003, 2011). Despite the growing evidence for the benefits of breastfeeding, and implementation of global as well as regional policies, strategies and initiatives based on recommendations from the World Health Organization and UNICEF Baby Friendly Initiative, exclusive breastfeeding and breastfeeding duration rates remain below the recommendations.

The reasons why women choose not to breastfeed or to discontinue early can be varied and complex and '*range from the medical, cultural and psychological*

to physical discomfort and inconvenience' (The Lancet Breastfeeding Series, 2016:404). It has been documented that for those who choose to breastfeed (n=1177), as many as 60% (n=706) stopped earlier than desired (Odom at al 2013). Nipple pain is one of the most common reasons given by mothers for stopping breastfeeding, second to perceived low milk supply (Odom et al 2013, Buck et al 2014). Incidences of nipple pain and trauma vary in the literature from between 34–96% of breastfeeding women (Dennis et al 2014). Research suggests that the greatest appearance of trauma happens in the first week after childbirth (Dias et al 2017) with pain peaking by day 3 (Lucas et al 2016) and reducing to mild levels after seven to 10 days postpartum (Dennis et al 2014). Concerns between days 3 and 7 have been associated with a greater risk of breastfeeding cessation (Wagner et al 2013). Other research, however, reports 8% (27/340) of women continue to experience nipple damage and 20% (68/340) of women continue to experience nipple pain at eight weeks postpartum (Buck et al 2014). Research by Li et al (2008), using data from the Infant Feeding Practices Study II (IFPS II), reported lactation (including painful breastfeeding and sore nipples) and nutrition issues were the most frequently cited reasons for stopping breastfeeding during the first two months. While painful nipples are cited as a common reason for stopping breastfeeding, many women with painful nipples continue to breastfeed, with negative impacts on their breastfeeding experience. In addition to the physical pain and the risk of infection, nipple pain can cause psychological distress and interfere with the general activity, mood, and sleep of mothers as well as impacting on the bonding process (McClellan et al 2012). Other research suggests that breastfeeding experience, rather than duration, is predictive of depressive symptoms, with mothers who stop specifically due to pain or physical difficulties being at a greater risk (Brown et al 2016). Resulting anxiety from nipple pain may also inhibit the let-down reflex, and lead to reduced frequency and length of breastfeeds, subsequently affecting milk supply (Pollard 2017).

Numerous causes of nipple pain have been documented in the National Institute for Health and Care Excellence (NICE) publication *Breastfeeding problems*, including physiological causes, nipple damage, blocked ducts, nipple infection (bacterial, candida infection), skin conditions and nipple vasospasm or Raynaud's disease of the nipple. More than one cause may co-exist (NICE 2017). The *Postnatal care up to 8 weeks after birth* guidance informs that in the event of painful or cracked nipples, mothers should be advised this is '*probably due to incorrect attachment*' (NICE 2006:24). Other literature reports incorrect positioning and attachment as a contributing cause of nipple pain in 90% of cases, with the causes of pain being multifactorial in 89% of cases; highlighting the need for a systematic diagnosis for the causes of pain before a course of management is decided (Kent et al 2015). Variations in the cause or causes of nipple pain may lead to difficulties identifying and selecting effective interventions. Amir et al (2015) have developed an integrated approach to breastfeeding pain assessment that seeks to enhance current practice by way of the Breastfeeding Pain Reasoning Model, which takes both physiological and psychological factors into account. They propose that the model can help healthcare practitioners identify the multifactorial influences on nipple pain and increase management strategies.

Description of the intervention

Following assessment and advice on optimal positioning and attachment, the management of breastfeeding problems includes: the continuation of breastfeeding where possible, the use of self-management techniques, the application of expressed breast milk to the nipple, pharmacological treatment for infection or identified skin conditions, and referrals for further specialist management where necessary (NICE 2017). There are numerous other interventions specifically for the treatment of nipple pain, such as the use of various topical applications, protective devices, dressings, and laser therapies; however, a stronger evidence base and higher quality studies are needed regarding their effectiveness. A dated but valuable systematic review by Morland-Schultz & Hill (2005) concluded that no one topical agent showed superior results in the relief of nipple discomfort and that the most important factor in decreasing the incidence of nipple pain is the provision of correct positioning and attachment education. This finding was based on two papers. In the first study, an experimental group who received a one-hour antenatal positioning and attachment teaching session had significantly lower nipple pain scores on the first four days postpartum and a significant difference in breastfeeding duration at six weeks with 92% (32/35) still breastfeeding compared to 29% (10/35) of controls (Duffy et al 1997). In the second study an experimental group, who received a 30-minute postpartum positioning and attachment education intervention conducted within 24 hours of birth, had a significantly lower number of women experiencing nipple pain on day 2 (31/79 vs 49/79) and day 3 (39/76 vs 50/74) only, with no significant difference for breastfeeding duration at six weeks, three months or six months compared to the control group (Henderson et al 2001). Dennis et al (2014), in their more recent Cochrane systematic review of interventions for treating painful nipples, focused on pharmacological and non-pharmacological interventions, dressing interventions, nipple protection interventions, LED phototherapy and expressed breast milk. The review included four trials

of good methodological quality involving 656 women and concluded that there was insufficient evidence to recommend glycerine pads, lanolin with breast shells, lanolin alone, or an all-purpose nipple ointment and that applying nothing or expressed breast milk may be equally or more beneficial in the short term. The authors note that the '*applicability of evidence from this review was not strong and the results should be interpreted with caution*' (Dennis et al 2014:24). As the review found that there was no recommended intervention to treat nipple pain, consideration was given to the importance of assisting mothers to prevent nipple trauma and pain, noting that trauma often results from incorrect latching or positioning. Positioning and attachment interventions, however, were not included in this systematic review.

How the intervention might work

There are numerous breastfeeding positions including laid-back or biological nurturing, cradle, cross-cradle, rugby or football and side-lying. As each breastfeeding dyad is unique, it is important for the mother to find a position that works for her and her baby (Wambach & Riordan 2016) as long as the baby's body is straight, close to the mother, supported and facing the breast (WHO 2009). Attachment refers to how the baby latches on to the breast; good signs include the baby's mouth wide open, chin touching the breast, lower lip rolled down, nose free, less areola visible underneath the chin than above the nipple and no pain (NICE 2006). Most mothers can achieve successful breastfeeding by '*mastering attachment*' (Amir 2014:5). Therefore, while it is a natural act, breastfeeding is also a learned behaviour (WHO 2019) and so positioning and attachment can be considered a modifiable skill. As poor positioning and attachment can result in nipple pain, interventions may improve technique, reduce the incidence, severity or duration of nipple pain and thereby may impact upon breastfeeding duration. Given the high incidence, early onset, potential duration and associated negative outcomes of nipple pain, the aim of the current review was to collate and examine the most up-to-date evidence to explore the effectiveness of positioning and attachment interventions.

Aims and objectives

1. To collate and synthesise the available evidence on the effectiveness of positioning and attachment interventions for the prevention and/or management of nipple pain in breastfeeding mothers.
2. To consider the effectiveness of:
    a. different **mediums** for positioning and attachment intervention delivery such as practical demonstrations using dolls/aids, brochures or videos
    b. different **modes of delivery** for positioning and attachment interventions, including face to face, online or telephone, as well as through group or individual settings
    c. the **timing** of intervention delivery, being antenatal, postnatal or both
    d. the **frequency** of the intervention, being either single or multiple episodes.
3. To examine the effectiveness of positioning and attachment interventions for nipple pain on breastfeeding duration.

Methods

Criteria for considering studies in this review

The scope of the review was defined by the Cochrane 'Population, Intervention, Comparison, Outcomes and Study design' (PICOS) tool (McKenzie et al 2019), see Table 1, and eligibility criteria were developed, see Table 2.

Table 1. PICOS tool.

Population	Breastfeeding mothers
Intervention	Positioning and attachment interventions
Comparison	Standard or routine care
Outcomes	Primary: nipple pain
	Secondary: breastfeeding duration
Study design	Experimental

The population of breastfeeding dyads included primiparous or multiparous mothers who participated in experimental studies (randomised or quasi-randomised controlled trials) examining the effectiveness of positioning and attachment interventions for nipple pain. These interventions could be delivered using a variety of methods, mediums, settings, groups sizes and be delivered by a professional or lay person at any point during the antenatal or postnatal period. Interventions did not include positioning and attachment as part of a wider breastfeeding (educational) programme. Interventions included variations in the literature for nipple pain, such as nipple damage, nipple trauma, nipple fissures

Table 2. Inclusion and exclusion criteria.

Inclusion	Exclusion
Publication date 1/1/2003–1/5/2020	Articles not available in English language
Experimental design	No nipple pain outcome or nipple pain not the primary outcome
Positioning and attachment interventions	Maternal or infant complications that may impact upon the ability to breastfeed or may require specific pharmacological or surgical intervention

or sore or cracked nipples or any of these variations referred to as breastfeeding problems. As positioning and attachment interventions may already form part of the maternity care experienced by mothers, the aim of this review was to consider interventions that went beyond the comparison of 'routine care', which may vary between studies. The primary outcome of nipple pain included the incidence or severity of pain and breastfeeding duration was a secondary outcome.

Exclusion criteria extended to studies with infants born at less than 37 weeks' gestation or the presence of maternal or infant complications such as: ankyloglossia, cleft lip and palate, Down's Syndrome, Raynaud's, inverted nipples, previous breast surgery, nipple infection or skin conditions, as they may impact upon the infant or mother's ability to breastfeed or may require specific pharmacological or surgical intervention. A decision was made to include research published from 2003 until the present based on the WHO (2003) recommendation concerning breastfeeding duration. This time frame was also chosen in light of earlier systematic reviews examining interventions for nipple pain, including Morland-Schultz & Hill (2005) whose search criteria extended from 1983 until 2004 and Dennis et al (2014) whose search criteria included papers up until 2014. Dennis et al (2014) did not include positioning and attachment interventions and Morland-Schultz & Hill's (2005) search only resulted in two studies that examined positioning and attachment interventions for nipple pain.

Searching the literature

A literature search strategy was developed in line with the PICOS tool and search terms were derived from the nipple pain literature, information contained in *Off to a good start* (Public Health Agency (PHA) 2018) which is given to new mothers, advice regarding breastfeeding techniques from La Leche League GB (2016) and *Breastfeeding problems* (NICE 2017). Terms were also derived from *Breastfeeding and human lactation* (Wambach & Riordan 2016), reading as recommended by a specialist infant feeding co-ordinator. The strategy and subsequent search were reviewed by two expert librarians.

The following databases were searched for the time period 1 January 2003 until 1 May 2020: MEDLINE, Embase, PsycInfo, CINAHL, Proquest Academic Complete, Web of Science and Cochrane Central Register of Controlled Trials (CENTRAL), which included records from ClinicalTrials.gov and the WHO's International Clinical Trials Registry Platform. Grey literature searches included the EThOS and Proquest Dissertations & Theses Global databases, Google Scholar, ResearchGate, the EU Clinical Trials Register, WHO and UNICEF publications and hand searches of reference lists from relevant NICE guidelines and research papers. Searches included both Medical Subject Headings (MeSH) and key words; concepts were combined under terms for 'breastfeeding' with a focus on 'nipple (problems)' and variations in the terminology for types of 'positioning and attachment' as an intervention using 'AND/OR' commands. (See Supplementary information, Table 8).

Selecting the studies

Following the search strategy, identified publications were assessed to be included in the final review based on the application of the PICOS tool and inclusion/exclusion criteria. The screening and eligibility process was conducted and reviewed by two authors, with any disagreements resolved through discussion and consultation with other team members. Details of excluded full texts are available on request due to word limit.

Data extraction and analysis

Data extracted from the included studies are presented in Table 3 (see Supplementary information). The methodological quality for each study was assessed using the revised Cochrane risk-of-bias tool for randomised trials (RoB2) (Sterne et al 2019) and the Risk Of Bias In Non-Randomized Studies of Interventions (ROBINS-I) tool for non-randomised designs (Sterne 2016a), by two members of the review team following the associated guidelines (Sterne et al 2016b, Higgins et al 2019). The overall findings are presented in Tables 4a and 4b (see Supplementary information).

Results

A total of 383 papers were identified from the database and grey literature searches. After duplicates were removed, 163 records were screened by title and abstract; 152 studies were excluded for reasons including: non-experimental design, the testing of other interventions outside the scope of this review, such as dressings and nipple shields or interventions targeted at dyads who may find breastfeeding more challenging, such as infants with ankyloglossia or mothers with inverted nipples. Of the 11 full-text articles that were assessed for eligibility, eight were excluded for the following reasons: no nipple pain outcome (n=4), non-experimental study design (n=2), nipple pain was not the primary outcome (n=1) and the intervention was not exclusively positioning and attachment (n=1). Three studies met the inclusion criteria and were included in the final review (see Figure 1).

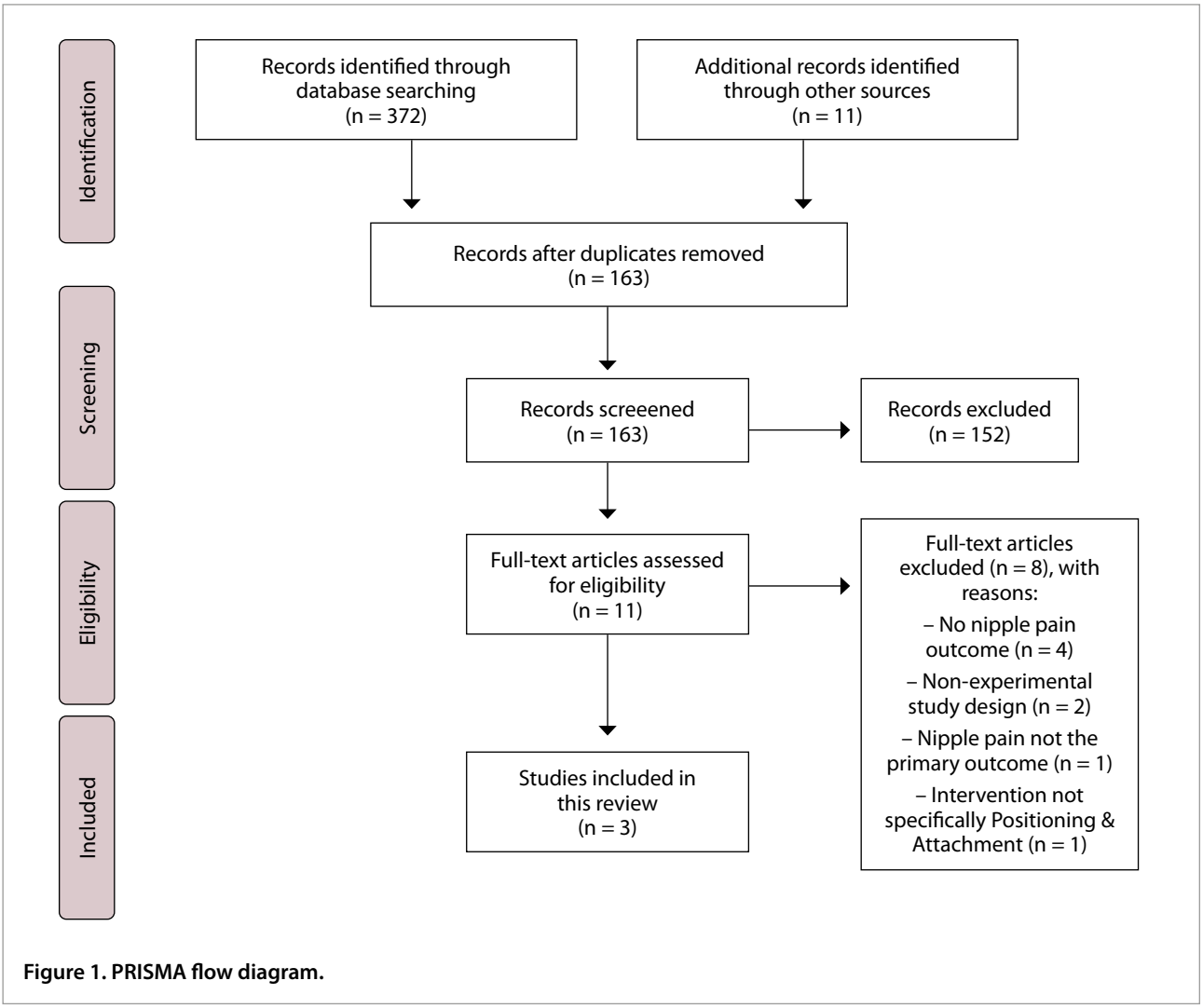

Figure 1. PRISMA flow diagram.

Included studies

The three remaining studies shall be discussed in chronological order: de Oliveira et al (2006), Eksioglu et al (2017) and Milinco et al (2020). Information concerning the specific details of the positioning and attachment interventions is presented in Table 5 (see Supplementary information). Information providing a summary of the results is detailed in Tables 6 and 7 (see Supplementary information).

In the study conducted by de Oliveira et al (2006), women were recruited postnatally in the maternity ward of a Baby Friendly-accredited hospital and randomised to either the routine care group (n=137) or the experimental group (n=74) on the day of hospital discharge to return home. Both groups received routine care during their postnatal stay that included: first breastfeed initiated in the first half hour after birth whenever possible, overall guidance on breastfeeding technique and practical help in the case of difficulties. The experimental group however, received a 30-minute counselling session on breastfeeding technique that consisted of a reinforcement of the information routinely given to mothers. This one-off session was conducted by two nurses, one a lactation consultant, in groups of no more than two mother–infant dyads. The intervention involved a discussion of '*proper mother and infant positioning and correct attachment of the child to the breast*' (de Oliveira et al 2006:317) following the WHO breastfeeding counselling principles (WHO 1993). Pictures, dolls and a model breast were used for demonstration purposes and the session was used as an opportunity to correct technical details and reinforce positive aspects among those who chose to breastfeed during the intervention. Data for the study were collected on three occasions: on the maternity ward prior to randomisation all mothers' breasts were examined for breastfeeding-related problems, including sore nipples, engorgement and mastitis, then a complete breastfeeding session was observed to assess proper position and latch based on indicators drawn from a WHO-recommended tool (WHO 1993). On day 7 infant feeding patterns and breastfeeding problems were assessed through breast examinations and mothers' reports. This was repeated on day 30 which also included another position and latch assessment. The primary outcomes were frequencies of exclusive breastfeeding and lactation-related problems at one month postpartum.

No significant differences were found between the groups in terms of exclusive breastfeeding, improving breastfeeding technique and reducing the incidence of breastfeeding problems during the first month. At days 7 and 30, the rate of sore nipples for the experimental and control groups were, respectively, 43.2% vs 48.9% (p>0.05) and 8.5% vs 9.1% (p>0.05). For the same time points and groups, exclusive breastfeeding rates were 79.7% vs 82.5% (p=760) and 60.8% vs 53.3% (p=365).

The next study by Eksioglu et al (2017) recruited mothers in the gynaecology clinic of a Baby Friendly-accredited hospital. The mothers were divided into one of three groups of 30 to be studied sequentially to avoid contamination bias, prior to hospital discharge: first the routine care group, then a brochure group and finally a demonstration-based training group. The routine care group did not undergo any 'special' interventions, care was given by the baby nurse working in the clinic and support was only given to those who asked. In the second group a brochure that contained pictures and information on breastfeeding positions, holding and grasping the breast and breast problems was given by the researchers to mothers, with their attention drawn to important points. No information was provided by the authors as to whether this was undertaken individually or in groups and how long this intervention lasted. Finally, the demonstration-based training group received a single coaching session on accurate and inaccurate positions through explanations, demonstrations and practices with feedback using a breast model, puppets, model doll and illustrated guidelines lasting an average of one hour. Again, no information was provided as to whether this was undertaken at an individual or group level or who delivered the demonstration. The aim of the study was to investigate the effects of the different techniques delivered before hospital discharge on the incidence of cracked nipples in primiparous mothers. The assessment of cracks was carried out through a breast examination under the supervision of a health professional. In terms of results, the demonstration-based group was significantly more effective at preventing nipple cracks than the other two groups at two weeks and four weeks postpartum. The difference between the groups was not significant at the hospital. However, it is not clear if the hospital assessment was carried out before or after the intervention. The incidence of nipple cracks for the routine, brochure and demonstration groups respectively were as follows: hospital 30% vs 20% vs 16.7% (p=0.434), at two weeks 63.3% vs 56.7% vs 20% (p=0.001) and at four weeks 30% vs 10% vs 6.7% (p=0.026). Latch scores increased for all groups between hospital discharge and week 4, with the demonstration group scoring significantly higher (p<0.05). The percentage of mothers exclusively breastfeeding in this group was also higher at all three time points, but the finding was not significant (hospital p=0.207, two weeks p=0.179, four weeks p=0.214).

Finally, Milinco et al (2020) enrolled mothers for their study during an antenatal ultrasound scan visit at 30/32 weeks' gestation. At enrolment, mothers were randomised to either the experimental group following the biological nurturing approach (n=90) or the usual care group based on the WHO/UNICEF breastfeeding 20-hour course (WHO & UNICEF 2009) (n=98). All mothers were given a video containing information that corresponded with their group allocation (experimental or usual care) and recommended to watch it prior to labour. After birth mothers were allocated to different rooms depending on their allocation group. During their postnatal stay, all healthcare staff looked after the mothers but were instructed to provide different support for each room accordingly. Mothers in the experimental group were supported by staff to breastfeed in a '*laid-back position, with their babies lying prone on their chests*' while mothers in the control group were supported and shown how to breastfeed their babies in the '*sitting upright position and helped to attach their babies correctly*' (Milinco et al 2020:3) based on the WHO/UNICEF course. The primary outcome was the incidence of breast problems during hospital stay, defined as the presence of one or more of the following outcomes collected separately: sore nipples, cracked nipples, engorgement and mastitis. The study had numerous secondary outcomes, gathered by phone, that included the incidence of these problems at days 7, 30 and 120 as well as exclusive breastfeeding for all time points. At hospital discharge the biological nurturing group (BN) had a significantly reduced risk of overall breast problems (RR 0.56, 95% CI 0.40, 0.79), cracked (RR 0.42, 95% CI 0.24, 0.74) and sore nipples (RR 0.59, 95% CI 0.40, 0.88). These results were confirmed at day 7 (with a relative risk reduction of 55% for breast problems, 60% for cracked nipples and 50% for sore nipples) but were no longer significant at day 30. At 120 days, again the BN group had a significantly reduced risk of overall breast problems, although it is unclear if this included cracked or sore nipples as this variable was defined as the presence of one or more of the four problems. At the four timepoints (discharge, day 7, day 30, day 120) the incidence of cracked nipples for the experimental and control groups respectively were: 14% vs 35%, 14% vs 34%, 16% vs 14% and 2% vs 7%. The same results for sore nipples were as follows: 28% vs 47%, 17% vs 34%, 20% vs 24% and 8% vs 17%. No significant difference between the groups for exclusive breastfeeding was detected at any time point.

Risk of bias of included studies

The risk of bias of included studies is detailed in Tables 4a and 4b (see Supplementary information). It is worth noting that the nature of these

interventions often meant that participants were aware of their allocation. Two studies recruited both primiparous and multiparous mothers (de Oliveira et al 2006 and Milinco et al 2020), which had the potential to bias results in terms of the effect of previous positioning and attachment experience. Eksioglu et al (2017) included primiparous mothers only. As these interventions were conducted in Baby Friendly Hospitals, or used the WHO/UNICEF breastfeeding support routinely, it is possible that mothers in the routine care groups would have had access to lactation consultants in the case of any breastfeeding difficulties; this limitation was acknowledged by de Oliveira et al (2006). Only one trial, Milinco et al (2020), conducted an intention-to-treat data analysis.

Discussion

Outcomes

This review summarised the results of two randomised controlled trials and one non-randomised study, involving 489 mothers from three different countries, namely Brazil, Turkey and Italy, at three different time points: 2006, 2017 and 2020. In terms of the primary outcome of nipple pain and secondary outcome of breastfeeding duration, a single postnatal positioning and attachment counselling session (practical demonstration) did not significantly reduce the incidence of nipple pain or increase the rate of exclusive breastfeeding at day 7 or day 30 postpartum (de Oliveira et al 2006). However, a single postnatal demonstration-based training session significantly reduced the incidence of nipple cracks compared to a brochure or routine care at two weeks and four weeks with a higher non-significant percentage of mothers exclusively breastfeeding (Eksioglu et al 2017). The only intervention to include an antenatal and postnatal component using a video and a postnatal biological nurturing approach to care resulted in a significantly reduced risk of cracked and sore nipples (outcomes collected individually) at hospital discharge and day 7 (Milinco et al 2020). This finding was no longer significant at day 30, and although the percentage of mothers exclusively breastfeeding in the experimental group was higher at all data collection timepoints, the finding was not significant. Therefore, the applicability of the evidence from this review should be interpreted with caution given the small number of studies, variations in design and conflicting results.

Completeness of the evidence

Two studies (de Oliveira et al 2006, Milinco et al 2020) examined the effectiveness of the interventions on breastfeeding problems that included, but were not specific to, nipple pain. Only Eksioglu et al (2017) examined nipple cracks specifically. In de Oliveira et al's (2006:316) study, sore nipples were defined as '*cracks, blisters, spots and/or ecchymosis*', in Eksioglu et al's (2017) study cracked nipples were defined as the presence of pain, pinkness, redness, oedema, crusting, scarring or bleeding, and in Milinco et al's (2020) study a differentiation is made between sore nipples (without fissures) and cracked nipples (presence of a fissure). This variation is reflective of the literature in relation to nipple pain which uses a variety of descriptive words. All three studies in this review assessed the effectiveness of positioning and attachment interventions on the incidence of nipple pain only. None of the studies used any tools to measure nipple pain severity or trauma nor did they gather any other nipple pain information, such as the causes of pain. A recent systematic review described the numeric rating scale and the visual analogue scale as the most prevalent tools for measuring pain. Based mostly on studies examining interventions for nipple pain it concluded that, by using these consistently, findings can be compared across studies (Coca et al 2019). No studies set pain and trauma as inclusion criteria and only one study assessed the incidence of pain before intervention delivery (de Oliveira et al 2006). It was not clear if the hospital assessment of nipple cracks was carried out before or after the intervention in Eksioglu et al's (2017) study and in Milinco et al's (2020) study outcomes were assessed after intervention delivery. A more thorough pain assessment before and after intervention delivery would enable more rigorous testing of intervention effectiveness. De Oliveira et al (2006) reported that breastfeeding problems were similar in both study groups. They suggest this result is in agreement with the fact that the intervention did not improve technique, which was assessed before and after intervention delivery. Eksioglu et al (2017) reported a significant increase in LATCH scores in their study and a significant reduction in nipple cracks, however scores were assessed after intervention delivery. It is not clear if Milinco et al (2020) measured breastfeeding technique, although the authors suggest their significant results for nipple pain may be explained by a higher proportion of successful latching in the experimental group. Again, similar to assessing nipple pain before and after intervention delivery, the assessment of positioning and attachment parameters at both time points would enable studies to assess if their intervention actually improves breastfeeding technique.

Breastfeeding duration outcomes were reported in hospital, at seven days, two weeks, approximately four weeks and 120 days. No study included a six-month outcome duration; the current WHO recommendation. Milinco et al (2020) was the only study that had an intention to breastfeed as part of the inclusion criteria. Across studies, exclusive breastfeeding rates ranged from 53.3% to 82.5% (de Oliveira et al 2006), 40% to 80% (Eksioglu et al 2017) and 65% to 87% (Milinco et al 2020).

The rates for any breastfeeding across both groups in two of the studies ranged from 87% to 100% (Milinco et al 2020) and 100% (Eksioglu et al 2017). Therefore, the effectiveness of any intervention on breastfeeding duration may be limited when any and exclusive breastfeeding rates are already high.

The results from this review also create challenges in terms of identifying the characteristics of effective positioning and attachment intervention delivery. As mentioned, two interventions were delivered on the day of postnatal hospital discharge (de Oliveira et al 2006, Eksioglu et al 2017), which may have been too late. The only study to assess nipple pain before intervention delivery (de Oliveira et al 2006) reported 43.2% of the experimental group and 43.8% of the control group had sore nipples suggesting that interventions need to be in place as early as possible in a mother's breastfeeding experience. Only one study, Milinco et al (2020), included an intervention that had both antenatal and postnatal components. All experimental interventions were delivered face to face with limited information on group sizes. In the first study, two nurses delivered the intervention in groups of no more than two mother infant pairs (de Oliveira et al 2006). No information on staff or group size was provided for the second study (Eksioglu et al 2017). The more recent study (Milinco et al 2020) involved all staff normally involved in maternity ward activities providing support depending on the mother's room allocation, which presumably would have included one-to-one support as part of general postnatal care. No information was provided concerning the number of mothers in each room, or the ratio of staff to participants. With regard to frequency, the two demonstration-based interventions occurred at one single time point and lasted 30 minutes (de Oliveira et al 2006) and approximately one hour (Eksioglu et al 2017), whereas the biological nurturing approach consisted of care that lasted the duration of the mothers' postnatal hospital stay (Milinco et al 2020), therefore, increasing the opportunities for the intervention to be reinforced. In terms of the media used to demonstrate positioning and attachment, the two demonstration-based interventions (de Oliveira et al 2006, Eksioglu et al 2017) used puppets, dolls, pictures and model breasts. Both studies reported different results in terms of the significant effect of the intervention on nipple pain and breastfeeding technique, therefore it is important to consider the effectiveness of the 'trainer' in delivering these interventions. It was detailed that these studies were conducted in Baby Friendly hospitals (de Oliveira et al 2006, Eksioglu et al 2017) and a maternity ward that used WHO/UNICEF support routinely (Milinco et al 2020). Definitions of the positioning and attachment interventions were provided for two studies (de Oliveira et al 2006, Milinco et al 2020) and only one study reported that staff received training prior to intervention delivery (Milinco et al 2020). There were also variations in terms of who provided the intervention. In de Oliveira et al's (2006) study the intervention was delivered by two nurses, one of whom was also a lactation consultant. Eksioglu et al's (2017) brochure group was delivered by the researchers, with no information concerning their background and no detail about who delivered the demonstration-based intervention. As mentioned, in Milinco et al's (2020) study, all staff who normally looked after mothers provided care for both study groups. Only one study provided mothers with a brochure with written and illustrated information (Eksioglu et al 2017). Only one study, Milinco et al (2020), provided mothers with a video to watch in the antenatal period, which may help them prepare for the intervention and breastfeeding.

Agreements with previous research

Several reviews have been conducted examining the prevention and treatment of breastfeeding-related nipple pain and trauma (Page et al 2003, Morland-Schultz & Hill 2005, Vieira et al 2013, Dennis et al 2014, Niazi et al 2018). Most of the studies identified in these reviews include the use of various topical applications, dressings and protective devices with fewer studies concerning positioning and attachment. Nevertheless they advocate the potential of positioning and attachment interventions for nipple pain and trauma, identifying this as an area for further research; a finding shared in the current review.

Implications for practice and research

It is important to note that when considering the causes and clinical management of nipple pain, poor positioning and attachment can be viewed as a cause, while optimal positioning and attachment can be regarded as a preventative measure or management intervention. Although efforts can be made to improve mothers' knowledge about the prevention and management of nipple problems, breastfeeding is a practical skill. Kent et al (2015) suggest positioning and attachment may need to be assessed more than once during the first weeks and advice on correction of positioning and attachment may need to be repeated. Therefore, an integrative approach of increasing knowledge and support may be more beneficial. It is important for studies to identify if interventions actually improve technique, as well as to assess the effectiveness on other outcomes such as pain or breastfeeding duration.

When breastfeeding support is offered to mothers, the duration and exclusivity of breastfeeding is increased (McFadden et al 2017). It is important to acknowledge the potential impact that being part of a breastfeeding research study may have in terms of additional attention and support. It may be this extra support, or the influence of the Hawthorne effect whereby an individual's behaviour is changed

due to an awareness of being observed, that is having an impact on study outcomes as opposed to the specific intervention itself. In addition, it is essential to determine if interventions can be delivered as intended. Issues can arise, including the lack of staff availability to deliver the intervention (Wallace et al 2006) or staff having limited time to provide individualised support due to their intensive workload (Eksioglu et al 2017). Conversely, Milinco et al (2020) describe their study design as pragmatic, as it requires no equipment, minimal training and can be delivered by all staff who have a shared responsibility of looking after mothers during their postnatal hospital stay. It is important to consider the comparator of routine care and what study interventions offer over and above this that can make a difference.

Findings from this review suggest it may be challenging for researchers deciphering whether study results are due to the intervention itself, effective intervention delivery or extra support being part of a research study. Furthermore, two of the three included studies (Eksioglu et al 2017 and Milinco et al 2020) could be regarded as successful for breastfeeding problems and improving technique but not for duration. Although this is an important outcome, it may be beyond the scope of a single intervention given the complexity of breastfeeding behaviour.

Limitations

The current review had a very specific focus examining the effectiveness of positioning and attachment interventions for the primary outcome of nipple pain. Due to the low number of studies, findings must be interpreted with caution. A strength however, included the rigorous methodology that was used to undertake this review in order to identify the existing evidence.

Conclusions

There is insufficient evidence to determine the effectiveness of positioning and attachment interventions for nipple pain or breastfeeding duration. Subsequently, there is not enough information to recommend any specific intervention study design. However, an important finding from this review was the absence of information regarding pain measurement. Another finding was the importance of identifying if the intervention actually improves technique as a potentially confounding variable. Constraints on staff time are well known, and studies need to be realistic if they are to be delivered as intended. As nipple pain was prevalent during mothers' postnatal hospital stay in all three studies, it may be beneficial to prepare mothers for the possibility of this outcome during the antenatal period.

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Supplementary information

Table 3. Data extraction from included studies.

Study/ methodology/ location	Participants	Intervention	Comparison	Power calculation	Primary outcome measure	Results	Comments
de Oliveira et al (2006) Two-armed RCT Porto Allegre, Brazil	233 eligible 211 analysed (12 declined participation, 9 dropouts, one incomplete data record) Breastfeeding mothers	Postnatal reinforcement counselling session on breastfeeding technique in groups of no more than two mother–infant pairs, conducted on the day of discharge	Routine care which included overall guidance on breastfeeding technique and practical help in the case of any difficulties	Sample size of 211 sufficient to give the study a power > 80%	Exclusive breastfeeding and lactation related problems (sore nipples, engorgement, mastitis) at one month postpartum	No significant difference in nipple pain between intervention and control at day 7 (43.2% vs 48.9%) and day 30 (8.5% vs 9.1%)	The intervention did not improve breastfeeding technique. No significant differences between the two groups for exclusive breastfeeding.
Eksioglu et al (2017) Three-armed CT Izmir, Turkey	90 participants recruited and analysed	Postnatal intervention with two arms: 1. Brochure group with breastfeeding positions information 2. Demonstration group on breastfeeding positions with practice and feedback	Routine care, did not undergo any 'special' interventions and support only given to those who asked	Sample size calculated on NCSS PASS power analysis and sample size calculator by taking the incidence of nipple cracks as 46%, power = 80%	Incidence of cracked nipples in hospital, two weeks' and four weeks' duration	No significant difference between the groups in the incidence of nipple cracks in hospital but significant at two weeks and four weeks. Demonstration group: 16.7%, 20%, 6.7%. Brochure group: 20%, 56.7%, 10%. Routine care group: 30%, 63.3%, 30% at each time point respectively	Only significant increase in LATCH score observed in demonstration group. Percentage of mothers exclusively breastfeeding in this group was higher than the other two but not significant.
Milinco et al (2020) Two-armed RCT Trieste, Italy	229 assessed for eligibility 208 randomized 188 analysed	Antenatal video given to participants to watch and postnatal support based on biological nurturing / laid back approach	Routine care included antenatal video to watch and postnatal support based on WHO/ UNICEF course (breastfeeding in a sitting upright position)	For a reduction in breast problems from 40-20% using BN approach, sample of 94 in each group with power = 80%	Incidence of breast problems during hospital stay defined as the presence of one or more of the following outcomes collected separately: sore nipples, cracked nipples, engorgement and mastitis	Experimental group significant reduced risk at discharge for cracked nipples (14% vs 35%) and sore nipples (28% vs 47%) and day 7 for cracked nipples (14% vs 34%) and sore nipples (17% vs 34%)	First RCT on biological nurturing approach. No significant differences between the two groups for exclusive breastfeeding.

Table 4a. Risk of bias in included studies (RoB2).

Study/type	Randomisation process	Deviations from intended interventions	Missing outcome data	Measurement of the outcome	Selection of the reported results
de Oliveira et al (2006) RCT	High	Low	Low	Low	Some concerns
Milinco et al (2020) RCT	Low	Some concerns	Low	High	High

Table 4b. Risk of bias in included studies (ROBINS-I).

Study/type	Bias due to confounding	Bias in selection of participants	Bias in classification of interventions	Bias due to deviations from intended interventions	Bias due to missing data	Bias in measurement of outcomes	Bias in selection of the reported result
Eksioglu et al (2017) Non-randomised controlled study	Critical	No information	Moderate	Low	Low	No information	Low

Table 5. Characteristics of the intervention from included studies.

Study	Definition of the positioning and attachment intervention	Timing/place	Delivered by	Medium	Mode	Duration/ frequency
de Oliveira et al (2006)	Based on WHO principles unfavourable indicators: Position (unrelaxed mother with tense shoulders, infant distant from mother, infant's head and trunk not aligned, infant's chin not touching the breast, infant not firmly supported) Latch (mouth not open wide, lips not flared outward, and a non-asymmetric latch)	Postnatal intervention, conducted on the day of discharge Maternity ward in a BFI-accredited hospital	Two nurses (one was also a lactation consultant)	Pictures, dolls, model breast	Face to face Groups of no more than two mother–infant pairs	30-minute session Single dose
Eksioglu et al (2017) * Group 1 =control	'Correct positioning and attachment', 'accurate and inaccurate breast holding positions, how to position the baby, and how to position the breast' stated in paper. Informed proper positioning and attachment explained or demonstrated; however it is not clearly defined what this means	Postnatal intervention conducted prior to discharge Gynaecology clinic in a BFI-accredited hospital	Group 2 – researchers Group 3 – ?	Group 2 – brochure with written and illustrated information Group 3 – dolls, puppets, model breast, illustrated guidelines	Groups 2 and 3 – face to face No information if either group delivered at individual or group level	Group 2 – no duration information/ single dose Group 3 – average one hour/single dose

Milinco et al (2020)	Biological nurturing approach – mothers supported to breastfeed in a relaxed, laid-back position, with their babies lying prone on their chests. This position promotes the baby's movements, activating primitive neonatal reflexes.	Antenatal (30/32 weeks) and postnatal from delivery to discharge Maternity ward that uses WHO/UNICEF breastfeeding support routinely	All healthcare staff involved in maternity ward activities	Antenatal video and postnatal care approach	Antenatal video given as a DVD, email link or USB Postnatal – face-to-face care, no information how many mothers in each allocation room	Antenatal and postnatal – no information for length of video or hospital stay/ No information if mothers watched video or frequency of interactions with healthcare staff. Potential to be multiple times.

Table 6. Summary of results for the incidence of the primary outcome.

Study	Intervention arm	Incidence of the primary outcome (nipple pain)				
		Hospital	Day 7	Two weeks	30 days/four weeks	Day 120
de Oliveira et al (2006) *No significant differences between the groups at any time point*	**Experimental**	43.20% (assessed before intervention delivery)	43.20%	X	8.50%	X
	Control	43.80% (assessed before intervention delivery)	48.90%	X	9.10%	X
Eksioglu et al (2017) *No significant difference between the groups at hospital* *Significant difference at two weeks and four weeks*	**Experimental (demonstration)**	16.70%	X	20.00%	6.70%	X
	Experimental 2 (brochure)	20.00%	X	56.70%	10.00%	X
	Control	30.00%	X	63.30%	30.00%	X
Milinco et al (2020) *Significantly reduced risk of cracked and sore nipples for the experimental group at hospital and day 7. Not significant at day 30. Significant reduced risk of overall problems at day 120.*	**Experimental**	Cracked 14.00% Sore 28.00%	Cracked 14.00% Sore 17.00%	X	Cracked 16.00% Sore 20.00%	Cracked 2.00% Sore 8.00%
	Control	Cracked 35.00% Sore 47.00%	Cracked 34.00% Sore 34.00%	X	Cracked 14.00% Sore 24.00%	Cracked 7.00% Sore 17.00%

Table 7. Summary of results for the incidence of the secondary outcome.

Study	Intervention arm	Incidence of the secondary outcome (breastfeeding duration)				
		Hospital	Day 7	Two weeks	30 days/four weeks	Day 120
de Oliveira et al (2006) *No significant differences between the groups at any time point*	**Experimental**	X	EBF 79.70%	X	EBF 60.80%	X
	Control	X	EBF 82.50%	X	EBF 53.30%	X
Eksioglu et al (2017) * = Any breastfeeding EBF = exclusive breastfeeding PB = predominant breastfeeding BF&F = breastfeeding and formula feeding *No significant differences between the groups at any time point*	**Experimental (demonstration)**	**100.00%*** EBF 80.0% BF&F 20.0%	X	**100.00%*** EBF 66.70% PB 26.70% BF&F 6.70%	**100.00%*** EBF 73.30% PB 16.70% BF&F 10.00%	X
	Experimental 2 (brochure)	**100.00%*** EBF 63.30% BF&F 36.70%	X	**100.00%*** EBF 53.40% PB 33.30% BF&F 13.30%	**100.00%*** EBF 60.00% PB 26.70% BF&F 13.30%	X
	Control	**100.00%*** EBF 60.00% BF&F 40.00%	X	**100.00%*** EBF 40.00% PB 33.30% BF&F 26.70%	**100.00%*** EBF 43.30% PB 20.00% BF&F 23.30%	X
Milinco et al (2020) * = Any breastfeeding EBF = exclusive breastfeeding PB = predominant breastfeeding PartBF = partial breastfeeding EFF = exclusive formula feeding *No significant differences between the groups at any time point*	**Experimental**	**100.00%*** (Hospital stay) EBF 82.00% PartBF 18.00% (At discharge) EBF 89.00% PartBF 11.00%	**100.00%*** EBF 87.00% PartBF 14.00%	X	**95.00%*** EBF 81.00% PB 1.00% PartBF 14.00% EFF 5.00%	**92.00%*** EBF 71.00% PartBF 21.00% EFF 8.00%
	Control	**100.00%*** (Hospital stay) EBF 86.00% PartBF 14.00% (At discharge) EBF 82.00% PartBF 18.00%	**100.00%*** EBF 78.00% PartBF 22.00%	X	**98.00%*** EBF 76.00% PartBF 22.00% EFF 2.00%	**87.00%*** EBF 65.00% PartBF 22.00% EFF 13.00%

Table 8. Search terms.

Main theme	Focus	Intervention
breastfeeding breastfeed* "breast feed*" breastfed "breast fed" lactation lactat*	nipple* nipple(s) **chose nipple* to capture nipple pain, nipple damage, nipple trauma, nipple fissures as advised by expert librarian.*	"positioning and attachment" "position* and attach*" "position* and latch*" "improve latch" latch "fit and hold" "breast feed* position*" "breastfeed* position*" **Types of breastfeeding positions and holds:** • Cradle hold • Cross-cradle hold • Crossover hold • Rugby/Football/Clutch hold • Koala hold • Underarm hold • Side* position • Lying position • Sitting/Upright/Vertical /Straddle* position • Semi-recline* position • Laid back breastfeed*/laid back breast feed*/biological nurture*

Language used during antenatal education for labour and birth: a literature review

Lisa Cutajar, Mary Steen, Julie-Anne Fleet, Allan M Cyna

ORIGINAL

Background: Until recently, little attention has been given to the language used in clinical settings. Published literature suggests that in many areas of health care there is an ubiquitous use of negative language which can adversely affect anxiety and/or pain. There appears to be a lack of insight and research relating to the language used during antenatal education for labour and birth.

Aim: The aim of this literature review was to explore the literature relating to the language utilised during antenatal education of labour and birth. A specific focus was placed on the use of positive and negative suggestions (placebo and nocebo communications).

Method: Peer-reviewed articles written in the English language and current national and international guidelines published within the last 10 years were included in this literature review. The review was undertaken from July 2019 to October 2019 and there were no restrictions on study design. This review was guided by Cooper's five stages of literature review (1989). A comprehensive search of three electronic databases: MEDLINE, Emcare and PsycInfo, was conducted to access literature specific to antenatal education, with a focus on labour and birth and the language used by health professionals. The following key words were used with slight variations due to database categories: 'antenatal education', 'labour', 'childbirth', and 'suggestions'. National and international publications were examined for references to childbirth classes, communication, labour and birth, and also reference lists of relevant articles.

Results: A total of 10 articles met the inclusion criteria. From the published literature included in this review, there was no consensus for a definition of 'effective communication' when providing maternity care. The literature identified that responding with a positive attitude and answering questions concisely during antenatal classes were essential to enable health professionals to communicate effectively. A framework consisting of five steps: listening, acceptance, utilisation, reframing and suggestion (LAURS) was identified as a potentially useful communication resource.

Conclusions: This literature review has highlighted that there is a gap in research examining language and communication used during antenatal education for labour and birth. The review also highlights that while communication has been identified as a component of respectful maternity care, a lack of evidence as to what effective communication encompasses exists.

Keywords: antenatal education, language, communication, labour and childbirth, midwives, evidence based midwifery

Introduction

Childbirth is a momentous life event that may be a positive experience for some women and their partners, while a daunting experience for others (Robertson 1994, Steen 2007, Sayakhot & Carolan-Olah 2016). As traditional methods of information sharing have declined, expectant parents have sought alternative approaches to learn about childbirth and parenthood (Gagnon & Sandall 2007, Ahldén et al 2012). This has led to the worldwide development of structured antenatal classes. The words and phrases used by childbirth educators may impact on parents' expectations and this in turn could be a key determinant of their experience of birth and parenthood (Robertson 1994, Serçekus & Başkale 2016, Hollander et al 2017).

During pregnancy women access information from a variety of sources: their friends, family and health care providers (Robertson 1999, Grimes et al 2014). Currently, digital technologies such as internet and social media are proving to be popular resources as well (Steen & Kingdon 2014, Sayakhot & Carolan-Olah 2016). There is some research evidence emerging to suggest that a high majority (over 85%) of expectant mothers residing in Western societies are accessing the internet for information during their pregnancy (Lagan et al 2010, Gao et al 2013, Declerq et al 2014). It has been reported that many expectant mothers will discuss information retrieved via the internet with a midwife or obstetrician (Lagan et al 2010), but that midwives and obstetricians are concerned about the quality of such information (Steen & Kingdon 2014). Yet, there appears to be limited concerns over the language used during face-to-face communication with expectant parents. Nevertheless, many women and partners continue to choose to attend antenatal classes in order to directly obtain information on topics such as: pregnancy, labour and childbirth, analgesia in labour,

medical interventions and parenting skills, including breastfeeding and care of the newborn (Ferguson et al 2013, Levett et al 2016, Serçekus & Başkale 2016).

Until recently, little attention has been given to the language used in clinical settings. However, research over the last 15 years has shown that in many areas of health care there is an ubiquitous use of negative language which can adversely affect anxiety and/or pain (Lang et al 2005, Varelmann et al 2010, Cyna et al 2011). Guidelines now recommend that health professionals examine the language used when providing care (National Institute for Health and Care Excellence (NICE) 2014, World Health Organization (WHO) 2018). This review will describe and discuss articles and relevant guidelines that have reported on the language utilised by health professionals when discussing labour and birth.

Aim

The aim of this literature review was to explore the literature relating to the language utilised during antenatal education of labour and birth. Particular focus was placed on the use of positive and negative suggestions (placebo and nocebo communications), as these may have implications for birth expectations and experiences of women and their birth partner.

Method

Search strategy

The population, concept and context (PCC) mnemonic was used to inform the search strategy for this review. The population was pregnant women and their partners, the concept was communication and the use of language for labour and birth during antenatal education, and the context included any article or document that referred to the use of information, language and/or any communication guidelines or frameworks. Cooper's (1989) guide for literature review was utilised to ensure a structured and systematic approach. The five-step guide examined: problem formulation, data collection, data evaluation, analysis and interpretation, and public presentation.

The first step, problem formulation, involved asking two research questions:

1. Is there published literature that has identified and/or reported on how communication and language is used in antenatal education for labour and birth?
2. Is there any published literature that has identified communication frameworks and guidelines to assist health professionals to communicate effectively?

The second step was to collect the data. The inclusion criteria consisted of peer-reviewed articles, chapters, international and national guideline documents published in English, that included literature relating to antenatal education for labour and birth and the use of language when providing information to pregnant women and partners. The review was undertaken from July 2019 to October 2019 and there were no restrictions on study design.

Step three involved evaluating the data. This stage included screening articles using the 'Quality Assessment Tool' adapted from Steen & Roberts (2011:61), see Table 1, and summarising the characteristics of the included documents, see Table 2. The authors discussed potential biases to promote objectivity about the literature and evaluated the quality of the included research studies.

The fourth step, analysis and interpretation, involved creating a table with each article's characteristics. Themes for each study and factors related to the study design, as well as findings, comments and recommendations, were assessed and compared between articles. Similarities and differences between the article findings were identified and discussed by the authors. Step five was public presentation of the key findings and a discussion.

After consultation with the university librarian, the electronic databases MEDLINE, Emcare (which has replaced CINAHL) and PsycInfo, were accessed to identify literature specific to the topic of antenatal education with a focus on labour and birth, and language used by health professionals. The following key words were used with slight variations due to particular database categories: 'antenatal education', 'labour', 'childbirth', 'communication' and 'suggestions'. National and international publications (NICE, WHO, Department of Health (DH)) were also examined for references to childbirth classes, communication, labour and birth, as were the reference lists of relevant articles.

The initial database search yielded 114 records of interest, see Figure 1 PRISMA flow chart (Moher et al 2009). Of these, 21 were identified from MEDLINE, 52 from Emcare and 41 from PsycInfo. Additional records searched resulted in seven more articles. After removing duplicates and articles that did not meet the inclusion criteria, 94 articles remained. These articles were screened for relevance by their titles and abstracts; 17 full texts were reviewed and 10 articles deemed eligible for inclusion. Excluded articles focused on childbirth (labour and birth) experiences and did not relate to antenatal education information, communication, or use of language.

Findings

The full-text published articles and documents reviewed were: one mixed methods systematic review (Chang et al 2018), one quasi-experimental study (Serçekus & Başkale 2016), one retrospective survey (Hollander et al 2017), one grounded theory study (Campbell & Nolan 2016), one opinion-based article (including online data) (Mobbs et al 2018), a book chapter (Leap & Hunter 2016), one exploratory study (Wilmore et al 2015), two internationally published guidelines (NICE 2014, WHO 2018) and one national guideline (DH 2018). The reviewed articles and documents were published between 2014 and 2019 and are therefore relevant to current clinical practice.

Table 1 provides a summary of the screened included papers and Table 2 displays the characteristics of the included papers.

PRISMA flowchart from: Moher et al (2009)

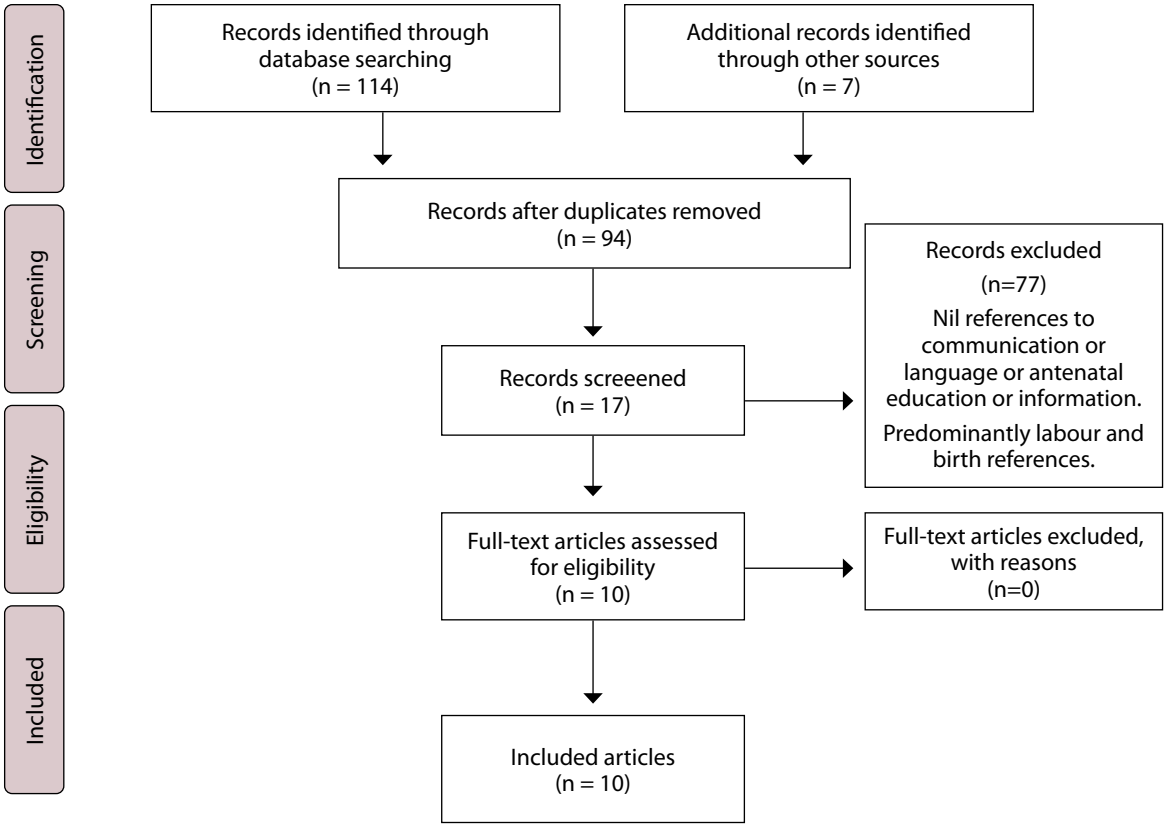

Figure 1. Articles and documents examining or exploring the language utilised in antenatal education when discussing labour and birth.

Table 1. Summary of the screened included articles.

Code	Author/year	Aims clear?	Participation appropriate?	Design appropriate?	Method appropriate for design?	Sample size and sampling justified?	Reflexivity present?	Ethical considerations?	Does the content justify the findings and/or implications for practice?	Is the content described sufficiently?	Is there sufficient evidence of rigour?
1	Campbell & Nolan (2016)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2	Chang et al (2018)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3	Department of Health (2018)	Y	Y	N/A	N/A	N/A	N/A	N/A	Y	Y	N/A
4	Hollander et al (2017)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5	Leap & Hunter (2016)	Y	Y	N/A	N/A	N/A	N/A	N/A	Y	Y	N/A
6	Mobbs et al (2018)	Y	Y	Y	Y	Y	Y	U	Y	Y	U
7	NICE (2014)	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Y	N/A
8	Serçekus & Başkale (2016)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9	WHO (2018)	Y	Y	N/A	N/A	N/A	N/A	N/A	y	Y	N/A
10	Wilmore et al (2015)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 2. Characteristics of the included documents.

Author, year, country	Type of reviewed document	Aim and objectives	Findings/conclusions	Comments/ recommendations
Chang et al (2018) United Kingdom	Mixed methods systematic review	To assess whether interventions to support effective communication between maternity care staff and healthy women in labour with a term pregnancy could improve birth outcomes and experiences of care.	The review identified a lack of evidence on the impact of interventions to support effective communication between maternity care staff and healthy women during labour and birth.	Robust studies which are able to identify characteristics of interventions to support effective communication in maternity care are urgently needed.
Campbell & Nolan (2016) United Kingdom	Grounded theory study	To report how the aims, language and actions of yoga for pregnancy teachers may impact upon women's self-efficacy for labour and birth.	Consistency in teachers' aims. Emergence of four main themes • creating a sisterhood • modelling labour • building confidence • enhancing learning	Women's self-efficacy for labour is complex and multifactorial. A follow-up study will explore women's experiences of yoga for pregnancy classes to ascertain which aspects women find helpful in labour.
Serçekus & Başkale (2016) Turkey	Quasi-experimental study	To examine the effects of antenatal education on fear of childbirth, maternal self-efficacy, and maternal and paternal attachment.	Antenatal education was found to reduce the fear of childbirth and to increase child related maternal self-efficacy. Antenatal education had nil effect on parental attachment.	Recommended that widespread antenatal education programmes should be provided in developing countries, and that the content of the education programme about parental attachment should be increased.
Hollander et al (2017) Netherlands	Retrospective survey	The purpose of this study was to explore and quantify perceptions and experiences of women with a traumatic childbirth experience in order to identify areas for prevention and to help midwives and obstetricians improve women-centered care.	Interactions around interventions seemed to be more important than the interventions. 'Communicate/explain' and 'Listen to me (more)' were the most frequently selected responses, when asked what their caregiver could have done to prevent the traumatic birth experience.	A definite need for attention to and improvement of communication and interaction between patient and caregiver at all stages (antenatal, labour and postnatal).
Wilmore et al (2015) Australia	Exploratory research	To examine the informal approaches taken by midwives and antenatal staff to adapt health communication to the needs of patients.	Attempts to tailor health information to individual needs are frequently based on incomplete information about patient's health literacy and may be inconsistent in delivery and content.	Improvements in health communication training, and commitment to use innovative approaches to health promotion where these have been shown to have a positive impact on health behaviours.

Mobbs et al (2018) United Kingdom	Opinion-based article (including data from online Facebook group)	To give an insight and explore language used in maternity settings in order to identify how language could improve the experiences of women, babies and families.	Six key categories were identified that required change: • paternalistic/ patronising language • language which objectifies women • anxiety-provoking language • dictatorial language • discouraging language • exclusive or codified language	Multidisciplinary, collaborative #MatExp Facebook group participated. Good communication during the birth process is critical to good maternity care, but achieving a shift in deeply ingrained language, and the thinking it reflects, is difficult.
Leap & Hunter (2016) United Kingdom	Chapter within a book	Described a framework for thoughtful encouragement that could be systematically applied by midwives and student midwives to achieve effective communication.	Midwifery research has identified that pregnant women receive messages from diverse sources at conscious and subconscious levels. These messages can have either placebo (positive) or nocebo (negative) effects depending on 'how' and by 'whom' they are delivered.	The framework consists of listening, acceptance, utilisation, reframing and suggestion (LAURS) and was adapted from the original works of Cyna et al (2011).
National Institute for Health and Care Excellence (NICE) (2014) United Kingdom	Clinical guideline (cg190)	To provide an evidence-based guide for care throughout labour with regard to communication.	Conclusion is to treat all women with respect. Ask the woman about her wants and expectation for labour and be aware of the importance of tone and demeanour, and of the actual words used. Use information to support and guide her through her labour.	Recommendations include an outline of how staff can establish communication with women in labour.
Department of Health (DH) (2018) Australia	Clinical practice guidelines: *Clinical Practice Guidelines in Pregnancy Care*	To provide high-quality evidence-based guidance to maternity service providers and the consumers of their care. Clear outline of antenatal class content and aims.	Antenatal education programs can help women to be informed about pregnancy, birth and parenting. Psychological preparation for parenthood may have benefits for parents' mental health, parenting and infant development.	Include psychological preparation for parenthood as part of antenatal care as this has a positive effect on women's mental health postnatally.
World Health Organization (WHO) (2018) Geneva	Recommendation	In the absence of a standardised definition of 'effective communication' the aim is to describe the components of effective communication.	Findings were based on the Mixed Method systematic review by Chang et al (2018) which identified the absence of a standardised definition of 'effective communication'.	Recommendations include an outline of how staff can effectively communicate with women during labour and childbirth. Health systems should also ensure that maternity staff are trained to national standards for competency in interpersonal communication and counselling skills.

Key findings

From the published literature included in this review, there was no consensus for a definition of 'effective communication' when providing maternity care (Chang et al 2018, WHO 2018). The World Health Organization recognised that there is a lack of a standardised definition for effective communication and also that, as the language spoken by a woman and her family is a component of effective communication, it should be paraphrased (NICE 2014, WHO 2018).

Several studies reported similar issues relating to communication and the use of language (both positive and negative) used by health professionals to facilitate transfer of antenatal information relating to childbirth (Wilmore et al 2015, Campbell & Nolan 2016, Leap & Hunter 2016, Hollander et al 2017).

The literature identified that responding with a positive attitude and answering questions in a clear and concise way during antenatal classes was essential to enable health professionals to communicate effectively (Leap & Hunter 2016, Serçekus & Başkale 2016, WHO 2018).

A mixed methods systematic review by Chang et al (2018:5) aimed to '*assess whether interventions to support effective communication between maternity care staff and healthy women in labour could improve birth outcomes and experiences of care*'. However, while communication is seen to be a major component of respectful maternity care, the review was only able to identify two papers that met the inclusion criteria. In their concluding statements Chang et al (2018) acknowledged that there was a gap in the evidence as to what effective communication encompassed.

Campbell & Nolan (2016) used a grounded theory approach to report how the aims, language and actions of yoga for pregnancy teachers may impact on a woman's self-efficacy in labour and birth. Four main themes were identified: 'building confidence', 'creating a sisterhood', 'modelling labour', and 'enhancing learning'. Of the four themes, 'building confidence' involved the use of positive language, imagery and positive affirmations, to '*emphasise how strong and capable the woman's bodies were and how beautiful birth can be*' (Campbell & Nolan 2016:7). 'Creating a sisterhood' incorporated storytelling by other experienced mothers in the group and the childbirth educators; while 'enhanced learning' included creating an atmosphere through tone of voice, soothing words and the use of metaphor. Modelling labour was another theme and focused on the repetition of words and postures in order to imbed phrases in the woman's mind (Campbell & Nolan 2016).

A quasi-experimental study by Serçekus & Başkale (2016) that compared the effects of antenatal education with routine antenatal care, found that antenatal education reduced fear of childbirth and increased labour-related maternal self-efficacy. This was attributed to the education but no reference was made to the language or communication utilised within the antenatal education classes, nor did the study identify who was teaching the antenatal classes. Serçekus & Başkale (2016:170) did acknowledge that the reduction of fear surrounding childbirth may have occurred because antenatal education '*provides information about the birth and positively changes earlier misinformation acquired about birth*'. This study was included following discussion and consensus between the authors.

The language of encouragement was discussed by Leap & Hunter (2016) as a way of stimulating positive motivation, with antenatal groups being identified as one opportunity where this can occur. This chapter was included as the authors agreed that the content related to the aim of this review. Mobbs et al (2018) gathered data from a maternity expert Facebook group (#MatExp), examined 121 comments and phrases commonly used in maternity care and found that these were patronising or paternalistic. Mobbs et al (2018) suggested alternative phrases that utilised positive language. This is particularly important because positive communication has been linked to improved outcomes that extend beyond the birth experience into the postnatal period (WHO 2018).

When considering the benefits of positive communication, it is important to recognise that negative, or even lack of, communication can impact on the experiences of expectant parents. Hollander et al (2017) identified factors that impacted on the incidence of post-traumatic stress disorder, experienced by women following childbirth; this included lack of communication and the poor provision of information during the antenatal period. Women stated that their traumatic birth experience could have been prevented had their caregivers communicated, explained or listened more. Hollander et al (2017:522) identified that it was the '*interactions rather than interventions*' that resulted in the trauma.

In a study by Wilmore et al (2015) the specific communication needs of groups with low health literacy levels were addressed, and while the study focused on antenatal care, parenting educators were consulted with regard to written information. A consensus was that too much written information was given without identifying literacy levels and that material should be customised to target different groups. The study identified that the '*use of medical terms and complex language can cause confusion*' Wilmore et al (2015:77). One implication for practice identified by Wilmore et al (2015) included improvements in health communication training.

In the United Kingdom (UK), NICE has highlighted a growing global consensus on the importance of examining what health professionals say and how

they say it (NICE 2014). Within the NICE guidelines for intrapartum care (2014) building a rapport with the woman and identifying her expectations and wants regarding labour is identified. The guidelines also make specific reference to the importance of being aware of the tone, demeanour and actual words used, when conveying information and guidance through the labour (NICE 2014).

Childbirth education programs in Australia are similar to those found in other countries, where providers are from both public and private hospitals and private agencies, and include obstetricians, midwives, and allied health practitioners. The DH publication *Clinical practice guidelines in pregnancy care* outlines the aims of structured childbirth education (DH 2018). These guidelines recommend the content to be included in antenatal childbirth classes, such as, to prepare women and their partners for labour pain, and build confidence in their ability to labour and give birth without pharmacological pain relief. It is also suggested that antenatal education programmes include '*building women's confidence in their ability to labour and give birth*' (DH 2018:69).

Discussion

While the importance of 'effective communication' has been recognised in both general health care and maternity care, there is no consensus on the definition (Chang et al 2018). The World Health Organization Guideline Development Group (GDG) recognised that there is an '*absence of a standardized definition of effective communication*' (WHO 2018:1). In response they outlined communication components to be utilised by maternity staff when interacting and communicating with women during labour and birth. These components represent a minimum standard for effective communication and were similarly expressed in the NICE guidelines (2014):

- *'Introduce themselves to the woman and her companion and address the woman by her name;*
- *Offer the woman and her family the information they need in a clear and concise manner (in the language spoken by the woman and her family), avoid medical jargon, and use pictorial and graphic materials when needed to communicate processes or procedures;*
- *Respect and respond to the woman's needs with empathy and compassion, through encouragement, praise, reassurance and active listening;*
- *Support the woman to understand that she has a choice, and ensure that her choices are supported [**Authors' note:** with the proviso that further discussion and explanation may be indicated where the choice may involve unrecognised additional risk to the woman or baby given her particular circumstances, for example, choosing a vaginal birth in the context of a placenta praevia];*
- *Ensure that procedures are explained to the woman, and that verbal and, when appropriate, written informed consent for pelvic examinations and other procedures is obtained from the woman [**Author's note:** this should also include simple manoeuvres such as placement of monitoring equipment, for example, the blood pressure cuff, when frequently women are told the cuff is being positioned rather than permission asked to place the cuff];*
- *Encourage the woman to express her needs and preferences, and regularly update her and her family about what is happening, and ask if they have any questions;*
- *Ensure that her privacy and confidentiality is maintained at all times;*
- *Ensure that the woman is aware of the available mechanisms to address complaints;*
- *Interact with the woman's companion of choice to provide clear explanations on how the woman can be well supported during labour and childbirth'*

(WHO 2018:1-2).

Interestingly, various studies in the field of Anaesthesia and Radiology have identified that an improved understanding of communication can improve care, particularly when having potentially painful procedures (Perry et al 2015). The inadvertent use of negative suggestions can alter an individual's experiences by increasing anxiety and/or pain (Varelmann et al 2010, Perry et al 2015). Lang et al (2005) also discussed how warnings and commiserations do not reduce the pain or anxiety experienced by the individual and suggested that care providers focus on communicating the desired outcome. This is a view supported by midwifery research which has identified that pregnant women receive messages from diverse sources at conscious and subconscious levels. These messages can have either placebo (positive) or nocebo (negative) effects depending on 'how' and by 'whom' they are delivered (Leap & Hunter 2016). Schenk (2008) outlined six common language 'traps' used by clinicians throughout the course of conversation that invoke the nocebo effect. However, this author also stated that linguistic bad habits can be rectified, ultimately resulting in better communication.

This literature review highlights the urgent need for communication education and training for health professionals providing maternity care. The following section will discuss why it is vitally important for health professionals to develop effective communication skills and provide information for

a framework that could be utilised by midwives to achieve this.

Communication, education and training for health professionals

As mentioned by the WHO (2018), offering information in the language spoken by a woman and her family is a component of effective communication. However, studies have identified a need for health professionals providing care to carefully consider their use of words and phrases because of how certain terms influence perceptions (Cyna et al 2009, Alex & Whitty-Rogers 2012, Mobbs et al 2018).

The benefits of effective communication between health professionals include an increase in consumer safety, efficient use of time, and improved team satisfaction (Berkhof et al 2011, Figueiredo & Potra 2019); while effective communication between health professionals and health care consumers can '*enhance the consumers' experience, reduce complaints and increase the practitioners' self-confidence*' (Ali 2017:18). The importance of effective communication has been identified at both national and international levels and has resulted in the use of standardised tools to assist with the transfer of information (Figueiredo & Potra 2019). One such structured tool is the '*introduction/identification; situation; background; assessment and request/recommendation, commonly known as ISBAR*' (Kitney et al 2016:20). However, while ISBAR is an effective tool for health professionals it does not address effective communication between health professionals and service consumers.

According to Burt et al (2014) more than half of the medical schools within the UK, as well as those in Canada, Europe and USA, teach communication skills based on *The Calgary-Cambridge guide to the medical interview* (Silverman et al 2013). The basic framework of the Calgary-Cambridge guide involves providing structure to the patient interaction and building a relationship. This is achieved by first 'initiating the session', conducting introductions, establishing a rapport and identifying the reason for consultation. The next stage is 'gathering information' and involves listening attentively to the patient's narrative, using open and closed questions to clarify points. Picking up on cues, clarifying information, establishing a time frame of events and using appropriate language are also part of the gathering information stage. Once this is achieved a physical examination can occur followed by an explanation of any findings. During the explanation of findings, planning of management occurs as a shared decision-making process. The last stage is the session closure which includes a forward plan (Burt et al 2014). Pollack et al (2017) identified that, while training programs assisted with improving clinician communication behaviours and included both face-to-face courses and interactive computer courses, there was no particular intervention that was uniformly embraced in the United States.

Maternity care, as with all health care in Australia, abides by the National Safety and Quality Health Service (NSQHS) Standards. These standards are a nationally consistent statement of the level of care consumers can expect from health service organisations (Australian Commission on Safety and Quality in Health Care 2016). Within these standards effective patient–clinician communication is defined as:

'the exchange of information between a patient and their healthcare provider, and includes communications with the family and carer.

It involves two-way communication (spoken, written and non-verbal) that engages patients in decision making and care planning. It is tailored, open, honest and respectful and there is the opportunity for clarification and feedback.'

(Australian Commission on Safety and Quality in Health Care 2016:1).

Midwifery students are taught that effective communication involves '*giving and receiving information, which requires efficient use of language, effective listening, observation, accurate interpretation, and appropriate responses to verbal and non-verbal clues*' (England & Morgan 2012:1). Effective listening is not just about the words that are being spoken but utilises one's senses and emotions to interpret and understand what is being said (Deane-Gray 2008).

Internationally, there is a move to incorporate respectful collaborative communication with a growing consensus to emphasise the importance of examining what health professionals say and how they say it, to be aware of the actual words used, and their tone and demeanour (NICE 2014). The WHO suggests responding with a positive attitude to a woman's needs, preferences and questions during structured antenatal classes, paying particular attention to providing information in a clear and concise manner (WHO 2018). Leap & Hunter (2016) described a framework for thoughtful encouragement that could be systematically applied by midwives and student midwives to achieve effective communication. The framework consists of listening, acceptance, utilisation, reframing and suggestion (LAURS) and was adapted from the original work of Cyna et al (2011). The LAURS approach suggests a five-step process for how to listen (see Table 3).

L: Listening. Effective communication requires the health professional to listen with intent (Cyna et al 2011). Does the woman have your full attention or are you engaged, for example, in an activity (palpating the abdomen or taking blood pressure)

while she is speaking? Are there interruptions by a relative or partner? Does the woman know she has been heard? Does she know that she has been understood? Confirming that you have heard and understood what has been said frequently requires a 'checking in' process with the woman. This can be undertaken by repeating and rephrasing the information back to the woman: 'So are you telling me that you are 34 weeks' pregnant and have not been feeling your baby move since waking up at 2am this morning – is my understanding correct?'

A: Acceptance of different realities. Acceptance of another person's reality requires health professionals to be open-minded and non-judgmental (Cyna et al 2011). This can be difficult when logically it would seem that there is no basis for concern. For example, a midwife feeling a baby move while palpating the abdomen while the woman is insisting that she cannot feel the movements. In this example, it may be tempting to dismiss the woman's concerns by saying 'The baby is fine because I can feel him moving now'; however, this does not help the woman when she is at home not feeling her baby move. One could say 'This is very common' (normalising that not every woman can feel her baby move even though the baby is moving and healthy). 'I know you can't feel the baby just now [acceptance], but in a moment, when you feel your tummy where I have placed my hand you will find you can feel your baby moving [suggestion]. Is it okay to see if you can feel your baby moving now?' 'Now you know how to do this, it is very likely it will become easier for you to feel whether the baby is moving or not' [suggestion]. The midwife can accept and acknowledge the woman's beliefs and provide her with different skills and strategies. One strategy could be to invite the woman to place her hands on her abdomen and feel the movements that way. Or it may be that the woman would benefit from seeing the baby move on an ultrasound screen. Sometimes, it is time itself that is required, coupled with validation of the concerns and reassurance gained from the assessment.

Table 3. LAURS framework.

L	Listening. Effective communication requires the health professional to listen with intent.
A	Acceptance of different realities. Acceptance of another person's reality requires health professionals to be open minded and non-judgmental.
U	Utilization of the sensory perceptual language: visual (I'm looking forward), auditory ('It sounds like…') and kinaesthetic ('It doesn't feel right'). Utilization of specific words – contraction, surges, waves, rushes.
R	Reframing takes an unhelpful thought or perception and converts it into a helpful or therapeutic thought or perception.
S	Suggestion is communication that can lead to subconscious, non-volitional changes in perceptions, mood and behaviour.

U: Utilization in the birth unit may involve adopting the language that is being used by the woman. The language of contractions varies with some women describing them as waves while others may call them rushes. Utilising the woman's perceptual world is also a means of building rapport, by accepting the language that is meaningful to her (Cyna et al 2011). Engaging in the woman's language will also increase the likelihood of being heard and understood. For example, when a woman asks 'How will I know when to push?' The concern can be utilised by explaining the signs of full dilatation and then utilising the experience. Midwife: 'When your body is ready to give birth there will be signs and sensations that you will feel and I may observe, which will let us **know** when you are ready.'

R: Reframing is a concept that takes an unhelpful thought or perception and converts it into a helpful or therapeutic thought or perception (Cyna et al 2011). For instance, a woman may be very distressed by the increasing pain she is feeling with contractions as labour progresses. A reframe could be communicated as: 'The pain from the contractions is telling you that the contractions are getting stronger and more effective and, therefore getting you closer to seeing and holding your baby.'

S: Suggestion. '*Hypnotic phrasing, commonly known as suggestions, are communications that can lead to subconscious, non-volitional changes in perceptions, mood and behaviour*' (Perry et al 2015:27). '*The ability of people to respond to communications in a subconscious way is known as suggestibility*' (Cyna et al 2011:27). Suggestions are the most useful form of subconscious communication and can be applied in many forms (Cyna et al 2011). Following on from the Reframing above: '… the **stronger** the contraction the more **effective** it is … therefore, the **stronger** you can feel … the more confident you can feel … as the **effective** contractions get you nearer to seeing and holding your baby for the very first time.' Suggestions exist in various forms such as: negative and positive suggestions, positive and negative non-verbal suggestions, direct and indirect suggestions, and linked suggestions.

Negative suggestions are suggestions that provoke unwanted symptoms or behaviours (Cyna et al 2011). For example, the sensations of crowning may lead to an inadvertent negative suggestion such as, 'you will feel **burning** and **stinging** and that's normal.'

Positive suggestions are suggestions that provoke a positive therapeutic effect (Cyna et al 2011). An example of this would be to describe the sensations of crowning: '**As skin stretches** it tends to **go numb** allowing the birth to be as **comfortable** as possible.'

Positive suggestions can also be used to focus on the desired outcome (Lang et al 2005, Cyna et al 2009). For example, mentioning that 'every contraction brings you closer to meeting your baby.'

Positive non-verbal suggestions at the time of the birth may be demonstrated by the calm and confident presence of the midwife, which has the effect of de-escalating the tension in the woman and her partner.

Negative non-verbal suggestions during labour would be giving a woman a vomit bag after a dose of strong analgesia, when she is not complaining of any symptoms, suggesting that she will feel nauseous and vomit.

Direct suggestions deal specifically with what the woman may feel: 'You will find that as you breathe the contractions away the rest in between the contractions will become longer.' While **indirect suggestions** tend to be collective and imply that a similar experience will occur: 'Most women find that pushing is easier because they can work with the contractions.' Indirect suggestions are also useful when a 'yes' or 'no' answer would not be accurate (Cyna et al 2011). For instance, if a woman asks 'Will the gas make me vomit?' both 'yes' and 'no' responses have the potential to be incorrect. One possible response could be 'Some woman may feel that; however, most women will use the gas and find that it helps focus their breathing.' This response acknowledges the concern of the woman and then provides an indirect positive suggestion by describing the action of 'focus their breathing.'

Linked suggestions involve joining two perceptions or behaviours, for instance joining a conscious behaviour and achieving a subconscious effect. For example, 'When you rock and move [conscious] with the contraction you will find yourself relaxing automatically [unconscious]'.

Other language techniques include verbal repetition, truisms, double binds, and reversed effect (Cyna et al 2011).

Verbal repetition at any time during the labour, like 'Well done', 'Great focus', 'You can do this', can reinforce a desired behaviour such as breathing through or pushing with a contraction.

A **truism** is a statement that is difficult to refute and can be useful for reinforcing and eliciting a 'yes' response (Cyna et al 2011). The repetition of the truism then becomes a powerful tool in changing the person's perceptions. An example of a labour truism is that 'Every contraction is followed by a rest period.'

Double binds are a technique that leads to a choice of comparable alternatives giving the perception of control and choice to achieve the desired outcome (Cyna et al 2011). Facilitating a position change in labour: 'Would you prefer to roll on to your left side or right side?' Either choice results in the desired outcome of the woman moving on to her side to relieve vena caval compression.

Reversed effect. Interestingly, some words are not processed by the subconscious. The word **'not'** is one such word (Cyna et al 2011). This means that when a woman is asked 'Not to tense your legs' she hears 'Tense your legs'. The technique of reversed effect can be used therapeutically by saying to the woman 'You do not have to relax your legs until you are ready'. Subconsciously the woman will hear 'You have to relax' because consciously she will fail to hear the word **not.** The word **try** should also be used with caution since it can imply failure. Often when a labouring woman is being prepared for epidural the phrase 'Try not to move' will be used, this is a subconscious suggestion for the woman to move because 'Try to move' is what she will hear.

A recently published study by Cutajar et al (2020) has provided an insight into the language used during antenatal education classes. It was found that negative statements were more common than positive statements when discussing labour and birth with women and their partners. In particular, the second stage of labour had a greater proportion of negative statements from two educators. Misinformation statements were minimal for this topic; however, there was an absence of any statements discussing the rest period between contractions. This study further reported issues relating to how health professionals use language to influence how women and their partners prepare and manage labour and birth. In summary, this review highlights how it is important for midwives and other health professionals to be aware of the impact of positive and negative words and phrases.

Limitations

While this review was comprehensive, it was not exhaustive. Only studies in the English language were selected for inclusion in the review, therefore, the authors may not have captured all literature on the topic. In addition, as clearly identified by this review, there appears to be limited research that has investigated or explored ways to communicate effectively and the use of language for antenatal education (labour and birth). The level of evidence for studies identified was low, with the majority being observational studies or opinion-based. This lack of evidence indicates that further research is urgently required.

Conclusions

This literature review has highlighted that there is a gap in the research regarding the language and communication used during antenatal education for

labour and birth. While communication has been identified as a component of respectful maternity care, a lack of evidence as to what effective communication encompasses exists.

The LAURS framework has been identified as a possible resource that could be systematically utilised by midwives and other health professionals to achieve effective communication in all areas of care including antenatal education. By using a framework such as LAURS, benefits may include the utilisation of language that suggests a sense of control rather than fear, distress and pain. With a clear guide to the components of effective communication in the intrapartum period, midwives and other health professionals can observe and analyse the language and phrases that are utilised. By observing and analysing the language and phrases that are utilised during each interaction it can then be determined what is information and what is suggestion (both positive and negative) and so promote discussion about how this may impact on the woman and her partner. Potential benefits include improvements in outcomes, co-operation, avoidance of complications, and shortened hospital stays.

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