WOMEN'S EXPECTATIONS AND EXPERIENCES OF RUPTURE OF MEMBRANES AND VIEWS OF THE POTENTIAL USE OF REAGENT PADS FOR DETECTING AMNIOTIC FLUID

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ABSTRACT

AIMS: To explore first time mothers' expectations and experiences regarding rupture of membranes (RoM) at term, and their views on the potential use of reagent pads that detect amniotic fluid.

BACKGROUND: There is little information available on women's experiences of spontaneous rupture of membranes, or interest in utilising methods to confirm rupture of membranes (e.g. reagent pads).

DESIGN: Descriptive qualitative study, utilising focus groups and telephone interviews with women during pregnancy and after the birth of their first baby. Thematic analysis was undertaken to analyse women's responses.

METHODS: Ethics committee approval was obtained. Twenty-five women participated in the study of whom 13 contributed both during pregnancy and postpartum between October 2015 and March 2016.

FINDINGS: Three overarching themes emerged from the data from women's expectations and experiences: uncertainty in how, when and where membranes may rupture; information which was felt to be limited and confirmation of rupture of membranes. The potential use of reagent pads met with varied responses.

CONCLUSION: Women were interested in having facts and figures regarding RoM, such as characteristics of liquor; volume and probability of membranes rupturing spontaneously at term. Use of a pad as a means of confirmation was viewed as helpful, although the potential for increasing anxiety was raised.

Keywords: Rupture of membranes; Expectations; Experiences; Midwifery; Mothers Nurse-Midwifery; Uncertainty; Reagent pad; Amniotic fluid; Early labour.

SUMMARY STATEMENT

Why is this research needed?

- There is little evidence of what women expect regarding spontaneous rupture of membranes prior to giving birth for the first time, nor of their experience.
- There can be uncertainty about membrane rupture and methods of confirmation can be invasive.
- The accessibility of reagent pads to confirm amniotic fluid is increasing, although there is little evidence of women's views about their use.

What are the key findings?

- Spontaneous rupture of membranes is a source of uncertainty for women anticipating their first labour with little information routinely available.
- Spontaneous rupture of membranes was described by women as an explosive sensation.
- Women's view on the potential use of reagent pads to confirm RoM include possible benefits but also some concerns including increased anxiety.

How should the findings be used to influence policy/practice/research/education?

- Information on the likelihood of spontaneous rupture of membranes occurring, estimates of the amount of amniotic fluid and sensations of spontaneous rupture of membranes should be included in antenatal education and other information available to pregnant women.
- Larger scale studies are required prior to the wider introduction of reagent pads for women with a straightforward pregnancy.

INTRODUCTION

The timing of spontaneous rupture of membranes in relation to contractions is unpredictable and varies considerably (Hannah et al., 1996, Walker, 2003, Marowitz and Jordan, 2007, El-Messidi and Cameron, 2010, van der Ham et al., 2011). Membrane rupture occurs prior to the onset of contractions in approximately 8% term pregnancies (Hannah et al., 1996). This is followed by contractions for 95% women within 72 hours, although it is impossible to predict which women will experience this (El-Messidi and Cameron, 2010). Confirmation of membrane rupture may be equivocal on history alone and is difficult to establish for at least 10% of women (van der Ham et al., 2011, van der Ham et al., 2012); admission to a maternity unit and invasive examinations may be required. Gross et al. (2003) suggest that watery loss was reported as a sign heralding labour onset by almost 16% of nulliparous women and that women's reporting of symptoms might influence subsequent management (Gross et al., 2009), especially for those that experience rupture of membranes (RoM) prior to onset of labour (Jomeen and Martin, 2002).

Background

Overall, there is currently limited information about women's expectations and experiences of spontaneous rupture of membranes. Evidence gathered in studies that included women in early labour with their first babies identified concerns about their waters breaking. For some, advice to attend hospital immediately was a source of alarm and disruption to expected plans for early labour (Spiby et al., 2006). Not all women share this view: some women may wish to go to a hospital because they feel that is the safer option for them and their babies (Green et al., 2012).

Preliminary studies amongst women with complicated pregnancies explored the use of absorbent pads to discriminate between urine and amniotic fluid. These were reported to offer some reassurance to clinicians of intact membranes. However, further testing of sensitivity and specificity was recommended (Alto and Cooper, 2005, Bornstein et al., 2009, Mulhair et al., 2009). Such pads are now becoming available and midwives encouraged to explore their use with women, particularly as a means of reducing unnecessary referrals and speculum examinations (Ray et al., 2015). Women's interest in or experience of the use of such pads, has yet to be reported.

THE STUDY

Aim

The primary objective of this study was to explore women's expectations, concerns and experiences of spontaneous rupture of membranes at term. A secondary objective was to explore women's views about the possibility of using reagent pads to confirm pre-labour or early labour membrane rupture.

Design

A descriptive qualitative study (Vaismoradi et al., 2013, Sandelowski, 2010) using focus groups and telephone interviews as data collection methods allowed for exploration of expectations and experiences of rupture of membranes from women's own perspectives, including their insights on the potential use of reagent pads detecting amniotic fluid.

Participants

The research sites comprised two hospitals and a community setting providing maternity and health visiting (specialist public health nursing) care under the auspices of two NHS Trusts in the East Midlands of England. A purposive sampling strategy was adopted based on the research aims, pragmatic reasons and optimal size for focus groups (Green and Thorogood, 2009). The study consisted of two groups of participants, Group A (n=18) and Group B (n=8), all expecting their first baby. Group A women were recruited during pregnancy and invited to attend one focus group or to participate in a telephone interview before the birth of their baby and one postnatal focus group or telephone interview, unless they gave birth by planned caesarean section. A further group of women (Group B) who had experienced spontaneous rupture of membranes at term were invited to participate in one postnatal focus group or telephone interview. The inclusion criteria for both groups were women who were able to give informed consent; minimum age of 18 years; good general health and sufficient knowledge of English language to enable participation in a focus

group/interview. Figure 1 displays the recruitment and flow of the sample within the study.

INSERT FIGURE 1 HERE

Data collection

Posters and leaflets were displayed at research sites and initial information about the study was provided to potential participants by a member of the woman's care team. For Group A participants, this was via antenatal education organised by the community midwifery team, or an antenatal physiotherapy session at the hospital. Recruitment of Group B participants took place at well-baby clinics run by health visitors in the community, and infant feeding cafés held at the hospitals. Information and expression of interest forms were available at all sites for potential participants to provide contact details to the research team.

Data collection commenced in October 2015 and was completed by the end of March 2016, using audio-recorded focus groups (n=4), usually with two co-facilitators who were members of the research team (HS; SB; AJH). Women unable to attend a focus group were offered an audio-recorded telephone interview (n=20). The individual interviews were conducted by one member of the research team (AJH). Topics for focus groups were developed from existing evidence and agreed by the research team prior to data collection. Topics explored in the antenatal data collection included expectations, anticipated feelings, concerns and information needs related to membrane rupture. In the postnatal data collection, women were invited to provide a short account of RoM and experiences and feelings were explored and views about the use of a reagent pad to confirm membrane rupture.

Ethical considerations

Approval was obtained from a National Research Ethics Service (NRES) Committee and the relevant Trust research departments prior to commencing the study. Posters

were displayed on each site. Information sheets and expression of interest forms were also made available for potential participants. The voluntary nature of the study was discussed and the option to decline or withdraw at any time made explicit prior to obtaining written consent. Audio recordings were stored securely and transcripts anonymised. No demographic data were collected due to the exploratory nature of the research.

Data analysis

All recordings were transcribed verbatim and thematic data analysis (Vaismoradi et al., 2013) was performed manually. To enable a comprehensive understanding of the phenomena, data from both focus groups and telephone interviews were integrated during analysis. Anonymised transcripts were read and coded independently by two members of the research team (AJH and SB) in the first instance, to delineate units of meaning. A second iteration of a coding framework was reviewed by HS and the units of meaning clustered to form themes. Quotes from each focus group and interview were identified to underpin the themes agreed and to allow exploration for disconfirming evidence. A third iteration of the framework was then reviewed and agreed by all authors.

Validity and reliability

Two of the authors have backgrounds in midwifery (HS, SB) and the third in psychology. Although a midwifery lens was inherent in data collection, analysis and interpretation, there was a conscious effort to avoid the influence of existing views to maintain openness to data. Participants were offered the opportunity to contribute by either focus group or individual telephone interview; the use of two qualitative data collection methods with different advantages enhanced the richness and trustworthiness of the data (Lambert and Loiselle, 2008). Whilst the focus groups allowed the investigation of shared experiences, the individual interviews allowed the exploration of more in-depth perspectives. Validity and reliability were also enhanced though the collection of both antenatal and postnatal data for the majority of participants, with a retention rate of 77% from Group A. The rigour of the data analysis

process was strengthened by the initial iteration being conducted independently by two members of the research team and then compared to ascertain recurring themes.

FINDINGS

Group A comprised 17 women who participated in either a focus group or telephone interview in the third trimester of pregnancy prior to the commencement of antenatal education. Of the 17 women, 13 participated in the postnatal follow-up; a 77% retention rate for group A. Group B comprised 8 women who experienced spontaneous rupture of membranes during labour who participated after the birth of their baby. All participants were planning birth in a hospital maternity unit. Quotes are reported to provide transparency in the interpretation of findings. The code at the end of each quote includes information about the antenatal (AN) or postnatal (PN) time-point; the data collection method (FG: focus group; INT: interview); the focus group or interview identification number (with A and B indicating the participant's group) and the participant's number for focus groups.

Three overarching themes emerged from the analysis; these were derived from both antenatal and postnatal data: a) uncertainty: how, when and where?; b) information provided and expected; c) confirmation of rupture of membranes.

Uncertainty: how, when and where?

Participants lacked knowledge about rupture of membranes (RoM) at the point of antenatal data collection. They were unsure of the volume of liquor, when and how RoM may occur, and were concerned about how they could prepare for it. A lack of knowledge, combined with an absence of control, resulted in anxiety for some women:

> It's not something I know a huge amount about if I'm honest. (AN-FG-A1-P7)

> Yes, that's what I think was worrying me, you know, like I think I feel like I like being in control of things and this is something I've absolutely no control over - the time or what happens - not that I worry about it. (AN-INT-A3)

Lack of control featured in experiences reported postnatally, including an unexpected inability to control RoM:

> It did feel different, with that lack of control. (PN-INT-A8)

> Breaking waters is something, I think any mum thinks 'I could control'…because I was just oh I am peeing, and then all of a sudden a gush of water came out. (PN-INT-A2)

During pregnancy women had concerns about the lack of control over the timing and location when RoM might occur, resulting in a preference to avoid public places within the last weeks of pregnancy, in the hope that embarrassment and inconvenience might be avoided:

> Yeah, I suppose that's my concern because I'm staying at work till about a week and a half before my due date… I suppose it's that paranoia that you just don't want anything to happen while you're not at home. (AN-FG-A1-P4)

> I thought I'd probably be caught out when I was out and about. I was expecting all kinds of embarrassing scenarios like being in the [supermarket] and looking like I'd wet myself, or being in the car. So I'd actually laid down towels in my partner's car and my car just in case, and in the bed as well. What ended up happening is my waters did break in bed and I had towels ready (PN-INT-B4)

Women wanted to be prepared for RoM and had sought information from family and friends who provided practical suggestions, which they found useful. These included placing towels beneath sheets to protect the mattress; covering car seats; wearing black clothing; and having their hospital bag and telephone ready:

> I've been told to protect my car seat. (AN-FG-A2-P1)

> Just wear black constantly. (AN-FG-A2-P6)

> I personally bought a mattress protector, waterproof one. (PN-INT-A10)

Pregnant women were unsure of the amount of liquor they would 'lose' and considered the possibilities of having either a *gush* or a little *trickle*:

> Well, I'm expecting - well, hoping it to be painless, that it will be either a…at some point when I'm near my due date it will be either a gush of fluid or it could be sort of a slow trickle over a period of time. Yeah, that's what I'm expecting. (AN-INT-A1)

> Obviously on the films you see women and it's a great big whoosh and they're in a massive puddle but I think that's probably overdramatised. I imagine that does happen with some women but my thoughts are it probably feels more like you've wet yourself than anything else. (AN-INT-A2)

This uncertainty of the process was felt to impact on their perceived expectations, with information and advice being viewed as important in preparing for labour and birth.

Information provided and expected

Women obtained information from a range of sources, including healthcare professionals, friends, family and media. Healthcare professionals were, overall, seen as a source of accurate information, although the actual advice provided appeared to be limited, other than general information on timing of induction if labour had not commenced after RoM:

> Class that I went to with my husband, um, although they kind of talk about it, they perhaps don't talk about it as much. (PN-INT-A4)

> I don't know if there's many leaflets about in terms of what to expect in the early labour phase and in terms of waters breaking. (AN-INT-A2)

> I had been told in my antenatal classes that if your waters had gone you needed to be checked out, because if you hadn't given birth within 24 hours they would induce you. (PN-FG-B1-P3)

The women were aware of the varied accounts of RoM from friends and family members, but appreciated that those accounts could not predict their own actual experience. Women also acknowledged that without additional information, television portrayals of RoM had potential to increase anxiety, and for many postnatally did not reflect their experiences:

> I thought my waters would break, I thought they would have broken while I was at home, when I was contracting, but they just didn't. (PN-INT-A5)

> I think not everyone's will go like it did on the TV. Yes it might, but you're not going to necessarily have a big puddle on the floor when you're out and about. It might just be a trickle, you might not have anything at all, and they might burst while you're in labour. (PN-FG-B1-P2)

Whilst acknowledging the unpredictability of RoM, participants expressed a preference for information that would enable them to understand the *likelihood* of events occurring. Women wanted guidance, facts and figures on which they could base their expectations. Much of the information required related to practical aspects, such as the different ways in which RoM might occur; the proportion of women experiencing RoM at different stages of labour and sequence of events; the likely amount of fluid; what is considered as normal and warning signs:

> I've not really found anything in terms of, this is generally what you can expect in terms of your waters breaking, early labour, although it's not the set protocol for everyone but just kind of a rough outline of what to expect. (AN-INT-A2)

> Maybe some numbers on how many people's waters break early being the first thing, and how many does it happen to later? Put it in context. (AN-INT-A5)

> I would've quite liked to have known what the volume of the waters usually is. I don't think I know that now actually, like how much is a lot or a little. If they do gush are you expecting a litre on the floor or 20mls. (PN-FG-B1-P2)

> What are the signs or when you should worry. You know if there's blood in the water, or mucus or anything like that. Faeces, if baby's faeces is in the water. Stuff to look out for. (PN-INT-A3)

Participants considered that the third trimester of pregnancy was an appropriate stage to access information on RoM, as they were starting to think about labour and birth:

> I think as well when you first find out you're pregnant you sort of think about those things. You think oh I've got to go through labour, my waters are going to break, and then it just sort of eases off because you remember you've still got 30 something weeks before you get there, so you just sort of push it to one side and concentrate on everything else, and then you get to this stage and it starts coming back. (AN-FG-A1-P6)

Confirmation of rupture of membranes

The third theme related to confirmation of rupture of membranes, the related signs and sensations. There was an expectation during pregnancy that there would be signs or warnings to herald RoM, but the exact nature of those was unclear. Some of the signs suggested by pregnant women were a *show* and the abdomen feeling different:

> There's got to be some indication…or if you feel anything, if your tummy feels different afterwards or anything like that. (AN-FG-A2-P1)

> I'd like to think I'll know something, just there'll be some sign, not just the water. I'm hoping there's some feeling just to give me that extra clue. (AN-FG-A2-P5)

During pregnancy, women expressed doubts about their ability to distinguish between RoM and urinary incontinence, although it was believed that colour of liquor and odour could be potentially distinctive features. Postnatally, participants identified characteristics of smell and colour of the amniotic fluid, variously described as *sweet* or *slightly sweet*, of a *slight straw colour* and *not smelling like urine*.

> It will smell slightly sweet and it won't smell like urine and whatever else, and it will have a slight straw colour. I have to admit, I didn't notice the colour, per se, perhaps as it was so late and I was like, it's happened, but it definitely didn't smell like wee. It wasn't unpleasant, so I thought, that's an extra confirmation. Then, on the pads, which I changed quite a few times, there was that pinkie tinge and I thought, that's another sign that it is. (PN-INT-B4)

During pregnancy women were unsure of the temporal relationship between RoM and uterine contractions. Some recognised that RoM is not always a sign that labour is imminent; whilst other participants expected contractions to start first:

> I'd expect contractions and then your waters break as you get closer but then I've also been told that your waters can break and contractions don't even start and then you'd have to be induced. (AN-FG-A2-P1)

> It can happen either way, my waters could break and then my contractions could start, or contractions could start, then my waters can break. (AN-INT1)

The experience of being certain or uncertain if RoM had occurred was apparent from participants' accounts. Some women who were certain of RoM, described either a *popping* or *explosive* sensation, compared to the bursting of a *water balloon* whilst for others the amount of fluid tended to convince them of membrane rupture. Women who had experienced a *gush*, described RoM using the adjectives *massive*; *forceful*; *bizarre* and the metaphors *waterfall* and *hosepipe*. The gush was generally followed by a warm/wet feeling and on-going trickle throughout labour:

> I just felt a sort of popping sensation… Something just popped out of me, or exploded out of me… It definitely made me jump. (PN-INT-A12)

> It was so forceful, because it was like a water balloon or something… like somebody had literally burst it. (PN-FG-B1-P2)

> Suddenly it was like a massive gush and it just kept coming. (PN-INT-B4)

> It was like a hosepipe, it was just clear liquid but it lasted ages, it trickled down my leg and then it started to spray out. (PN-FG-A2-P2)

> Mine was like a waterfall. And then it continued while I was in hospital, just gushing out. (PN-FG-A2-P1)

Spontaneous RoM was considered a positive occurrence by some women, as they felt they had experienced it naturally and without the need for medical interventions:

> I suppose I am quite lucky then to have experienced it naturally (PN-INT-B2)

> I was fortunate enough that actually my waters broke (PN-INT-A9)

The possibility of not being able to personally confirm if membranes had ruptured was identified antenatally, therefore postnatally women were asked for their views on the potential for using a reagent pad to distinguish between amniotic fluid and urine. The responses were mixed. Positive views included the potential to reduce uncertainty for women; to avoid unnecessary hospital visits and to help women who had lost a small amount of liquor to confirm RoM:

> I would've liked to know personally. I would've liked the pad, so I would've known that my waters have gone. But I'm a bit of a control freak so I would like to know definitively yes or no. (PN-FG-B1-P3)

> Maybe for other women that it's more, little drops or not so continuous, maybe it could be helpful. (PN-INT-B1)

> I think it would be a good idea, because I can imagine a lot of people think their waters have broken and go into hospital to get checked out and it probably wasn't...Or you know it mightn't have been your waters breaking, so it would probably save a trip to hospital if nothing else... At least it gives women, the mothers, peace of mind. They wouldn't have to be second guessing every little drip. (PN-INT-A8)

Participants who were less certain of the benefits of the pad, or had mixed views on its usefulness, raised the possibility that using such pads had the potential to increase anxiety and to medicalise birth:

> I would say I probably…mm…with my first, I probably would have done, because I probably would have bought all of these sorts of things that I thought might be useful, but I'm not sure that I would now, no. In general I would say no, I would say no… because you don't know when they're going to break so it's tricky, isn't it? (PN-INT-A1)

> Perhaps if there was a product like that, that may be some women would be more anxious. You know, is it so difficult to tell the difference between them, that you need a product like that... (PN-INT-A12)

> Are we medicalising things though a bit too much? Because this is a completely natural process and a woman's designed to go through this. And a baby will come out eventually, whether your waters have gone or whatever timeframe it will happen, you will have a baby if you're nine months pregnant. And adding an extra thing to think about is…I don't know. (PN-FG-B1-P3)

Other comments related to the pad potentially supporting communication and telephone conversations between women and healthcare professionals in the early stages of labour, in terms of being able to clearly recognise if RoM occurred or not and therefore deciding whether to go to hospital or remain home:

> I was in the stages when I didn't know when to go into hospital. …So I don't know if they'd gone or not, but if I had a pad that said yeah your waters, that

was your waters, then I could have more convincingly said to the midwife, no my waters have definitely broken, I think I would like to come in… cos I was sort of, I felt that I was sort of getting to the point where I was nearly ready to go in, but they were saying no, no, keep going. (PN-INT-A3)

I think definitely, I think especially if you've not been through labour before and you're not sure. There's so many unknowns. If that's something that you could definitively say my waters have broken, when you're in at the hospital, it's just one less thing to have a question about. So I think if somebody had offered me that I would've said yes…I guess it's good to know because it's an immediate response, isn't it? So you know whether to go into hospital or phone the hospital or whether you've just wee'd yourself. (PN-FG-B1-P4)

DISCUSSION

The themes of uncertainty, information and confirmation related to rupture of membranes were identified across data provided by women during pregnancy and following the birth of their babies. Uncertainty about RoM reflects the unpredictability of spontaneous rupture of membrane in the international obstetric literature (Hannah et al., 1996, Walker, 2003, Marowitz and Jordan, 2007, El-Messidi and Cameron, 2010, van der Ham et al., 2011) and the women involved in this study highlighted this as a key concern while 'reacting to the unknown' experience of childbirth (Dahlen et al., 2010a: 415). In addition, women in this qualitative study anticipated and subsequently experienced some loss of control related to the process of RoM. Previous research identified the importance to women of retaining a sense of control during labour and birth (Green and Baston, 2003, Snowden et al., 2011) and how different approaches to management of RoM prior to labour onset can impact variously on women's locus of control (Martin and Jomeen, 2004). Similarly, apprehension around the potential for embarrassment if RoM occurred in a public place, voiced by our participants, reflected the concerns of women participating in a randomised controlled trial that compared home and hospital care for early labour (Spiby et al., 2008).

Although the participants appreciated that each woman's experience will be unique, they often utilised television programmes and films as their reference point in both anticipating and describing their experiences of RoM, mirroring the evidence on media as being increasingly accessed as a source of information about childbirth (VandeVusse and VandeVusse, 2008, Young, 2010, Luce et al., 2016). Whilst women obtained practical advice from family and friends and some information through antenatal education, they felt further information was needed specifically on RoM, including the likelihood of different events occurring and their sequence; this reflects the wider literature regarding childbearing women's need to be reassured and informed on the normal progression of events during labour and birth (Fraser, 1999, Brown et al., 2009, Dahlen et al., 2010b, Borrelli et al., 2016) .

Whilst the descriptions of RoM that our paper presents may be recognised by midwives and others providing intra-partum care, we believe this is the first paper to report women's *sensations* of these, the metaphors used and women's accounts of how they thought that liquor and urinary loss could be differentiated. This information has utility for antenatal education and other sources of information that women access during pregnancy.

The use of a reagent pad to confirm rupture of membranes has been tested amongst a group of women reported as being mainly at high obstetric risk (Mulhair et al., 2009). Such reagent pads have been recommended as a means of reducing more invasive methods such as speculum examination (Ray et al., 2015) that women may find embarrassing, stressful and painful (Seehusen et al., 2006). However, women's views of the use of reagent pads do not appear to have been reported previously. Our preliminary exploration of women's views identified a range of perspectives. Whilst some participants could see a potential value for some women, depending on childbearing experience and how RoM occurred, the potential for increasing anxiety and unnecessary intervention during birth were also identified. This study contributes some preliminary information to this issue but further research is required to explore potential interest in new approaches prior to widespread introduction. In particular, impacts on psychosocial experience must be carefully explored, together with how such approaches can be optimally integrated into maternity care. The suggestion that the availability of such pads in early labour may support communication with healthcare professionals around possible admission to the birthing facility is interesting

in the context of evidence that identifies this communication as unsatisfactory from women's perspectives across several settings (Spiby et al., 2008, Nolan and Smith, 2010, Eri et al., 2011, Green et al., 2012, Iannuzzi and Borrelli, 2014).

Whilst our study was carried out in one geographical area, there is no reason to believe that women in other settings will experience and perceive spontaneous rupture of membranes differently. Common concerns related to early labour drawn from different countries have been reported in a meta-synthesis (Eri et al., 2015). Our findings therefore have utility to support the information provided to women during pregnancy and within antenatal education across a range of international settings.

STRENGHTS AND LIMITATIONS

Whilst a relatively small sample size drawn from one geographical area may be considered a limitation of the study, this paper reports novel evidence regarding women's descriptions of the sensation of spontaneous rupture of membranes, identification of specific information needs and insights into the use of a reagent pad to confirm rupture of membranes. Participants were offered the opportunity to contribute by either focus group or individual telephone interview. We believe that this flexibility is important for childbearing women who both during pregnancy and following birth have many priorities ahead of research participation and who will have different preferences for contributing their views. Our sample retention of 77% suggests that this was a useful strategy, as we are aware that some participants re-located and became unavailable between the two points of contact. The inclusion of some participants at two time points enabled reflection of experiences against expectations, reflecting rigour in considering perspectives as potentially fluctuating over time and from the antenatal to postnatal period (Green et al., 1988, Green et al., 2000).The recruitment of a postnatal-only group was planned to offset potential attrition due to participant preference and possible change of clinical circumstances between the first data collection in pregnancy and labour onset.

CONCLUSION

There are several areas of uncertainty around labouring and birth for women expecting their first baby including the nature, timing and location of membrane rupture and the potential for embarrassment if spontaneous rupture of membranes occurs in public. Women require information about this aspect of the birthing process in order to make informed decisions at an individual level. Providing women with realistic information about RoM, labour onset and how women may experience this is important and should be integrated into antenatal education and other pregnancy information resources. Discussion of potential use of a reagent pad for confirmation of membrane rupture met mixed responses and requires further exploration in larger, mixed-methods studies prior to wider introduction.

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