Introduction and background

Induction of labour is one of the most frequently performed interventions in pregnancy, accounting for around 25% of all births in England (NHSDigital, 2017). Induction carries the risk of further interventions and is associated with increased pain in labour and an increased likelihood of instrumental delivery (Cheyne, Abhyankar, & Williams, 2012; National Institute for Health and Clinical Excellence, 2008; Shetty, Burt, Rice, & Templeton, 2005).

Epidemiological evidence from numerous studies in Europe, Israel and the USA has shown a gradually increasing risk of perinatal mortality in pregnancies exceeding 40 weeks, however, the absolute risk remains very low (National Collaborating Centre for Women's and Children's Health, 2008). It is concluded that the potential health benefits to women and babies of inducing labour after 41 weeks outweigh the additional costs to the maternity care provider (National Collaborating Centre for Women's and Children's Health, 2008). Where medical conditions such as pre-eclampsia or type 1 diabetes exist, the dangers of continuing the pregnancy may not be controversial (Cheyne et al., 2012). However, around half of all inductions in the UK are performed for uncomplicated, post-dates pregnancy, where the risk of perinatal death is low (2-3:1000). In these situations the risk of maternal morbidity resulting from induction is relatively high, compared to spontaneous labour (Cheyne et al., 2012; National Collaborating Centre for Women's and Children's Health, 2008). In keeping with the principles of client-centred care (Department of Health, 2007), the decision to induce labour or continue with the pregnancy rests with the woman. Guidelines from the National Institute for Health and Clinical Excellence (NICE) state that:
Women who are having or being offered induction of labour should have the opportunity to make informed decisions about their care and treatment, in partnership with healthcare professionals (NICE, 2008, p.4)

There is evidence that many women welcome the offer of induction for post-dates pregnancy, through concern for the baby’s wellbeing, because of physical discomfort or for social reasons (Gammie & Key, 2014; Heimstad, Romundstad, Hyett, Mattson, & Salvesen, 2007; Moore, Kane-Low, Titler, Dalton, & Sampselle, 2014; Murtagh & Folan, 2014; Shetty et al., 2005). For others, however, induction represents a significant and unwelcome change to their anticipated trajectory of pregnancy and labour onset (Gatward, Simpson, Woodhart, & Stainton, 2007).

Literature review

Early UK studies identified a need for more information and involvement in decision-making relating to induction (Kitzinger, 1975; Lewis, Rana, & Crook, 1975; Stewart, 1977). Cartwright’s UK-wide study of over 2,000 women found that around 40% of participants would have liked more information (Cartwright, 1977). Despite the growing discourse on informed choice since the 1970’s, recent studies continue to highlight these issues. A comparative survey of 900 Scottish women by Shetty et al. (2005) found that 34.7% of women who had their labour induced perceived information to be lacking and noted a disparity between expectations of induction and women’s actual experiences of it, particularly in terms of duration, pain and interventions. This suggests that the information women received about induction did not enable them to build realistic expectations (Shetty et al., 2005). A mixed-methods study, involving secondary analysis of data from over 5,300 women from
across England identified a lack of information and involvement in decision-making about induction (Henderson & Redshaw, 2013). Overseas studies have noted similar findings (Gatward et al., 2007; Moore et al., 2014; Nuutila, Halmesmaki, Hiilesmaa, & Ylikorkala, 1999). However, evidence from the UK remains scarce and is mostly derived from quantitative research, limiting the emergence of knowledge to that which falls within the parameters of closed-question surveys. The present study therefore set out to add depth and context to existing knowledge by delving into the ways in which first-time mothers acquire information about induction, how and why they consent to the procedure and how they experience it. Findings from this study relating to women’s experiences of induced labour have been published elsewhere (Authors, 2017). The present paper focuses on information and decision-making.

**Methods**

The conceptual framework underpinning this study centred on the notion of informed choice in maternity care: a qualitative methodology was considered the most appropriate means of obtaining insight into women’s perceptions of choice and how decisions were made. The face-to-face interview method of data collection is widely regarded as one of the key tools of the qualitative researcher (Barbour, 2008) as it allows for both depth and breadth of data. A semi-structured approach was adopted, using a flexible schedule of open-ended questions (e.g. ‘tell me about how you made the decision to go for induction’) which allowed participants to control the extent of disclosure (Rees, 2011; Rogers, 2008). Ethical approval was granted by the Health Research Authority, England (NRES Committee South Central – Oxford A) and the local Research and Development committee.
Interviews were conducted during the autumn/winter of 2012/13. Participants, who were identified from the postnatal ward of a maternity unit in the south of England, consisted of primiparous, English-speaking women over the age of 18, who had experienced induced labour at or close to term. Multiparous women were excluded, since they might be expected to have acquired a broader knowledge of induction through personal experience or their expanded peer network. No distinction was made in respect of the reason for induction, but all women had been classed as low-risk at the start of pregnancy and none had requested induction. All women were living with husbands or male partners. The first investigator visited the postnatal ward once a week for six months. All women who met the inclusion criteria were approached via the agency of a senior midwife who was fully appraised of the study. Access was denied to women who were deemed especially vulnerable (such as those whose babies were sick or going to foster care). An information leaflet was offered and after reading it, women who expressed an interest in participating were asked for their written consent to be contacted again 3-4 weeks after discharge. Women were assured of their option to withdraw from the study at any time without consequences for their subsequent care.

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<th>Age range</th>
<th>25-29 ((n=4)), 30-34 ((n=10)), 35-39 ((n=5)), 40-45 ((n=2))</th>
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<td>Reasons for IOL</td>
<td>Post-dates pregnancy ((n=15)) pre-labour rupture of membranes ((n=2))</td>
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A total of 33 women consented to be contacted, however twelve were lost to follow-up, as they either could not be reached or declined to participate. Except for one participant, who opted to be interviewed by telephone, all women were visited in their homes by the first investigator, where the purpose of the study was verbally reiterated, with reference to the participant information leaflet. Written consent was obtained prior to commencing interviews. Confidentiality and anonymity in all stored data and publications was assured. Interviews lasted 30-90 minutes and were audio-recorded.
A field diary was used to facilitate reflexivity, by recording impressions and feelings after each interview and reflecting on how the researcher’s position as a midwife/teacher/mother might influence data interpretation. Transcripts of audio-recordings were re-read three times, whilst listening to the recordings, to check for accuracy of transcription. Data were initially organised using *a priori* categories formulated from the interview questions, with new categories added as they emerged. The software package NVivo10© was used to create a hierarchical structure of categories and sub-categories, which were then re-grouped into themes, using an iterative process until all identifiable themes were exhausted (Barbour, 2008; Gibson & Brown, 2009). A form of framework analysis was also employed, in which numerical instances of particular aspects of data were counted, helping to identify the most frequently reported events, feelings or perceptions. All data were anonymised, in accordance with the Data Protection Act (1998). In this paper all quotations are suffixed by pseudonyms and the reason for induction.

**Findings**

Key themes emerging from the findings of this study relate to the acquisition of information about labour induction, how women perceived choice and how they made the decision to accept induction.

**Sources of information on induction**

Family and friends were the most common sources of information, cited by two thirds of participants. Impressions of induction were varied and sometimes contradictory. Increased pain in labour was most frequently mentioned, but there was little consensus on other aspects; for example, four women had heard that the onset of labour would be quicker than natural labour, whilst five believed it would take longer.
I just knew [...] from having spoken to other Mums and Dads that it would artificially bring on the contractions...the one thing I did know was that it would all mean it would happen a lot quicker ... and therefore it might be a good deal more painful... (Clare: maternal age)

My mother had been induced.... I didn’t really know what it was other than it was meant to be more painful than a natural birth and that they gave you something to make the baby come (Megan: pre-labour rupture of membranes)

Fourteen participants had attended free antenatal classes led by midwives from the local hospital, whilst seven had attended fee-paying classes, chiefly those organised by the National Childbirth Trust (NCT) (n=21), a national parent’s charity. Some women had attended more than one type of class, but it was unlikely that any two women had attended the same class simultaneously. Several women were not sure whether their classes had covered induction and those who recalled information described it as not very memorable.

I don’t remember a lot of detail though...nothing that really sticks in my mind...

(Donna: midwife-led classes. Post-dates pregnancy)

I don’t think they did [mention induction] and if they did, I don’t remember it...it wasn’t memorable. (Rose: midwife-led classes. Post-dates pregnancy)

There was no suggestion that information had not been comprehensible to any participant, however, some women reported that they had paid little attention, as
they could not foresee induction happening to them. Midwife-led classes attracted less criticism than those run by the NCT:

NCT’s very much ‘everyone has a perfect birth’ and that’s it…. I mean, nobody had said that … inducing you actually makes the contractions more painful.

(Megan: NCT classes. Pre-labour rupture of membranes)

In NCT…we spent half an hour drawing pictures of what we thought would help induce labour, so pineapple and raspberry leaf tea… Drawing pictures!

We’re all in our 30s, all professionals! […] so, I hadn’t paid much attention, or the information wasn’t there to be paid attention to. (Jasmine: NCT classes. Pre-labour rupture of membranes)

The maternity unit produced an information leaflet on induction, to be given out when induction was booked. Only eleven women reported reading the leaflet, whilst two stated that they had received it but not read it. It was not clear whether the remaining women had received a leaflet or not, but none reported having read it.

[…..] …I’ve got so many leaflets I don’t know what’s what anymore! I don’t remember reading one, but they might well have done, and I’ve missed it...

(Olivia: post-dates pregnancy)

Electronic media were mentioned by just seven women. Two women found helpful ‘Apps’, whereas those who searched the Internet often had trouble finding credible websites and relating the information to their own situation:

……and then, obviously, you look on the Internet and there’s so many… lots of horror stories …and other people were saying how it wasn’t that bad… but it
didn’t really help me, because it was going to be my experience anyway!

(Donna: gestational diabetes)

Several women gleaned information from various sources:

...a little bit from Google, a little bit from my sister [...] because my midwife didn’t explain a lot to me, [...] Yeah... from like friends and family. (Tanya: post-dates pregnancy)

As in Tanya’s case, information from midwives in the antenatal clinic was often perfunctory or limited to a leaflet, as midwives gave the appearance of being too busy to offer much explanation:

To be honest...I think she was quite busy, she always...just seemed a bit rushed, so we didn’t really get to talk a lot but...yeah, I didn’t really know anything! (Olivia: post-dates pregnancy)

I think she assumed that I knew about it and I sort of didn’t really get asked if I knew about it but I... it was all quite a quick appointment, I think they had others waiting. (Sarah: post-dates pregnancy)

Few women sought further information from midwives, as they perceived no need for this at the time induction was first offered. With hindsight, however, many stated that they would have preferred to have known more, particularly in relation to the possible duration and procedures.

Involvement in decision-making

Half of the women stated that they had been involved in the decision to induce labour, however, this tended to be framed as little more than agreeing to a predetermined plan:
I was kind of part of the decision, I was there when she made the phone call to the hospital but it, other than that it was ‘oh, if you haven’t gone into labour by this date then this is what’s gonna happen’ and that was, I was like ‘oh, OK. (Gemma: post-dates pregnancy)

[...] he [the doctor] told me to go to see the midwife at the desk who then gave me a leaflet to read while she went and booked it [the induction].

(Donna: gestational diabetes)

Where induction was presented as an option, there appeared to be a bias towards compliance:

...it was presented as a choice, but they were definitely encouraging me to strongly consider it rather than waiting. (Clare: maternal age)

Nina, who had been planning a home birth, was highly resistant to the offer of induction for post-dates pregnancy and opted to defer the procedure, but found the stress of daily fetal monitoring overwhelming and eventually capitulated:

[...] they did say I could push my induction date back, but because I kept going in every day and all the stress [...] when it came to it I was like “do you know what? Let’s just do it, I can’t deal with this stress any more” [...] (Nina: post-dates pregnancy).
The impression from most women was that regardless of reason, induction was often presented as routine, with little or no opportunity for discussion and with compliance assumed.

**Risk awareness**

Many women alluded to the powerful influence that any mention of risk had on their decision to accept induction. Where medical conditions existed, women were generally clear about the reason for induction; conversely, in cases of post-dates pregnancy, perception of risk was often non-specific:

> Um...no, basically it was...being induced really, because obviously I was that far overdue...they needed to get (baby) out I think (Isobel: post-dates pregnancy)

> … and it (the App) just says also about some of the risks if you are overdue like past 42 weeks about the baby’s health and I think that’s when I just thought, right, it needs to be now and that was my paramount focus was (baby) being okay. (Sarah: post-dates pregnancy)

Trust in professional opinion appeared very strong and risk was generally seen only in terms of dangers to the fetus of prolonged pregnancy, rather than risks to both the woman and fetus/neonate from medical interventions.

> [...] I don’t know anything about medicine; they’re saying it’s for my benefit and the baby’s benefit, so I’ll just go with whatever the medical people say. (Rose: post-dates pregnancy)
well, you know, if medical professionals advise you that that’s the best thing and the least risky thing, then you know you’d be very brave to do something different really? (Emily: post-dates pregnancy)

In all cases, concern for the unborn baby overrode women’s prior aspirations for a natural birth experience, a phenomenon noted in earlier studies (Heimstad et al., 2007; Moore et al., 2014; Murtagh & Folan, 2014; Roberts & Young, 1991).

However, there was no apparent awareness of the statistical probability of harm.

**Influence of partners**

Partners were a significant influence on some women’s decision to accept induction. Some reportedly viewed induction simply as a logical choice for the sake of safety and expediency, whilst others were impatient.

…and when I spoke to [partner], he was the one to sort of realise I needed a bit of a prod and, you know […] they’re saying to you baby is ready…so we need to do it […] (Jasmine: pre-labour rupture of membranes)

…I think my partner was more interested in it than me! I think he thought … can we just like book it now? … (Beth: post-dates pregnancy)

The role of partners in the decision to accept induction has not been previously explored and is worthy of further study.

**Discussion**

The NICE guideline and quality standards emphasize the need for a thorough explanation of the reasons for induction, the process, the relative risks and alternative options (National Institute for Health and Care Excellence, 2014; National Institute for Health and Clinical Excellence, 2008). Evidence from this study indicates
that women received very limited information during pregnancy and around the time that induction was booked, indeed many could recall little or nothing that was meaningful to them beyond anecdotes from friends and family. This contrasts with other UK studies which cite clinicians as the main information providers (Gammie & Key, 2014; Shetty et al., 2005).

Only half of participants had reportedly read the Trust’s information leaflet on induction. This lack of engagement may reflect information overload, which may also explain the apparent reluctance to seek information via the internet. However, it is possible that having accepted induction as inevitable, women felt no need to enquire further for fear of fuelling anxiety, a phenomenon noted in earlier studies (Hallgren, Kihlgren, Norberg, & Forslin, 1995; Levy, 1999). Moreover, it has been demonstrated that the high level of trust afforded to clinicians leads many women to assume that whatever is offered must be in their best interests (Edwards, 2008; Jomeen, 2007; M. Kirkham, 2004a; Sakala, 2006). This may go some way towards explaining the apparent lack of enquiry.

The connection between knowledge and power is widely documented and health professionals have power to control the release of information (Bradbury-Jones, Sambrook, & Irvine, 2008; Fahy, 2002; Johanson, Burr, & Leighton, 2000). It has been argued that women without previous childbirth experience, are unlikely to enquire about options which are not brought to their attention by clinical staff and are thus especially vulnerable to coercion (DeVries, Salvesen, Wiegers, & Williams, 2001; Jomeen, 2007; Kirkham & Stapleton, 2004; Newburn, 2003). Withholding information that may create dilemmas for women may be done for benevolent
reasons, such as to avoid creating anxiety (Levy, 2004). In this study, however, by failing to share knowledge about other options or to discuss the finer details of induction, it appears that midwives were steering women towards induction and effectively suppressing autonomous choice.

It has been argued that too much information and responsibility for decision-making can have effects similar to those of insufficient choice, leading to a sense of anxiety and loss of control (Green, Coupland, & Kitzinger, 1998; Weaver, 1998). There were instances in this study of women choosing not to seek information or opting to delegate decision-making to clinicians (e.g. Rose). This raises questions about the value that individual women place on information and decision-making and whether they would have welcomed more information had it been offered.

Studies into the provision of childbirth information have highlighted the importance of appropriate timing of information-giving (Cooper & Warland, 2011; Maher, 2008; Stapleton, Kirkham, Curtis, & Thomas, 2002a). Women’s recall of detail about induction from antenatal classes suggests that they were unable to retain or assimilate that which did not seem relevant to them. In some cases, this may have been attributable to the presentation style of the class leader, however, by necessity, information given in antenatal classes is generalised and there may not be scope to address individual needs. Moreover, women typically attend classes early in the third trimester of pregnancy, well before the question of induction arises. This highlights a need for individualised and appropriately timed information in late pregnancy.

Only four women questioned the need for induction, the majority agreed to the process without any discussion with health professionals, contrary to the
recommendations of NICE (2008., 2014). Fear of harm to the fetus was cited as the chief influence. However, there was little evidence of risk evaluation having taken place, particularly where induction was offered for uncomplicated, post-dates pregnancy. Women need to be aware of the relatively low probability of mortality resulting from prolonged pregnancy compared to the much higher probability of lower levels of harm resulting from interventions following induction.

Poor understanding of probability is thought to be common among health professionals (Cheyne et al., 2012; Furedi, 2006; Gigerenzer & Muir-Gray, 2011). Midwives need a deeper understanding of risk and probability and the ability to meaningfully convey this to women (Cheyne et al., 2012; Skyrme, 2014). Unless both sides of a risk argument are presented, any decisions made cannot be said to have been truly informed. Furthermore, midwives need to feel empowered to offer a balanced discussion of risk, safe in the knowledge that they will not be penalised if women choose not to comply with the expected norm (Skyrme, 2014).

It is easy to attribute the lack of information and discussion to shortcomings in midwifery practice. However, in common with many UK maternity units, the system of care was based around short, task-oriented appointments, which compels midwives to control the agenda and limit discussion time to ensure that appointments do not overrun. This leads to a reactive rather than proactive approach to discussion (Kirkham & Stapleton, 2004; Levy, 2004). It was noted that midwives often appeared busy and had others waiting, which may have inhibited women from asking questions.
Limitations

This study was conducted in a single NHS Trust. The sample was self-selecting and women from higher socio-economic groups were over-represented: a factor common to studies of this nature (Levine, 2008). For pragmatic and ethical reasons, women under eighteen, those not fluent in English and those deemed vulnerable were excluded from the sample. There is a need for further studies to address the experiences of such women.

Conclusion and implications for clinical practice

Midwives need to acknowledge that induction is often an unexpected disruption to women’s expected trajectory of labour and birth. Providing information and preparation for what to expect during induction is of key importance in enabling women to make an informed choice about induction, particularly where the risks and benefits are not easily quantifiable. Findings of this study suggest that a new approach is needed to the management of uncomplicated, post-dates pregnancy. Rather than steering women towards routine acceptance of induction, women should be given individualised information, taking account not only of their clinical status, but also of their social and cultural background and their desire for choice and information. This implies that providers of maternity care will need to consider more flexible ways of working, allowing more contact time for women and midwives to discuss options in an unhurried and balanced manner. Additional measures could be considered, such as the use of decision aids, on-line resources or pre-induction classes. This may require the recruitment of more midwives or the adoption of alternative patterns of care provision, such as case-holding. Each will have budget implications for maternity units.
Midwives and doctors need to be able to engage with women in a balanced discussion of the relative risks of induction and expectant management. This implies a need for Higher Education Institutions to emphasise the understanding and communication of risk and probability as part of their undergraduate curricula.

**Funding**: this work was undertaken as part of a doctoral programme and was supported by the School of Health and Social Work, University of Hertfordshire, England and by the Iolanthe Trust [http://www.iolanthe.org/Iolanthe_Awards.cfm](http://www.iolanthe.org/Iolanthe_Awards.cfm)

**Conflicts of interest**: There are no conflicts of interest
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