Abstract

Introduction: Where to give birth is a key decision in pregnancy. Women use information from family, friends and other sources besides healthcare professionals when contemplating this decision. This study explored women’s use of lay information during high risk pregnancies in order to examine differences and similarities in the use of information in relation to planned place of birth. Half the participants were planning hospital births and half were planning to give birth at home.

Methods: A qualitative study using semi-structured interviews set in a hospital maternity department in South East England. Twenty-six participants with high risk pregnancies, at least 32 weeks pregnant. Results were analysed using thematic analysis.

Results: Three themes emerged: approaches to research – how much information women chose to seek out and from which sources; selection of sources – how women decided which sources they considered reliable; and unhelpful research – information they considered unhelpful. Women planning homebirths undertook more research than women planning to give birth in hospital and were more likely to seek out alternative sources of information. Women from both groups referred to deliberately seeking out sources of information which reflected their own values and so did not challenge their decisions.

Conclusions: There are similarities and differences in the use of lay information between women who plan to give birth in hospital and those who plan homebirths. Professionals working with women with high risk pregnancies should consider these factors when interacting with these women.

Keywords: High risk pregnancy, homebirth, information.

Introduction

Women receive information about how best to manage pregnancy and birth from a multitude of sources including midwives and obstetricians, family and friends, and the internet and other media. This includes information on options regarding where to give birth. Women have to decide how
much information they wish to access and which sources they will trust. They consider information deemed useful and trustworthy to be empowering and a source of support.\textsuperscript{1,2} How women use information regarding where to give birth is of interest to all healthcare professionals involved in providing care during pregnancy.

Women may not prioritise advice from professionals above that from other sources. In a study of factors influencing women’s decisions to have homebirths, Catling-Paull et al (2011) found women used information from their families and friends, blogs and chatrooms on the internet, books and other sources when considering their choice.\textsuperscript{1} A study of general information-seeking among pregnant women found women rated information from books as most useful. Information from midwives was rated second and that from the internet third.\textsuperscript{3} Information from family and friends was considered less useful than that from midwives but more so than advice from obstetricians. Women planning homebirths described hearing positive stories about other women’s homebirths as influencing their decisions about where to give birth.\textsuperscript{4} The beliefs and practices of family members can also exert a strong influence over decisions about birth location.\textsuperscript{5}

Various factors may influence the way women seek and use information. This is important as the types of information women are accessing may form the basis of discussions with professionals and influence how women balance information from professional and other sources. Women who are confident using the internet in other spheres of life may consider it natural to do so for information regarding pregnancy.\textsuperscript{2} However socio-economic factors influence internet availability and use; women from lower socio-economic backgrounds are less likely to access online information.\textsuperscript{6} Planned location for birth is also related to information use with women planning homebirths less likely to rely on advice from healthcare professionals and more likely to rely on that from other sources.\textsuperscript{7} Women who endorse standard care during pregnancy are more likely to rely on information from healthcare professionals and not seek information from other sources whereas women who question routine care are more likely to consult other sources.\textsuperscript{8}
Women need to establish criteria to help them discriminate between multiple sources of information. A meta-analysis of how people select information demonstrated people are almost twice as likely to select information consistent with their beliefs, attitudes and behaviours than to select information which challenges or contradicts them. They will also select information which best suits their goals. Research into who women discuss homebirth plans with shows similar results: women seek out like-minded associates to discuss their plans and avoid discussing them with people likely to express negativity toward their ideas. This extends into discussion with healthcare professionals.

The aim of this study was to investigate use of information from sources other than healthcare professionals among a group of women with high-risk pregnancies, half planning to give birth in hospital and half at home despite medical advice to the contrary. The women’s perceptions of information and advice from healthcare professionals have been reported elsewhere (ref removed for blind review). The intention was to consider differences and similarities between the groups regarding the sources of information they used and the reliance they placed on these when deciding on their place of birth. It is acknowledged there exists a sociocultural element in the construction of the concept of risk in pregnancy but all the women in the study were aware their pregnancies were defined as high risk by obstetricians and so were making choices against the backdrop of this information.

Methods

This was a qualitative study using semi-structured interviews to examine risk perception and decision making processes in women with high risk pregnancies booked to give birth at home or in hospital. This paper reports the analysis and results of the use of information from sources other than healthcare professionals. Ethics approval for the study was obtained from the [removed for blind review] Research Ethics Committee.

Women were eligible to participate if they were pregnant and had a medical or obstetric condition which meant their pregnancy was at higher risk and homebirth would not be recommended. Conditions defined as high risk included any that could potentially have an impact on the pregnancy
and required referral to an obstetrician. Women were recruited via a hospital maternity department. Information about the study was available in the antenatal clinic and women were given verbal information by obstetricians and midwives. Women who gave their permission were then contacted by the first author. They were provided with written information about the study and an opportunity to ask questions. All women gave written consent to participate.

Seventeen women planning hospital births were approached to participate in the study and 14 women planning homebirths. Thirteen women from each group agreed to participate. Details of participants’ medical and obstetric conditions and demographic data are reported in Table 1. Women’s conditions varied across the groups but all meant women fell within clinical categories advised to give birth in hospital.

Interviews were conducted from 32 weeks of pregnancy onwards in a location chosen by participants. Interviews were carried out by the first author, an experienced midwife, under the supervision of the third author, a psychologist with experience of perinatal research. Women were aware the interviewer was connected with the hospital but were reassured about confidentiality. The interviewer was not involved in the participants’ healthcare. The interview schedule consisted of open-ended questions to explore (i) which sources of information women utilised when deciding on their planned place of birth and (ii) how they perceived those sources (Table 2). The interviewer also had the freedom to follow lines of enquiry introduced by women.

Interviews took place between April 2012 and November 2013. Data collection ended when no new information emerged from the interviews and data saturation was achieved.

Systematic thematic analysis was used to analyse the transcripts. Interviews were transcribed with all identifying data removed. The transcripts were read several times to ensure familiarity with the data. Initial codes arising from the data were identified. These were refined and organised into potential themes. The themes were reviewed in relation to the codes and the original data to ensure theoretical connectedness and finally were named and defined. NVivo 10 was used to organise the data.
Inter-rater reliability was checked across themes to maintain quality in the coding process. Agreement was high (mean agreement was 97 %, Kappa .97).

**Findings**

Three similar themes arose in both groups of women concerning research and advice. These were: approach to research; selection of sources; unhelpful information. Similarities or differences between the groups are discussed within each theme. Direct quotes supporting the themes are provided in italics, coded (Home1-13 and Hospital1-13) to maintain confidentiality.

**Approach to research**

Women planning homebirths often described doing a great deal of their own research into childbirth and the potential complications of their medical or obstetric condition: “I researched everything, I contacted people, I found out as much information as I could” (Home5). Most of the research was internet-based: “All the internet really. I’ve read pages and pages and days and days and weeks and weeks. I regularly read everything on the internet” (Home1). Women planning to give birth in hospital made some reference to finding out information although they had generally spent less time on this than women planning homebirths: “I’ve got a few books at home that I’ve been looking at” (Hospital6). They also more often mentioned using standard NHS information: “I’ve gone with trusted sources such as talking to doctors but also the NHS website” (Hospital7). Being informed about pregnancy and birth was considered reassuring and empowering: “I’m more comfortable being better informed” (Hospital12); “I am informed and I am educated about what I’m doing, it adds to that confidence” (Home10).

The sources of information women were prepared to trust varied. Some women planning homebirths referred to medical journals as reliable sources: “If I was reading a blog from somebody who had no qualifications… then obviously I would take it with a pinch of salt against a proper journal article from a medical magazine” (Home3). However other women were suspicious of scientific studies: “It was medical literature which I don’t trust” (Home13), or were concerned they misrepresented facts: “I think the stats are useful but I think sometimes they are taken out of
proportion... out of proportion and out of context” (Home12). Women who took this view were more inclined to trust the stories of individual women who had experiences similar to their own: “I try to read books that I would trust more and real stories about real women who have had VBACs” (Home13). More women planning hospital births mentioned using academic sources: “If I’m reading a medical report, if it’s affiliated to a known journal or a known association... then that gives me confidence” (Hospital9). A smaller number referred to personal sources: “You listen to people who’ve experienced things more and who are actually giving advice... from their previous experience” (Hospital8).

Of the women who did less research, most felt they had sufficient knowledge from previous pregnancies: “What with doing the antenatal class last time and all the research I ended up doing” (Home12). Some however preferred to approach childbirth with less information: “I think the labour is for me the least I know the better” (Hospital3). One woman believed reading about pregnancy could affect her personal experience: “I made a conscious decision not to read much. The main reason was that I wanted to have my own experience and not base my experience on someone else’s experience” (Home8).

Selection of sources

Women from both groups described valuing advice from family and friends. They described trusting people known to them who had been through similar circumstances as sources of information: “You just build a picture I suppose... it’s just kind of building your idea of what to expect” (Hospital7); “the ones that have had homebirths... they’ve just said that they were really pleased that they laboured at home, had the baby at home... which gives us more confidence” (Home10). Women planning homebirths used the internet to forge new links with women in similar situations who were regarded as allies: “I’ve joined with people on Facebook who know friends of friends who are diabetics who’ve gone through exactly the same thing” (Home1). Women perceived this information as credible because it came from people in circumstances similar to their own: “It
gives you reassurance that it’s a good thing... it’s just believing that through someone else’s experience, what you’re doing is making a right choice” (Home12).

Women from both groups described following similar processes when deciding which information to trust. These involved evaluating the source and content of the information according to how it fitted with their existing understanding of birth: “If something’s made sense to me, and my logic and my beliefs and my kind of philosophy” (Home6); “Whatever feels right really, whatever kind of sits with how I run my world and life” (Hospital13). The women recognised they placed more trust in sources which seemed to reinforce their existing values and beliefs about childbirth: “I was lucky I was able to pull on that knowledge around me really, people that shared my philosophy” (Home6); “I suppose you set more store by stories that validate your own experience” (Hospital4). Women were aware the volume of online information made this easier: “You can find whatever you want to find eventually on the internet” (Hospital7).

Women planning to give birth at home were clear they chose to speak to people who had values and beliefs similar to their own and therefore were not likely to disagree with their decisions when discussing their planned place of birth: “All my friends here are really like-minded, loads of my friends have had their babies at home” (Home13); “Having people who I suppose are in a similar mindset of why you want to do that” (Home4).

**Unhelpful information**

The internet, books and television were considered useful tools for finding information about pregnancy and birth but women from both groups also highlighted drawbacks. Women were aware that not all available information was necessarily accurate: “[the internet] can be dangerous and you have to be very careful about what you’re reading... and therefore how seriously you take it” (Hospital9). They also recognised information potentially reflected the biases of its authors. If these were biases the women did not share, they questioned the reliability of the information provided: “There were some blogs or articles or everything that were quite biased towards being a bit
scaremongering towards homebirth... I didn’t take [them] into account” (Home11); “They just show the dramatic ones, they don’t show the good ones that happen a lot of the time” (Hospital10).

So called ‘horror stories’ of births that had gone wrong in some way were easily available on the internet and most women had encountered these. Women found they provoked anxiety and reported trying to avoid them. The majority of women mentioned such stories however, so may not have always implemented a strategy of avoidance: “I wish I hadn’t read all the nightmare stories on the internet about it cos that’s now put this little seed of fear in me that I didn’t need” (Home9); “I had a look on an internet website and I really regretted it... it did scare me a bit” (Hospital3).

Whilst women mainly appreciated the availability of information, the volume of potential information and the contradictions between sources could feel overwhelming: “Information is useful, although sometimes it can be a bit overbearing and it can be too much; it can take things in the wrong direction” (Home12). They were also critical of sources of advice which invoked guilt if not followed: “It made you feel like if you didn’t follow what they said, you weren’t doing it right” (Hospital13).

Discussion

The aim of this study was to investigate use of information from sources other than healthcare professionals among a group of women with high-risk pregnancies. It identified three themes: approach to research; selection of sources; unhelpful information. The study provides new insight into how women seek and use information and shows there are similarities and differences in information use between women who plan to give birth in hospital and those who plan homebirths.

The women planning homebirths generally read more information than the women planning hospital births. This echoes the finding of other studies showing women who hope to give birth at home read more birth and pregnancy related books and seek out alternative sources of information besides that from healthcare professionals.11,15 Women planning to give birth at home stress the importance of self-care and self-reliance.11 This emphasis on personal responsibility is reflected in higher internality scores on the Health Locus of Control Scale15 and Fetal Health Locus of Control
Scale and indicates a high degree of self-efficacy, the degree to which an individual believes their behaviour can affect the outcome of a situation. This is influenced by the perception of the locus of control in a given situation, i.e. whether one believes circumstances are more likely to be affected by the self or by other factors one cannot control. Higher internal locus of control scores are associated with positive health behaviours as displayed by the women planning homebirths.

Self-efficacy is positively associated with information seeking during pregnancy. Individual approaches to information in stressful circumstances fall into two broad categories: monitoring, the preference for seeking out information; and blunting, the preference for avoiding information and using distractions to avoid focusing on the cause of stress. Healthcare professionals should be aware women may want different amounts of information and may use information in different ways. An awareness of the potential for these different approaches should enhance communication with women. Data from this study regarding women’s perceptions of interactions with obstetricians and midwives are reported elsewhere (ref removed for blind review) but indicate the women planning homebirths were less inclined to trust advice from obstetricians and more likely to seek out other sources of advice and trust their own judgement, indicating a higher degree of self-efficacy, whereas women planning hospital births were more likely to follow advice from healthcare professionals.

The women planning to give birth at home referred to the internet as a source of information more frequently than women planning to give birth in hospital. Women describe using the internet as a source of information when they perceive the information they receive from professionals as insufficient for their needs and lacking in depth. The internet may be particularly useful for women with pregnancies complicated by unusual conditions who experience difficulty finding information elsewhere or who want to communicate with other women in similar circumstances. Women have expressed a desire for more accurate and consistent information to be available from healthcare professionals to balance the amount of information available from other sources. Professionals should be aware of the reasons women are likely to use other sources of information. They should also ensure they have the necessary skills to be able to access and impart high quality information.
Pregnant women consider knowledge about their circumstances a source of power and agency\textsuperscript{24} but are critical of both information and its sources. Information is crosschecked across sources and compared with women’s existing knowledge and experiences for credibility before it is accepted.\textsuperscript{2,25} Midwives have reported increasing use of the internet as an information-source by pregnant women and recognise it can be a useful tool for women. However, they have also expressed concern regarding the quality of information available online and their own abilities to appropriately assess and recommend websites.\textsuperscript{26} Further research could establish how women find and appraise online information.

Women in this study, particularly those planning homebirths, described using a variety of sources of information regarding place of birth. Women choosing not to follow standard medical advice may have to seek out alternative sources to find information which supports their choices as much mainstream pregnancy information depicts a limited portrayal of pregnant women as passive recipients of authoritative medical advice.\textsuperscript{27} Women rejecting this approach to pregnancy therefore have to find other sources of information supportive of their ideas.\textsuperscript{24}

Women described deliberately seeking out information consistent with their existing beliefs about birth rather than information which challenged them. Hart et al (2009) described this tendency in general information seeking\textsuperscript{9} and it may support the action of ‘bolstering’ referred to in pregnancy by Shepherd-McClain (1983).\textsuperscript{28} This is a process of downplaying the risks of a chosen activity and exaggerating its potential benefits and applying the reverse principle to a rejected activity, in this case giving birth at home or in hospital. This work draws on the concept of cognitive dissonance which describes cognitive strategies used to dispel distress caused by inconsistent or contradictory ideas.\textsuperscript{29} Professionals should be aware of this tendency in order to sensitively present information which challenges women’s beliefs. They should also ensure information they present is accurate and unbiased rather than reinforcing their own personal beliefs.

Women in this study described discussing their plans with people they knew held similar beliefs about birth and avoiding people likely to display a negative attitude or provoke anxiety. Many
reported being told ‘horror stories’ of other people’s pregnancies even though they would have preferred not hear these and women have reported similar experiences in other studies. People are more likely to share information associated with a high level of emotional arousal within themselves which may explain why some of these stories came from women who had been pregnant themselves and so may at one time have been equally uncomfortable in similar circumstances. Women do though regard peers as an important source of information. Their advice is considered credible and up to date for being based on recent experience. Importantly, women do not regard seeking information from their peers as a threat to their self-esteem. This is a significant consideration for healthcare professionals working with pregnant women as people are more likely to react defensively to information which challenges their self-esteem and to listen more even-handedly to information given in a way which means they can maintain a positive sense of self. Professionals risk women hiding information from them if they do not communicate sensitively and respectfully.

This study provides new insight into the way women seek and use information during pregnancy. The qualitative design ensured richness of data. Methodological rigor was ensured by use of appropriate techniques for data collection and analysis; discussion of results between team members; checking reliability of coding with an external rater; and maintenance of ethical standards of consent. The study demonstrates theoretical connectedness through the consistent use of direct quotes from data to support themes. Heuristic relevance is demonstrated by the complementary relationship of the study to existing research and its applicability to practice. Limitations include the fact that participants came from a single city, and were mostly white European, living with partners and highly educated. Further research is required to establish how women from other sociodemographic groups perceive information during pregnancy.

Healthcare professionals working with women with high risk pregnancies should be aware the information they give is only a part of the total information women receive during pregnancy. These women may be especially likely to turn to alternative sources of information if mainstream sources provide little on their particular conditions. Women may place equal or greater trust in information from a variety of other sources. Professionals should be sensitive to this during discussions about
pregnancy, including regarding place of birth, and explore what other information is contributing to
women’s decisions.

Conclusion

Women with high risk pregnancies use a variety of sources of information when deciding on the
preferred birth location. Women planning to give birth at home do more research about birth and are
more likely to seek out alternative sources of information. Women planning to give birth in hospital
more often rely on information from healthcare professionals rather than lay sources. Women from
both groups described actively seeking out information from sources they knew would reflect their
own values and so be unlikely to challenge their decisions. Healthcare professionals discussing place
of birth with women should be aware of how women utilise lay sources of information to complement
professional advice.

References

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Table 1. Women’s obstetric and demographic details

<table>
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<tr>
<th>Women’s details</th>
<th>Planning homebirth</th>
<th>Planning hospital birth</th>
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<tbody>
<tr>
<td></td>
<td>n=13 (%)</td>
<td>n=13 (%)</td>
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<tr>
<td><strong>Medical/obstetric conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes (inc Type 1 &amp; gestational)</td>
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<td>9</td>
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<tr>
<td>Previous caesarean section</td>
<td>7 (54)</td>
<td>6* (46)</td>
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<td>Hypothyroidism</td>
<td>2 (15)</td>
<td>1* (8)</td>
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<td>Previous postpartum haemorrhage</td>
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<td>Twin pregnancy</td>
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<tr>
<td>Osteoarthritis &amp; hypermobility syndrome</td>
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<tr>
<td>Polycystic kidneys</td>
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<td>1 (8)</td>
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<tr>
<td><strong>Ethnicity</strong></td>
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<td>12 (92)</td>
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<tr>
<td>Hispanic</td>
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<td>-</td>
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<tr>
<td>Mixed</td>
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<td>1 (8)</td>
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<tr>
<td><strong>Marital status</strong></td>
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<td>12 (92)</td>
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<tr>
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<tr>
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<tr>
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<td>Class II</td>
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<td>Class III</td>
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<td>2 (15)</td>
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<tr>
<td>Unemployed</td>
<td>1 (8)</td>
<td>-</td>
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*a One woman had a previous caesarean and hypothyroidism

*b One woman living with female partner

*c Determined by occupation according to Office for National Statistics Socio-economic Classification
Table 2. Interview questions

<table>
<thead>
<tr>
<th>Lay advice</th>
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<tbody>
<tr>
<td>Have you discussed where you would like to give birth with anyone else?</td>
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<tr>
<td>What was helpful about this conversation?</td>
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<tr>
<td>Was anything about the conversation unhelpful?</td>
<td></td>
</tr>
<tr>
<td>Have you done any research for your birth, e.g. read books, attended classes, used the internet?</td>
<td></td>
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<tr>
<td>What was helpful about this information?</td>
<td></td>
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<tr>
<td>Was anything about the information unhelpful?</td>
<td></td>
</tr>
<tr>
<td>Was there any information you would have liked but could not find?</td>
<td></td>
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<tr>
<td>How did you decide which of the information or advice to follow?</td>
<td></td>
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</tbody>
</table>