EVIDENCE BASED MIDWIFERY

ROYAL
COLLEGE
OF MIDWIVES

EVIDENCE BASED MIDWIFERY

CONTENTS

The truth revealing power of technology to impact on human error in midwifery practice

Key words: Technology, human error, patient safety, evidence-based midwifery

Blaming technology for human errors is not new and human error is still the subject of 'name and shame' in midwifery and, with high-profile cases of alleged misconduct becoming public news, the key question for me is, can we use technology to reduce human error?

While reading the recent court case of Montgomery (2015), I was struck by the fact that a scan to estimate the weight of the baby at 38 weeks in a primip diabetic mother was not performed, as the clinician decided it would not be in the mother's best interest, even though the mother was rightly and intuitively worried about the weight of her baby. The use of the ultrasound technology could have revealed a valuable estimate of fetal weight and may have resulted in a different chain of events, if acted upon. However, the baby was born at 38+6 days and suffered shoulder dystocia and hypoxia. The risk of such a birth was not discussed with the client and, in reading the transcript, it was stated clearly that the 'doctor wished to avoid caesarean section'.

This landmark case is very sad and challenges the way midwives practice shared decision-making in the UK and I have no doubt that it will lead to high-risk women being more informed and autonomous. Technology provides us with data on risk assessment, NICE guidelines, internet data from 'Doctor Google', surveillance and diagnostic technologies and national statistics, all of which are 'truth-telling and revealing' with regard to human behaviour.

Fortunately, there is a shift in public, professional and legal understanding about human error and we have many factors to consider if we are to have any real impact on reducing adverse outcomes that result from negligence. Leape et al (1991) produced research to demonstrate that errors are common and occur in almost every human activity and knowing how to use research, education, training, quality assurance procedures, guidelines and critical reviews from practice are essential. They also advocated computerised, automatic 'fail-safe' systems for medication dispensation and anticipated the development of 'less hazardous medications' to reduce the outcome from human error.

Human error cannot be completely eradicated, but it can be understood and defined and managed. Our knowledge in this area is still in its infancy and the past 25 years have resulted in enhanced understanding.

Theoretically speaking, regardless of how we define the concept of error, we still fall into one of two perception camps (Dekker, 2000). We either consider human error as the 'cause of the trouble' or we consider human error to be a manifestation or symptom of 'deeper trouble'. This division pervades modern thinking and Dekker refers to old views and new views of error. The tenets of the old view focused on 'human error' as the key to failure where human factors were responsible for inaccurate assessments, wrong decisions and bad judgements. This led to the production of statistics to name and shame those guilty of human error and led to the rapid growth of new technologies with fail-safe modes and alarm systems to protect the patient from human error. The 'new view' proposes human error as a symptom or manifestation of system failure, and symptomatic of trouble deeper inside a system, and sophisticated technologies are not the solution, as technology is dependent on human usage. Therefore, it is understandable that patient safety is both a national and international priority. In the UK, the National Patient Safety Agency (2010), now Patient Safety First, identified the human factors at play as being all of those that 'influence people and their behaviours', including the individual, organisation, context, environmental and job' including technologies.

I have always professed the need to use technology appropriately and judiciously in maternity care and still meet midwives with polarised opinions on the benefits and the drawbacks of using technology in practice. The paper by Martin (2015) in this edition of *EBM* demonstrates the cultural factors at play in the clinical setting, where the MEOWS technology is viewed both positively and negatively and yet it can be used appropriately. Some midwives will use technology aware of its limitations and its possibilities and some will refrain from its use and follow the rules and guidelines with some reluctance. The use of the most powerful machines with artificial intelligence, such as the CTG machine, will continue to be the source of many of our negligence cases, where we are accused of failing to act on the evidence portrayed. I dare to argue that the power of modern technology to support our practice and illuminate good care may indeed be harnessed by an overzealous and tenacious attachment to all things organic and natural. I believe we can and ought to use technology more effectively to assist us in maintaining safety in our maternity systems.

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Does the poor quality of Australian health education documentation undermine the message? A review of documents informing pregnant women about alcohol

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Abstract

Background. The advice given to pregnant women about alcohol consumption during pregnancy is variable across countries and within countries.

Aim. The aim of this study was to review the content and design of existing Australian health education documentation regarding alcohol consumption in pregnancy that is available to pregnant women.

Methods. A documentary analysis was conducted. This involved the identification and collection of a range of health education documents, which were then systematically analysed. The thematic and symbolic elements of each document were compared and contrasted using a modified version of the DISCERN instrument.

Findings. A total of 32 documents were retrieved via general and targeted internet searching. Documents varied considerably in their purpose, language levels, accessibility, and quality. The majority of documents scored as low to moderate quality.

Implications. Although there are many and varied existing documents relating to alcohol consumption during pregnancy in Australia, these are not of high quality and could be substantially improved by including publication dates, using simple language, and providing sources of information. This may result in a more effective public health message and so help to reduce the number of pregnant women who continue to drink during pregnancy.

Key words: Alcohol, pregnancy, health education, public health, evaluation, document analysis, evidence-based midwifery

Introduction

The consumption of alcohol during pregnancy has long been known to pose a significant risk to the fetus (Clarren and Smith, 1978; Jones and Smith, 1975); this can result in physical defects and developmental problems for the infant, that continue through childhood and beyond (O'Leary, 2002). As yet, there is no known 'safe' level of alcohol consumption recognised during pregnancy (O'Leary and Bower, 2012). For this reason, the current guidelines in Australia recommend total abstinence from alcohol for pregnant and breastfeeding women (National Health and Medical Research Council, 2009). However, many Australian women continue to drink during pregnancy (Callinan and Room, 2012) despite these recommendations.

Prevalence and predictors

Results from the 2010 National Drug Strategy Household Survey indicate that 47.3% of Australian women drank while pregnant before knowing about their pregnancy, with 19.5% continuing to drink after learning that they are pregnant (Callinan and Room, 2012). This may be underestimated as women are often not asked about their alcohol consumption during pregnancy in Australia (France et al, 2010). Another recent study found that 34% of Australian women admitted to drinking alcohol in their last

pregnancy and 31.6% would continue to consume alcohol if they were planning a pregnancy (Peadon et al, 2011). Furthermore, drinking in a previous pregnancy, and high levels of current alcohol consumption, have been observed as indicators of intention to drink in future pregnancies (Peadon et al, 2011). Women who continue to drink after learning of their pregnancy are also more likely to have a higher income, higher education, and higher socio-economic status than those who reduce alcohol consumption after learning of their pregnancy (Callinan and Room, 2012; Peadon et al, 2011). Moreover, several social factors have been identified that may influence a woman's decision to drink during pregnancy: socialising with people who drink regularly, attitudes of their social group, pressure to drink from friends, as well as their partner's use of alcohol or other drugs (Peadon et al, 2011; 2010; Chang et al, 2000; Testa and Leonard, 1995).

Interventions

In an attempt to reduce alcohol consumption in pregnant women, a range of interventions have been assessed around the world (Gilinsky et al, 2011; Stade et al, 2009). These interventions fall into two main categories: the clinical and the public health approaches. Clinical interventions target individuals and focus on a diagnosis and treatment

approach. These can include pharmacological or surgical interventions, therapy-based approaches, including behaviour change techniques, and one-on-one treatment plans, where the framework remains based on the individual (Schoenbach 2000). Public health interventions, on the other hand, place less emphasis on diagnosis and treatment, and concentrate primarily on increasing awareness and prevention at a community level (Schoenbach, 2000). These approaches are forms of universal prevention and are often aimed at increasing knowledge among the general population. These can include mass media campaigns, educational interventions and government regulations, such as alcohol warning labels. Public health prevention and intervention approaches often involve the use of written health education materials, used to provide health information to both the general public and targeted patient populations. Written health education materials have a number of advantages and have been found to be effective in changing health knowledge and behaviour (Redman and Paul, 1997; Ley, 1988), however, there is limited research into the effectiveness of such publications.

With regards to alcohol consumption in pregnancy, many written health education materials provide information about the possible harms of alcohol consumption during pregnancy. However, as almost 20% of pregnant women in Australia continue to consume alcohol during pregnancy, there is a need to evaluate these existing public health documents for their content and design. Therefore, the need for a comprehensive review of existing Australian documentation has been identified to provide an understanding of what is in the documentation available to pregnant women, and consider how this may impact upon the effectiveness of health education materials in changing behaviour.

Method

Aim
The aim of this study was to review the content and design of existing Australian health education documentation regarding alcohol consumption in pregnancy that is available to pregnant women.

Study design
Documentary analysis was conducted to provide insight into the written information that is available in Australia regarding alcohol consumption in pregnancy. Documentary analysis is a process of reviewing existing documentation from equivalent sources (Australian National University (ANU), 2010). This involved a systematic analysis of the content of the written materials, and included an investigation of the thematic and symbolic elements of each document.

Procedure
To capture as many relevant documents as possible, a comprehensive internet search was conducted. Firstly, a search was conducted via Google using a combination of the following search terms: 'pregnancy', 'alcohol', 'brochures/leaflets' and 'Australia'. In order to identify additional documents, the websites of the major hospitals in the seven states of Australia, drug and alcohol services, and government health sites, as well as independent organisations, were also searched for documents relating to alcohol consumption in pregnancy. These included: Royal Women's Hospital Melbourne, Mater Hospital Sydney and Brisbane, Royal Hobart Hospital Tasmania, Royal Darwin Hospital, King Edward Memorial Hospital, Women's and Children's Hospital, Turning Point, National Drug and Alcohol Research Centre (NDARC), Australian Drug Foundation (ADF), Drug and Alcohol Services South Australia (DASSA), SA Health, WA Health, NSW Health, TAS Health, QLD Health, NT Health, Russel Family Fetal Alcohol Disorders Association (RFFADA) and National Organisation for Foetal Alcohol Spectrum Disorders (NOFASD). The original search was conducted in November 2013 and updated in March 2015. Documents identified through this search strategy were downloaded if they met specific selection criteria. Additionally, local hospitals, including the Women's and Children's Hospital, Lyell McEwin Hospital, and Flinders Medical Centre, and major GP clinics in the Adelaide area, were visited in order to obtain any other suitable documents.

Selection criteria
Inclusion criteria
Documents were defined as any health education material described as a 'fact-sheet', 'information sheet', 'brochure', 'pamphlet', 'leaflet', 'poster' or 'booklet'. This included written material in print and online. Only documents written in the English language were included in this analysis.

Exclusion criteria
Website forums, books and media articles were excluded. Any documents that were not relevant to pregnant populations and any documents not specific to alcohol education were excluded. Furthermore, documents that were not Australian were also excluded. No date restriction was applied to the search.

Data analysis
The analysis of the health education documents involved a five-stage process adapted from Appleton and Cowley (1997) which included: developing the criteria for critique; familiarisation with the data; grouping similar documents together; creating the analysis database; and the final analysis. Central to this process was the development of the criteria for critique as a pro forma which addressed a series of questions to the text. This pro forma, was based on questions developed by the Academic Skills and Learning Centre (ANU, 2010), as well as the poster analysis worksheet and written document analysis worksheet designed by The US National Archives and Records Administration (The National Archives and Records Administration, 1999).

The criteria for which each document was evaluated included: what type of document it was, when the document was produced, the author or producer of the document, the intended audience, the images used, if links to further support were provided, the level of readability, if alternatives to drinking were provided, if messages for partners were

included, and if the sources of information were provided. In addition, three key messages were identified in each document and recorded so these textual messages could be analysed using thematic analysis techniques (Braun and Clarke, 2006). For each of these criteria, data were quantified and are presented using frequencies and percentages. Additionally, level of readability was measured using the Flesch-Kincaid Grade Level readability test. (Kincaid et al, 1975).

Quality assessment
In order to accurately assess the quality of each document, a modified version of the DISCERN quality assessment tool was used (Charnock et al, 1999). The DISCERN instrument was initially selected for use on the basis of a study by Ademiluyi et al (2003), which evaluated tools used for the quality rating of web-based health information. The modified DISCERN instrument consists of 14 questions and an overall quality rating. Each of the 14 questions represents a separate quality criterion. Studies to date indicate that DISCERN has satisfactory internal consistency, good inter-rater agreement, and good face and content validity (Thakor et al, 2011; Ademiluyi et al, 2003).

A modified version of the DISCERN instrument (see Figure 1) was developed to evaluate the quality of health education documents. The modifications consisted of: (i) adding specific descriptors for responses to questions 9 through to 11 (section two), (ii) removing question 12, (iii) changing question 13 (current Q12) from quality of life to the role of lifestyle factors, and (v) changing question 14 (current Q13) from possible treatment options to alternatives to drinking alcohol. Responses to the 14 questions were rated using a five-point Likert scale, ranging from one (low quality with serious or extensive shortcomings) to five (high quality with minimal shortcomings).

The scores were then averaged in order to acquire the overall quality rating of the document.

The modified DISCERN instrument was tested for face validity and inter-rater reliability by two researchers (AF and FCW), on a small sample of 12 documents. An assessment of the reliability of the scoring system was undertaken as follows. Documents which varied in design (four posters, three multi-page brochures, two single-page leaflets, and three online fact-sheets) were selected for this purpose. Reliability, as measured by the Intraclass Correlation Coefficient (ICC) two-way mixed model, average measure model for agreement, was 0.97. This was considered to be a high level of agreement.

Results
Internet searching via Google resulted in 25 relevant documents, targeted hospital website searching produced three relevant documents, one document was retrieved from the Australian Drug Foundation, and three additional documents were retrieved by visiting local hospitals. This resulted in a total of 32 documents to be included in the analysis.

Description of documents
The 32 documents included seven posters, 12 multi-page brochures, four single-page leaflets, three A4 fact-sheets, four online information sheets, and two wallet cards. Documents varied considerably in size (between 1 and 30 pages), style (from glossy documents to plain, functional documents) and purpose (from targeting Aboriginal women to informing the general public). A total of 15 documents (47%) did not provide a date of publication; however, the documents that did were produced between 2000 and 2014, of which five (15%) were produced before the change in government guidelines for alcohol consumption during pregnancy in 2009

Figure 1. Modified DISCERN quality scoring system

Section 1 – Is the publication reliable?

1. Are the aims clear?

2. Does it achieve its aims?

3. Is it relevant?

4. Is it clear what sources of information were used to compile the publication?

5. Is it clear when the information used in the publication was produced?

6. Is it balanced and unbiased?

7. Does it provide details of additional sources of support and information?

8. Does it refer to areas of uncertainty?

Section 2 – How good is the quality of information?

9. Does it describe how alcohol affects the fetus?

10. Does it describe any benefits for reducing alcohol use in pregnancy?

11. Does it describe the risks?

12. Does it describe the role of other lifestyle factors?

13. Does it provide alternatives to drinking alcohol?

14. Does it provide support for shared decision-making?

Section 3 – Overall rating of the publication

15. Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices

Adapted from *DISCERN: an instrument for judging the quality of written consumer health information on treatment choices* (Charnock et al, 1999)

(National Health and Medical Research Council, 2009). Out of the 32 documents, 16 (50%) were developed by non-government organisations (such as RFFADA, NOFASD, and the Australian Drug Foundation), 10 (31%) were developed by government agencies (ID numbers 1, 2, 3, 13, 15, 19, 20, 23, 25, 32), three (9%) by hospitals (ID 11, 12, 18), two (6%) by the alcohol industry (ID 8, 24), and one (3%) by a university (ID 16).

Eight documents (25%) were targeted specifically at Aboriginal women (ID 2, 4, 13, 17, 19, 25, 27, 32), five (15%) were targeted at women planning a pregnancy (ID 8, 10, 18, 22, 24), and one document (3%) targeted parents, not just the pregnant woman (ID 3). Only two documents (6%) contained any messages for partners. One (ID 24), created by DrinkWise Australia, used a quote from Dr Rochford (a media personality) stating 'it's safest for your partner not to drink while pregnant. Make sure you support her'. The other (ID 22), created by the Australian Drug Foundation, stated that 'men planning a pregnancy are advised to stop or reduce their alcohol and drug use before conception'.

A total of 24 of the documents (75%) used textual messages with eight (25%) using both textual and visual messages. Most of the documents (n=25, 78%) utilised an image; 10 related to pregnancy, seven were of women refusing a drink, four of alcohol, three of a baby, three of Aboriginal art design, and two of a child with fetal alcohol syndrome.

A minority of the documents (n=7, 21%) provided the sources of the information. However, half of the documents (n=16, 50%) provided links to further support and information, such as Alcohol Drug Information Service and other phone helpline numbers and web sources.

Five documents (15%) provided alternatives to consuming alcohol, or suggestions of what to say when offered a drink (ID 11, 14, 16, 26, 31). These included: substituting alcohol with non-alcoholic beverages; learning relaxation techniques; delaying the first drink; distracting yourself with other activities; and catching up in non-alcohol environments.

Only three documents mentioned the type of alcohol that can cause harm in pregnancy. One of these stated that 'all alcohol will cause problems before your bub is born: beer, spirits (rum and scotch), mixed cans, bottled wine and cask wine, all grog' (ID 17). The other described the Australian standard drink and explained that 'beer, wine, spirits or hard liquor, liqueur, port, sherry and homebrew all contain different amounts of alcohol. The more alcohol a drink contains, the stronger it will be' (ID 13). Both of these documents were targeted at an Aboriginal population. One document aimed at a general population stated 'all types of alcohol are equally harmful, including all wines and beer' (ID 28). In all other documents, there was a lack of information on whether all forms of alcohol had the same effects on the fetus.

Key themes in messages
Figure 2 illustrates that the overarching theme identified was that alcohol is not safe during pregnancy; that is, there is no safe level of alcohol consumption during pregnancy, no safe time to consume alcohol while pregnant, and if you're pregnant, the safest option is not to drink alcohol. Key secondary themes included; alcohol causes harm to the fetus, the effects of alcohol on the fetus, seeking support, and the mother's responsibility.

Quality of documents
Based on the DISCERN quality assessment instrument (Charnock et al, 1999), the documents identified were of relatively poor quality. Overall 28% (n=9) of the documents had a score of less than 2 (low quality), 69% (n=22) received a score between 2 and 4 (moderate quality) and no document received a score of 5 (high quality). The highest scoring document received a score of 4.14 (ID 14). The lowest scoring document was a poster with limited information provided and no publication details (ID 1, quality score = 1.29).

Although several documents achieved similar scores, the quality rating of individual questions was noticeably varied. Most of the documents received the lowest scores in section two: how good is the quality of information? The worst performing items were question 13 (does it provide alternatives to drinking alcohol?), question 8 (does it refer to areas of uncertainty?), question 4 (is it clear what sources of information were used to compile the publication?), question 14 (does it provide support for shared decision-

Figure 2. Key themes in documents
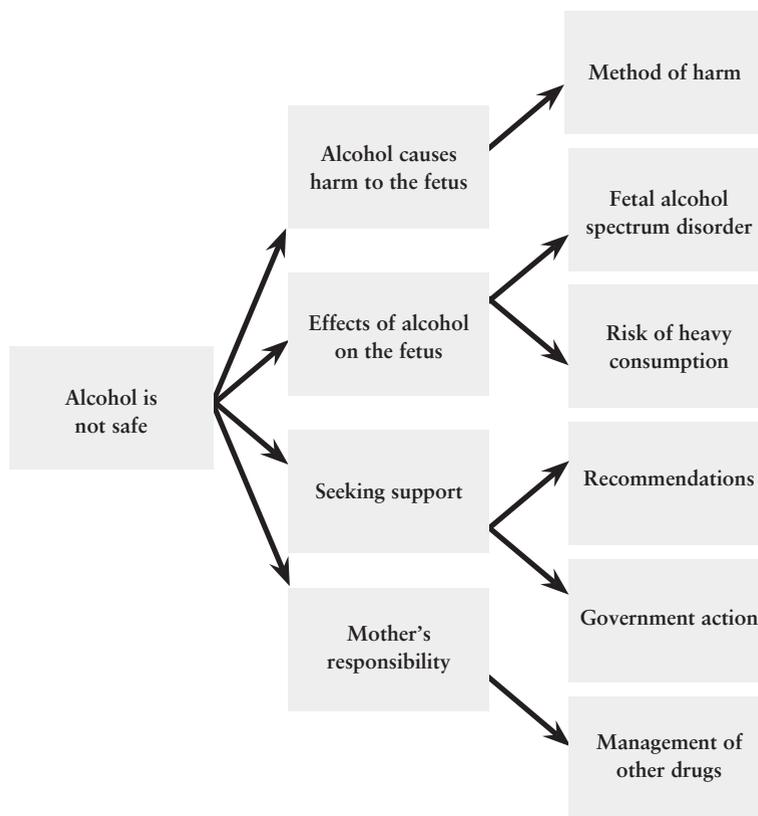
making?), and question 12 (does it describe the role of other lifestyle factors?). Best performing items were question 7 (does it provide details of additional sources of support and information?), and question 3 (is it relevant?).

Based on the Flesch-Kincaid Grade Level readability test, the average grade reading level of the documents was 7.6, with seven documents scoring over grade 10 (ID 3, 11, 20, 21, 26, 30, 31) and one document achieving a score of grade 2 (ID 9).

Discussion

This documentary analysis is the first study comparing posters, brochures, leaflets and other health education materials that are produced in Australia regarding alcohol consumption in pregnancy. An analysis of this kind was deemed important as, despite a number of public health campaigns and government warnings about the risk associated with drinking during pregnancy, a considerable percentage of Australian women continue to drink (Callinan and Room, 2012). The current study obtained a total of 32 Australian documents providing information on alcohol consumption in pregnancy. The most significant finding was that the majority of the documents were of low to moderate quality, which may translate into poor efficacy of such public health campaigns. Awareness of the present study's results may lead to an improvement in future health education documents in this area.

Effectively written health education materials and documents may play a key role in changing knowledge, attitudes and behaviour; however, limited research has been conducted into what makes these public health materials most effective. Some studies have suggested that the characteristics of effectively written health information materials can be grouped into design characteristics and content characteristics (Hoffmann and Worrall, 2004; Griffin et al, 2003).

In order to improve the content of documents providing information on alcohol consumption in pregnancy, the authors must ensure that the document is simple, clear, and accurate. As such, the document should be written at a suitable language level, use conversational tone, make use of headings and sub-headings, and include a publication date. To improve the design characteristics of such documents, the authors should utilise dark print on a light background, use ample spacing, include bold print for important messages, and use informative, striking illustrations (Hoffmann and Worrall, 2004; Griffin et al, 2003). Using eye-catching illustrations as well as written content may also allow for health education documents to reach a wider audience as effective health education materials need to be tailored to individual learning styles, including visual and verbal styles (Redman and Paul, 1997).

Research suggests that the average reading level for most adults in the US is at eighth or ninth grade (Ryan et al, 2014); however, studies have suggested that the most effective printed material should be written at a reading level of fifth or sixth grade (Badarudeen and Sabharwal, 2010; Mayer and Villaire, 2009). This suggests that the average reading grade of the documents in this study was slightly high at 7.6, and

several documents (38%) were written at a reading grade level much higher than that which is most effective, grade 10. This corresponds to research in the US, which suggests that most health education materials are written at a reading level too high to be well understood (Ryan et al, 2014). The documents aimed at Aboriginal women were written at a much lower reading grade level than the rest of the documents (between third and seventh grade).

Many of the documents lacked references, meaning it was unclear what the sources of information were. This brings into question the credibility of the information provided, particularly of those documents that were not created by government agencies. One of the key components of effectively written health education materials is to provide accurate information (Hoffmann and Worrall, 2004). Not only could these documents have provided references to support the major statements, but it is important that all health education materials contain a publication date and are updated regularly. For instance, the Women's and Children's Hospital, South Australia, has a policy suggesting documents are updated every four years and it is essential that a similar policy is followed elsewhere to ensure the knowledge imparted remains up to date.

Although all of the documents followed the national guidelines (National Health and Medical Research Council, 2009) and recommended that no alcohol was the best and safest option for pregnant women, many did not describe the harmful effects that alcohol may cause to the fetus. This information should be included in these documents, as highlighting the reasons behind the recommendations may be a motivator for change. Past research has reported that factual information is an effective incentive for reducing alcohol consumption and plays an important role in information-based prevention campaigns (Scheier and Botvin, 1997). Furthermore, research into alcohol and pregnancy has reported that, although women may know not to drink during pregnancy, many cannot explain the effects that alcohol can have on the fetus (Peadon et al, 2010).

Previous research investigating the use of alcohol warning labels with regards to alcohol consumption in pregnancy found that the most effective warning labels are those attracting attention, identifying the hazard, explaining the consequences, and providing advice for avoiding the hazard (Eurocare, 2011). It is likely that the warning messages displayed on written health documentation must include similar information in order to be effective. Therefore, it would be beneficial for a majority of the documents analysed in this paper to have included an explanation of the consequences of alcohol consumption during pregnancy. As alcohol consumption is a prevalent part of Australian culture, it would also be beneficial for these documents to provide suggestions on how to avoid alcohol, or alternatives to drinking alcohol in various social situations.

The included documents exhibited a lack of information targeted towards partners and other supportive individuals. Expectant fathers play a key role in healthy pregnancy outcomes, especially as it has been found that women's alcohol consumption is often influenced and encouraged by

other people, including partners (Finkelstein, 1994). Recent Australian research found that 38% of women would be less likely to drink alcohol if their partner or spouse encouraged them to cut back or stop drinking during the pregnancy (Peadon et al, 2011). Similar research in Canada noted that seven out of 10 men would encourage their partner to stop drinking alcohol while pregnant, but only three out of 10 men would be willing to stop consuming alcohol themselves while their partner was pregnant (Environics Research Group, 2006). This suggests that messages aimed at the partner and other people supporting the pregnant women may enhance the effectiveness of health education documents in reducing alcohol consumption during pregnancy.

After conducting a quality assessment, it was found that the highest scoring document was a multi-page brochure produced in 2011 (National Organisation for Fetal Alcohol Syndrome and Related Disorders, 2011). This brochure features the slogan 'be kind to me, stay alcohol free' and follows the government guidelines that no alcohol is the safest option for pregnant women and women planning a pregnancy (National Health and Medical Research Council, 2009). Information is provided on the reasons not to drink alcohol during pregnancy, the harm that alcohol may cause to an unborn baby, a description of fetal alcohol spectrum disorders, the consumption of alcohol before pregnancy knowledge, as well as some tips on how to say no to alcohol when pregnant. The brochure encourages shared decision-making, and provides links to further support; however, this document does not provide the sources of information, and provides no specific information for the partners of pregnant women. The documents with lower quality ratings tended not to include the sources of information, publication date, provided little factual information and featured no images or striking design features.

A thematic analysis of the text from each of the documents found that the key theme was one of safety. Many of the documents suggested that there was no safe type of alcohol; no safe amount of alcohol; and no safe time to consume alcohol during pregnancy. The wording of this message provides neutral information and allows individuals to make their own informed health decisions, rather than emphasising a negative message.

A major secondary theme found in the documents was that alcohol can cause harm to the fetus, which included messages such as 'alcohol can affect your unborn baby for life' and 'alcohol may cause permanent damage to your unborn baby'. Although the theme that alcohol can cause harm to the fetus recurred in many of the documents, as previously mentioned, many of the documents failed to provide details on the type of harm or method of harm that alcohol may cause. Furthermore, these messages generally used a negative or threat-based approach to inform women of the risks, which has the potential to make pregnant women feel guilty or reject the advice.

Limitations

A number of limitations are acknowledged with this study. Firstly, the internet search was limited to a single search engine (Google); however, a targeted web search was extensive involving health websites. Furthermore, the documents were limited to Australian English language publications and did not include documents that may be aimed at other non-English speaking groups, or documents published in other countries. Additionally, the search did not include documents on the topic of nutrition in pregnancy, or other topic areas that may have covered information about alcohol consumption in pregnancy. A further limitation of the study is that the nature of the inclusion criteria meant that mobile applications (apps) were excluded, as they do not specifically focus on alcohol use in pregnancy. However, apps may be an important source of information about health education for pregnant women and so prove a useful area for future research.

Implications

Despite these limitations, the implications from this study are that current Australian health education documents regarding alcohol consumption in pregnancy are of low to moderate quality, which may limit their effectiveness in changing behaviour. The largely moderate to low quality of the documents retrieved, and the valuable information that was lacking in many of the documents, suggests that health education documentation in the area of alcohol consumption in pregnancy could be improved. Effective documents on the subject of alcohol consumption during pregnancy need to be written in simple, conversational language at a fifth to sixth grade reading level; they should supply factual information, and include details about the risks including an explanation of the potential consequences of consuming alcohol in pregnancy.

Moreover, documents could be improved by providing alternatives to drinking alcohol; providing information for the partners and other supportive individuals; stating the publication date; and utilising appropriate images and visual elements that attract attention. It is recommended that documents target partners and other family members, as well as the pregnant women, as alcohol consumption is heavily influenced by a woman's social circle. While the implications of this research are aimed at health education materials relating to alcohol consumption in pregnancy, the findings could be relevant for any public health concern as it is important that health education messages are distributed in the most effective way in order to increase behaviour change.

Conclusion

The purpose of this study was to review and compare Australian health education documents that provide information to pregnant women about alcohol consumption during pregnancy. The conclusion is that although there are many and varied existing documents on the topic, they are of low to moderate quality. The poor quality of health education materials on the topic of alcohol use in pregnancy has the potential to undermine the message, and may be contributing to Australian women continuing to drink during pregnancy.

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The importance of continuity of mentorship in pre-registration midwifery education

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Abstract

Background. Grading pre-registration student midwives' clinical practice was new to the local BSc (hons) midwifery curriculum following its introduction by the NMC. Student midwives must work with a sign-off mentor at least 40% of the time in clinical practice and the mentor assesses the student's competence and grades their practice.

Objectives. The aim of this study was to explore the importance of continuity of mentorship in pre-registration midwifery education.

Design. A qualitative case study approach.

Methods. Mentor interviews (n=15) and student focus groups (11 groups with 51 student participants from each year group from 2009 to 2013). Ethical approval was obtained from two higher education institutes and a local research ethics committee and then the research and development department of each of the three trusts.

Findings. Continuity of mentorship is essential for students and mentors when practice is graded. For students, a lack of continuity affects their skill development, confidence and sense of connection in midwifery. For mentors, working with the student for long enough periods is essential to be able to grade their practice. For some mentors, especially in the hospital setting, working solely with first-year students was intensive. Community placements seem better able to offer continuity of mentorship.

Conclusions. One or two mentors (co-mentoring) seems ideal to balance the needs of students and mentors. Continuity of mentorship is essential for all practice assessments, but especially the grading process, if it is to be considered fair and robust.

Key words: Student midwives, sign-off mentors, mentorship, continuity, grading practice, evidence-based midwifery

Introduction

The regulatory body for nursing and midwifery in the UK, the NMC, sets the standards to support learning and assessment in clinical practice (NMC, 2008) and the education of pre-registration midwives and nurses (NMC, 2010; 2009). Student midwives are required to spend at least 50% of their time in clinical practice (NMC, 2009), working with a sign-off mentor for at least 40% of this time (NMC, 2008). Clinical practice is where students learn the hands-on care of women and their families under the direct or, later in training, indirect supervision of their sign-off mentor.

In 2009, the NMC introduced mandatory grading of clinical practice within the midwifery curricula, in addition to the assessment of competency, divided into four domains and five essential skill clusters (ESC) (NMC, 2009). Student midwives' hands-on clinical care is assessed to ensure they meet the ESC and their performance in practice graded by their sign-off mentor.

Aim

This study's aim was to explore the importance of continuity of mentorship in pre-registration midwifery education.

Literature review

There is a plethora of literature on mentorship in midwifery and nursing showing that positive student-mentor relationships influence students' self esteem, their sense of belonging, confidence, and the quality of the placement learning (Frazer et al, 2014; Longworth, 2013; Hughes and Fraser, 2011; Webb and Shakespeare, 2008; Levett-Jones et al, 2007; Begley, 2001). Conversely, unhelpful or poor mentoring, such as not enabling the student to practise, negatively affects the student experience (Henderson and Eaton, 2013; Levett-Jones et al, 2009; Licqurish and Seibold, 2008).

The complex clinical environment, with increasing time pressures on staff and lack of time for student feedback, negatively affects the learning environment and there is sometimes a lack of opportunity for students to work frequently enough with their mentors (Bradshaw et al, 2013).

A concept analysis of grading pre-registration practice states a relationship between the student and mentor is required; the mentor shows the required practice performance and the student learns and practises (Passmore and Chenery-Morris, 2012). At the end of the placement, a judgement is made about the student's performance, often against a rubric or assessment criteria. There are problems with all practice assessments, such as time for mentors to complete the assessment and consistency between assessors; however, specific to grading is the lack of validated tools with which to grade practice (Gray and Donaldson, 2009), in addition to mentor knowledge of how to accurately grade practice (Gray and Donaldson, 2009).

Research design

A qualitative case study design was used, as is common in educational, health and social sciences due to its flexible approach (Swanborn, 2010; Stake, 1995). Stake (1995:

x1) considered 'case study the study of the particularity and complexity' of a context-dependent phenomenon that cannot be controlled. Therefore, this approach was fit for purpose in this study setting.

Setting
The research was undertaken in one university offering midwifery education in the East of England and its three partnership trusts where students practise. This is usual in case studies.

Ethical considerations
Ethical approval was obtained from two higher education institutes and a local research ethics committee and then the research and development department of each of the three trusts. The head of the school and heads of midwifery were written to, requesting permission to recruit students and staff for the study. Confidentiality was respected at all times and names were removed from the data, which was stored on a password-protected computer.

Recruitment of study participants
All three-year midwifery students, in their second or third year who started their education in 2009-13 were invited to participate. The shortened midwifery course students from 2012 and 2013 were also invited after their first progression point, where their practice had been graded. Posters asking for sign-off midwifery mentor volunteers who had graded a student's practice were displayed in the maternity departments and community offices of the three NHS trusts. Mentors were also requested to participate at annual mandatory mentor updates. An information leaflet and consent form was provided for each participant.

Data collection
As is usual in case studies, multiple methods of data collection were utilised. Focus groups or group interviews were used to collect data from the student midwives to counteract the potential power imbalance between the researcher, as one of their lecturers, and the students (Anderson, 2011; Morgan, 1996).

The students were in their second or third year of training, so had experience of several clinical placements and had their practice graded summatively at the end of their first and/or second year. The students formed small groups (n=2-6) to ensure they felt safe to discuss their views in front of each other.

There were 11 students in three focus groups in the pilot study in 2011 (Chenery-Morris, 2014) and a further 40 students in eight more focus groups undertaken in 2012 and 2013. In total, 11 focus groups were undertaken as every volunteer was included. A total of nine of these were with direct-entry students and two with 78-week students. All focus groups were undertaken in the university buildings. The pilot study groups were shortest (around 25 minutes), the core phase groups lasted from 44 to 67 minutes.

Mentors were invited to participate in one-to-one interviews as their individual experiences were sought

(DiCicco-Bloom and Crabtree, 2006). The mentors were all sign off mentors who had worked at least 40% of the time with the student and had graded their practice. Four volunteered to participate in the pilot study and a further 11 in the core group.

However, one mentor could not meet physically due to differing work patterns so responded to the questions via email and three requested to be interviewed collectively. Some of the midwives were interviewed at work during their break; others came in early or stayed after their shift. The pilot interviews lasted 10 to 18 minutes, the core phase was 18 to 58 minutes, this was usually dependent on whether the midwives were working or not.

A semi-structured schedule of questions was used with students and mentors, based on how practice was taught and evaluated. The interviews were recorded and transcribed by a paid graduate due to the volume of material recorded and the amount of time required for the transcriptions. The researcher was known to all the participants and so the dual role of the status of a colleague or teacher was considered reflexively to help minimise potential bias (McConnell-Henry et al, 2010).

Other forms of data were also collected. These included a group discussion with all five full-time midwifery lecturers working at the study university in 2013, the students' practice grades and documents such as the curriculum and NMC standards (2009; 2008) were also examined, although these materials are not presented here.

Data analysis
The text from the transcribed interviews and focus groups were uploaded to Nvivo 10 to help the qualitative data analysis. As theoretical frameworks for analysing qualitative data can enhance the rigour of small scale research (Anfara and Mertz, 2006), Bernstein's pedagogic discourse (Bernstein, 2003) was used deductively to help analyse the data. Bernstein's theory considers the relationship between teachers and students in any educational setting, so the data were read looking for features of the relationship, such as explicit or implicit hierarchy between the mentor and student and who was leading the learning encounters. These were assigned codes in Nvivo 10.

An inductive approach was also used with coding and qualitative description, looking for themes and concepts outside Bernstein's theory by using nodes created by the researcher on Nvivo 10 (Johnston, 2006). These themes were then looked for across the different focus groups and interviews, as a way of triangulating the data and increasing the confirmability of the themes (Tobin and Begley, 2004).

This paper focuses on one of the inductive aspects of the larger case study: the importance of continuity of mentorship for the student and mentor when assessing clinical practice. The following formula will be used for the words of the participants: student or mentor (S or M) and which trust they worked at (T1, 2 or 3), for students their focus group is stated (FG), and for mentors whether they are hospital or community based (H or C) is noted.

Findings

Participant details are in the tables below. Students and mentors were aware of the importance of continuity of mentorship to enable student and mentor relationships to develop, however, for mentors, the student's year of practice affected their workload. The relationship between the student and mentor was pivotal, however, there was caution noted regarding the boundary between effective mentorship and developing a friendship and how this affected the grading process. A discourse on the benefit of having more than one mentor was heard from students and mentors alike and some areas of practice afforded greater opportunity for continuity of working together. All of these findings affected the ability of the mentor to grade a student's practice and the perceived reliability of the grade awarded.

Continuity of mentorship for relationship development
Continuity of mentorship was seen as essential to success on the midwifery course from both three-year and shortened course students' point of view for a relationship to develop with their mentor:

"I think when you're in practice and you're with a mentor for 40 or whatever percent you are with your mentor, it is personal because you build up a mentor/student relationship" (S48/T2/FG11).

"If you've got a bit more of a relationship when you're talking to each other they're (the mentors are) more willing to say, 'oh come and do this', or 'help me do that', or, 'I'll

Table 1. Student participants

Cohort	Number of students and number of focus groups	Cohort size
2009 (3 year)	11 students (3 groups)	11/16 = 68%
2010 (3 year)	2 students (1 group)	2/11 = 18%
2011 (3 year)	11 students (2 groups)	11/17 = 62 %
2012 (3 year)	16 students (3 groups)	16/21= 76%
2012 (shortened)	5 students (1 group)	5/6 = 83%
2013 (shortened)	6 students (1 group)	6/6 = 100%
51 students in total		

Table 2. Mentor participants

Trust 1	Trust 2	Trust 3
4 midwives	5 midwives	6 midwives
2 community	2 community	3 community (1 in pilot)
2 hospital	3 hospital	3 hospital (3 in pilot)
1 hospital midwife answered questions by email, 3 asked to be interviewed together	All interviewed individually	All interviewed individually

show you how to do this'" (S42/T3/FG9).

"And I think it depends on your experience of practice, particularly on whether you've got one or two mentors which you work with regularly and you've built up a good relationship with, or whether you're being passed from pillar to post to a new person every couple of days who doesn't know what you're capable of, isn't comfortable necessarily letting you develop your practice as smoothly as you would if you've got that continuity" (S19/T3/FG5).

As students and mentors get to know each other they 'build up a good relationship', which is one of the domains mentors are required to demonstrate (NMC, 2008: 25). The relationship is not just about supporting learning; the need to work a minimum of 40% of the time with the student is a regulatory requirement, as S48 noted. The students above (S19, 42 and 48), all from different focus groups, have demonstrated how important building a relationship is: it is personal, enables practice to develop and learning opportunities to be offered. Lack of continuity of mentorship is detrimental to the students' learning as they feel 'passed from pillar to post', and the student has to convince the new mentor to let them practise skills.

Not having continuity or building a relationship with a mentor had a detrimental effect on this student:

"Like I hadn't connected with anybody because I didn't have a mentor at all, so I felt like and I still feel I'm sort of six months behind all the time because of that experience" (S33/T1/FG8).

This student was assigned a named sign-off mentor but, for one reason or another, she did not work with her and this left the student feeling like she did not have a connection to midwifery. This had a detrimental effect on her learning and a major effect on her confidence.

Some mentors valued continuity so they could try to meet students' needs and nurture them:

"I think it is about having that relationship with student(s). Some students come here (obstetric unit) and they looked terrified and it is a scary place, you know. So it's about sort of just easing them into it over the three years" (M7/T2/H).

"I think when you get someone in their first placement you sort of do (build up a relationship with them) and you're with them every single day, you quickly build up a little bit of a bond, as they are reliant on you and you feel that you are nurturing them and looking after them, don't you?" (M12/T1/C).

The students discussed the nature of the relationship with their mentors and acknowledged there was the chance of this becoming too close and impacting upon the grade:

"Yeah, because of course you've got to have a good relationship but where do you stop at a good relationship and you know socialising with your mentor?" (S5/T1/FG2).

"But it's human nature to get on better with some people than others and if you get a mentor you get on really well with and it's the sort of person in a normal life you would choose as a good friend, it is very difficult to then be objective, isn't it?" (S5/T1/FG2).

Some of the mentors considered their role within the relationship and thought boundaries were necessary:

"I think you've got to keep a certain distance (in)

relationship, anyway, I don't do Facebook with students… I won't say we've never socialised with students as sometimes we have… you've got to keep a sort of boundary" (M6/T2/C).

"Not that I've made deep friendships with any of the students and gone out with them or anything like that because from my point of view that doesn't feel right as they are still students. I kind of keep work and private lives quite separate" (M8/T3/C).

Working with students from different years
However, some of the mentors found the relationship between the student and mentor intense, especially in the first year of direct-entry training:

"The more along in their training, the easier it is to be a mentor, obviously, I do find sometimes the first years are quite challenging especially when you have to prompt them… when you've got a first year it's like for six or seven weeks every shift with you and it is a lot" (M3/T3/H).

"If you've got a third-year, very competent student, it makes your life a little easier in some ways because you can share the workload a bit. If you've got a brand new first year, that's really difficult, but you just have to get on with it, don't you?" (M11/T1/H).

"It is quite time-consuming because you want to show them (the student). With a third year, they are helping you with the paperwork, with a first year, you're having (to) talk through the whole way" (M10/T1/H).

All three of these mentors (M3, 10 and 11) work in a busy hospital environment, which might have proved a barrier to their mentoring first-year students. Initially, there is such a lot to teach the first-year student midwives and, in an environment where the mentor is already busy, this is more work. However, as they note, later in the student's training they can share the workload.

The benefits of working with more than one midwife
A discourse in practice about the benefits of working with more than one midwife was heard from several sources; perhaps this combats the intensity of mentoring and prevents dependent relationships developing:

"I think they (students) could work with different mentors in different areas clinically because I do think it's important to work with other people as well because otherwise you just end up with clones" (M1/T3/H).

"If you're only ever working with one mentor… you don't want to morph into her. I'm not saying that's a bad thing if she's good, but I think you kind of get quite comfortable, you get too comfortable with one" (S39/T2/FG9).

"There are benefits to working with different midwives cause now I can see a range of different ways… whereas I know that's not the one way that you can do it, I know that there are several ways to do it and then I can formulate my own decision about how I want to practise, so there are benefits to working with different people but when it comes to grading, you need to, I think you need to have continuity, definitely" (S26/T1/FG6).

"I think it's nice to work with different people, but there's working with different people and having continuity if you

like. Two different midwives in a four-week placement, your mentor and your sign-off mentor and then there's Lydia's (pseudonym) experience, which I witnessed on several occasions, 'oh you go with her', and you had nine different midwives" (S36/T2/FG8).

There is clearly a balance between working with too few and too many mentors. At certain points in their midwifery education, students and mentors feel it is beneficial to work with a range of midwifery mentors. The students think their learning develops and it takes them out of their comfort zone so they can develop their own style by seeing a range of midwifery practices. One of the articulated risks of working too closely with one mentor is becoming too like them, as demonstrated in the words 'clone' or 'morph into'. However, students work in all areas of midwifery practice with several mentors over their course, so it is unlikely they will actually become too similar.

Different areas of practice
Working in the community was often described as affording better continuity. Most of the students had good continuity of mentorship in these placements. The nature of the work in the community means the student and the mentor are physically together for most of the day, whether travelling between visits, in a woman's home or in a clinic setting:

"I think they do build up a very different relationship in community to what you do in hospital" (S23/T2/FG6).

"I think mentors in the community as well, they see more of your practice and your communication, everything like that because they are with you all the time, whereas in the hospital the midwives tend to leave you with the women on your own for periods of time to see if you build your confidence up on your own but they don't actually see what you're doing" (S24/T1/FG6).

"In community doing the booking interview your mentor is there and I've got like a really good relationship with my mentor and it's like she's not there" (S39/T2/FG9).

For these students, the mentor's presence in the community is reassuring. S24 is more critical of the hospital midwives' ability to assess her performance as the midwife is not omnipresent. The space mentors gave students in the hospital to communicate with women, undertake observations and provide care, was sold as confidence building, yet S39 feels confident with her mentor being present as it is like she is 'not there'. This is reiterated by a community mentor who enables the student to feel relaxed and develop her own style of undertaking a booking interview:

"In a booking interview, the student talks constantly for 45 minutes if she's doing the whole thing, and if you feel that somebody is watching you the whole time, if you've got a good relationship with them then you think well, you know if I say something wrong I know she's not going to humiliate me in front of the woman or whatever. I think you feel like then that you can develop more of your individuality like that" (M9/T3/C).

Working together means both the midwife's actions and communications with others and the student's performance are directly visible for each other. Not only does the student

learn midwifery, but they also get to know the midwife and relax in their presence as their skills develop. Then when the midwife assesses the student's performance, the student generally feels this is a fair assessment.

Need for continuity of mentorship to grade students' practice
The study university introduced grading in 2009, so it was new for all involved. Mentor workshops were undertaken to prepare midwives prior to introduction. The local validated grading process involves a student and mentor independently awarding a grade aligned to the performance criteria and their grades are discussed and sometimes negotiated in the presence of the lecturer at a tripartite meeting.

One mentor discusses her first experience of grading a student's practice:

"I didn't feel prepared but because it's easy to do, I was prepared in the sense that I'd worked with the student enough... I had to sit and obviously read through it (the grading criteria) so it took quite a long time, but I don't think that's a difficult thing to do if you, the most important thing is that you work with the student enough... I don't think you can make the distinction between the grades if you don't know them (the student)" (M1/T3/H).

Here, the mentor is describing her experience and for her, working with, and coming to know, the student is essential to assess their performance level. Students also considered continuity to be essential for the grading process:

"I had good continuity with mentors, (it) made a huge difference, and actually I get on really well with my mentors. Every mentor that has graded me, we've been on the same sheet so, (interrupted by another student)" (S40/T2/FG9).

When this student says they were on the same sheet, she may have mixed two metaphors 'on the same page' or 'singing from the same song sheet'. The respective metaphors mean agreement with one another or presenting a united front in public. This student is also talking about the tripartite meeting where she and the mentor discussed the performance grade in front of a lecturer. She is saying there was no need to negotiate the grade, as they both agreed and said the same thing in front of the lecturer. This was due to the continuity and development of the relationship between the two of them.

The students felt continuity of mentorship increased the reliability and validity of the grading process:

"I had my community midwife come with me (to the tripartite grading) and she was fantastic and we'd worked together for four weeks and we really got to know each other and I felt my grading was quite fair" (S30/T1/FG7).

Student 30 describes her positive experience, which she attributes to the continuity of her mentorship. The words 'fantastic' and 'really' demonstrate how positive the experience was. Another student also thought this time together made the assessment of her performance fair:

"I am not sure you have to have a continuous practice with your mentor, because sometimes it is not possible and you spend more time just with different people... I must admit that with my last mentor, who was in the

tripartite with me, we spent about 90% of the time so that was really, really positive on the impact that they had, because she remembered different situations and still remembers different experiences and we had the time to sit and chat to her about different events, so that was really positive" (S49/T1/FG11).

During the tripartite meeting, S49 is reassured by the mentor's reflections of her practice, which contribute to the grade awarded, thus reinforcing her positive experience due to having spent so much time with the mentor. Without continuity of mentorship, students have reduced confidence in their mentor's ability to grade their performance. The next vignette shows a student who was supposed to have her practice graded by her delivery suite mentor but because of the lack of continuity, after discussion with her personal tutor, she asked the mentor from her previous placement in the community to undertake the assessment:

"I had rubbish continuity on CDS so I chose my community mentor because I was with her every day" (S36/T2/FG8).

This demonstrates again how positively student midwives value continuity of mentorship and its relationship to their graded performance and, in this study, it was more likely to happen in their community placements.

Discussion
The discussions and experiences of the students and midwives in this study are similar to the nursing literature on mentorship. The nursing literature focuses mostly on assessment of competence not grading performance, where the relationship may have a bigger impact upon the grade awarded. Establishing and maintaining a relationship with a mentor is essential for student midwives and mentors alike and perhaps more importantly when a student's practice is graded. For optimal learning in clinical practice, students need a sense of belonging. In a seminal text on nursing students' socialisation (Melia, 1987), fitting in or a sense of belonging was a key theme. A sense of belonging was also a prerequisite to learning in clinical practice for 18 nursing students across the UK and Australia in interviews (Levett-Jones and Lathlean, 2008). A midwifery study corroborates these findings (McKenna et al, 2013); mentors can have a positive effect on students' sense of belonging. These studies resonate with this paper; the positive effects of continuity of mentorship help the students to connect with their mentor and progress in their learning. Not connecting, due to a lack of continuity of mentor, was considered detrimental to a student's development. The relationship can also affect the grade awarded and has been cited as the cause of grade inflation and failure to fail (Speer et al, 2000).

The burden of establishing and maintaining effective mentoring relationships is documented in nurse education (Webb and Shakespeare, 2008). To get competencies signed off and have productive placements, students need to engage in emotional labour (Webb and Shakespeare, 2008). This was also seen in the current study – with a better relationship, the students were more able to discuss their progress and areas to work on to get a higher grade. Learning their mentor's preferences (Gray and Smith, 2000) in nurse education was

key to the assessment process; this too was evident in the discussions with the student midwives, with students often wanting a day or two to observe their mentor's practice.

Building relationships was the major theme of a Swedish study of student midwives on labour wards (Brunstad and Hjälmhult, 2014). The students had to be accepted by the midwives before they could begin their learning journeys; they achieved access to the learning through this acceptance. Students also had to tune into their mentors' ways (Brunstad and Hjälmhult, 2014); a feature identified in this study as well. A positive mentor/student relation was seen as pivotal to student learning (Licqurish and Seibold, 2008).

In this study, having a first-year student was said to be hard on mentors, especially in a busy hospital environment. However, in another study (Fisher and Webb, 2008), it was the community midwives who found some aspects of mentoring challenging. Fisher and Webb (2008) attributed the longer student midwifery placements in the community and some changes to the local service delivery to the mentor difficulties. They postulated community mentors might need an occasional break from students. A resolution might be to co-mentor first-year students with students working exclusively with one of two mentors, perhaps one full-time and the other part time, so the whole workforce shares the responsibility of mentoring students. This would be beneficial for students to have a sense of belonging and for mentors to have a break form the intensity associated, especially in the hospital, with first-year students.

The importance of continuity, especially in the first year of midwifery training, was explicit in Hughes and Fraser's (2011) study of 58 UK student midwives. In the second year of their training, the students were looking at the mentors as role models for their future qualified practice and the opportunity to work with different mentors was beneficial (Hughes and Fraser, 2011). This study also noted the difference between community and hospital mentorship, with community appearing to be more receptive to students. The demand on staff in the hospital seemed to be a barrier to mentoring. This was definitely reiterated by students and mentors in this paper.

This feature of hospital staff feeling pressurised to get through the workload is reminiscent of Hunter's emotional labour study of hospital-based midwives (Hunter, 2004). In the community, the midwives tended to have a more woman-centred approach (Hunter, 2004). This might explain the difficulties of hospital midwives in managing the competing needs of the woman and students in their care as the hospital midwives are already working hard at managing their emotions in a busy clinical environment (Hunter, 2004) and having one further competing demand – a student – exacerbates their work- and emotional load. The busyness of the hospital environment is a reccurring feature in the literature where students felt less supported in the hospital than the community (Kroll et al, 2009).

Community placements seem to offer greater opportunities for continuity of mentorship. The learning in clinical practice is more visible, as the mentor is able to directly supervise the student. In the hospital, there was talk of indirect supervision being common, which left students feeling their skills were not always seen. In another study, students engineered their off-duty to reduce the time they worked with a poor mentor (Gray and Smith, 2000). In this study, one student chose a different mentor to grade her practice, as she had not had effective continuity of mentor in one of her placements and was not confident the mentor would grade her fairly.

However, depending on the relationship between the mentor and student, this direct observation can seem intense. This correlates with literature on guiding or controlling hands in midwifery and hawks and doves in medical education (Hughes and Fraser, 2011; McManus et al, 2006). The hawks hovered above students and made them nervous while the doves were calm and reassuring (McManus et al, 2006). Mentors who stepped in too soon, or made students feel self conscious were seen as controlling, while being able to practise without feeling overly scrutinised enabled students to learn (Hughes and Fraser, 2011).

Integral to the role of mentoring (Lennox et al, 2008) is confidence building, rather than assessment. This has been called role confusion (Bray and Nettleton, 2007) as the mentor is both the assessor and supporter. The students in the present study felt continuity and achievement with one or two mentors gave them confidence, and lack of continuity caused a lack of confidence. The assimilation of both roles, supporter and assessor, may be undertaken more easily by mentors with greater continuity of working together with one student. The reciprocal nature of knowing each other seems to be needed for students' to feel happy with their grades and for mentors to grade students' practice.

Conclusion

This paper has considered continuity of mentorship and its affect on grading student midwives' practice. Key themes included the relationship development between the student and mentor. Whether the minimum standard of 40% of the time with a mentor is sufficient, especially in the first year, needs to be explored further. An early lack of continuity and associated lack of connecting can have lasting effects on the student's progress.

There were differences in perceived effort when mentoring first-year students, particularly in the busy hospital environment. Perhaps co-mentoring first- and second-year hospital-based students would help address the competing mentor and student needs of intensity versus a sense of belonging.

Continuity of mentorship is the best way for students to develop, at least initially, in their education. What this paper adds is the relationship between continuity of mentorship and the need to grade students' clinical practice. Continuity in community placements seems to be easier to achieve and the nature of community student midwife relationships and working practices seem to offer more visible midwifery care and communication.

The mentor and student need time to develop their relationship so the student knows what the expected performance or skill looks like and can demonstrate this.

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Users of the healthtalk.org breastfeeding webpages; their characteristics and views

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Abstract

Background. The internet is a popular source of health information, and infant-feeding webpages are being increasingly used by breastfeeding women to gain information and support. Identifying who uses infant-feeding webpages and the impact they have on knowledge and behaviour is key to understanding the potential of online resources.
Aim. The aim was to identify the users of the healthtalk.org breastfeeding pages, their roles and their opinions on breastfeeding.
Method. In 2012-13, users accessing the breastfeeding webpages on healthtalk.org were surveyed to identify user characteristics, website usage and impact. Ethical approval for the research was agreed by Bournemouth University ethics committee.
Results. A total of 178 users participated in the survey. Many of the users who completed the survey were health professionals or healthcare students. More than half planned to use the practical information they had gained, while nearly all said they had or would recommend the webpages to other people. Users found the website easy to use and there was some evidence to show that videos describing women's personal breastfeeding stories were the preferred format for gaining information and support.
Conclusions. While some studies show that healthcare professionals may find client use of online resources challenging, this study demonstrates that evidence-based breastfeeding resources can provide accessible, useful information. At a time when UK midwifery services are stretched, there may be considerable benefits for midwives in recognising the information and support gained by women from online sources, and in identifying high-quality and accessible webpages so that they can confidently recommend them to women.

Key words: Infant feeding, internet, health information, Dipex, evidence-based midwifery

Introduction

The internet has become an important source of health information, with 43% of adults using health websites in the UK (Office for National Statistics, 2013). Younger people (between 25 and 34 years of age) are even more likely to seek online health information (Office for National Statistics 2013), as are women, who show an interest in antenatal and postnatal care (Fox, 2013). Online searches using the term 'breastfeeding' identify millions of websites (Giglia and Binns, 2014). Healthtalk.org is a UK-based website that includes breastfeeding-related webpage content in the form of video interviews and factual information. These pages were developed by Bournemouth University researchers, and form part of the DIPEx health experiences collaboration, coordinated by the University of Oxford (DIPEx, 2014). The breastfeeding pages alone receive around 37,000 hits per month from about 1500 individuals (DIPEx, 2014). In 2012-13, a survey of users of the breastfeeding pages of healthtalk.org was conducted with the aim of establishing who was utilising the pages and what they did with the information they acquired.

Background

Women and their families frequently struggle with the physical and emotional aspects of breastfeeding (Ryan et al, 2011) and find that practical and social support is not always immediately available from health providers or those in their community (Renfrew et al, 2012). Availability of online health resources is increasing rapidly, both in terms of the number of websites available and the access that individuals have to the internet (Fox, 2012). Change occurs rapidly in the online environment, with 'real time' changes generated by providers and users. In addition, websites can achieve a 'snowball' effect, as high usage moves a website closer to the top of the list generated by the search engine, thus further increasing traffic (Lutes et al, 2011). This constant development and adjustment means that academic literature might struggle to reflect contemporaneous user behaviour.

In a study of Swedish women seeking pregnancy-related information from the internet, Larsson (2009) recommended that maternity care providers guide pregnant women to high-quality, web-based information. Breastfeeding is a key area of maternity care, for which information is increasingly widely available online, and healthcare professionals and website providers need to identify how users interact with resources if they are to respond to their needs appropriately.

A literature review was undertaken using EBSCOhost, Medline and Web of Knowledge to identify research focused on the availability and use of webpages offering online support and information for breastfeeding. The search

terms 'breastfeeding' AND 'information OR support' AND 'online OR internet' were used. Research from 2005 to March 2015, in English language, that related to peer or mass breastfeeding information and support was included. Studies considering only email or one-to-one clinician to mother internet communications were excluded, as were several papers that commented on online breastfeeding support as a very incidental element in more general online parenting support research.

A total of 10 papers were identified, which included one systematic review (Giglia and Binns, 2014) of online breastfeeding support interventions. In addition, one paper (Huang et al, 2007) was identified within Giglia and Binns' (2014) systematic review that had not been located by the search terms. Nine of the papers had been published during the last five years. Six studies had been conducted in Australia, Canada or the US, and several of these reflected on the particular benefits of internet support in communities that may be thinly spread across large geographical areas. Four studies were undertaken in European countries, including two in the UK. The final study was from Taiwan.

The papers from the literature review fell into several distinct areas of study: a systematic review of research relating to the impact of online breastfeeding support, two evaluations of the content of webpages, three studies reporting on specific internet-based breastfeeding support interventions and five studies that explored women's use of peer-support websites.

Giglia and Binns' (2014) systematic review sought to identify the impact of online resources on breastfeeding outcomes. The aim of the review was to identify research that evidenced the effectiveness of online resources in affecting breastfeeding outcomes. This evidence proved elusive, however, largely because of problems involved in defining and measuring user engagement or outcomes, and, of the 1379 articles, only one was identified that was regarded as providing reliable evidence (Giglia and Binns, 2014).

The very large number of breastfeeding resources available online makes it inevitable that the studies that evaluated the content of internet sites (Stockdale et al, 2007; Shaikh and Scott, 2005), could only hope to 'scratch the surface'. Indeed, Shaikh and Scott (2005) limited their evaluation of the content and quality of breastfeeding webpages to 40 websites 'most likely to be accessed by the public'. Stockdale et al (2007) focused on the 'motivational' content of 30 breastfeeding websites, but this represented a tiny fraction of the 15 million breastfeeding information websites that they identified. Both studies concluded that they had identified missing or oversimplified information in the websites they reviewed, while Stockdale et al (2007) also noted that none of the sites they reviewed met their criteria for being 'motivational'. This suggests that there might be a separation between content of websites and how effectively users are able to respond to or implement the information gained from them.

Three studies involved use of a specific internet-based breastfeeding information or support resource, with each using a quantitative approach with control groups.

They offer some insights into participants' motivations for using the internet in relation to breastfeeding, such as achieving successful breastfeeding (Hannula et al, 2014) and managing problems with breastfeeding (Giglia et al, 2015). Giglia et al (2015) noted that those women randomised to the group using the internet-support intervention were significantly more likely to be exclusively breastfeeding at six months. In addition, women in the intervention group who experienced problems with breastfeeding were more likely to access the internet for support than others. Huang et al (2007) introduced an online learning resource during pregnancy, and found that the use of this resulted in improved participant breastfeeding rates. They also suggest that particular content may have been important, specifically noting that video may provide women with the opportunity to become familiar with the physical aspects of breastfeeding, particularly if this is not something they have previously seen (Huang et al, 2007). Hannula and colleagues (2014) provided 431 participants with access to internet resources, such as articles, videos, pictures and an online game, in addition to 'face-to-face' lectures, workshops and intensive support in clinics. Unfortunately, although this paper has been included because it emerged as a result of the literature review, it does not provide much information about the impact of the online resource.

Women's interactions with online peer support were considered by five studies from the UK, US and Australia. A key theme that emerged from these studies was the importance of emotional support in the interactions between women on online support websites (Gray, 2013; Herron, 2013; Burman et al, 2012; Cowie et al, 2011). Only one study included both professional and peer support (Geoghegan-Morphet et al, 2014). Online peer support appeared similar to the reciprocity of face-to-face interactions (Burman et al, 2012) and suggested women might adopt different roles, and have different uses, for the websites at different times – depending on whether they were observing, seeking support or actively providing support (Herron 2013). Other features around the user experience of online support were also identified, such as 24-hour availability (Burman et al, 2012) and tailoring of support to individual needs (Herron, 2013).

The review of the literature identified several key points around the availability and utilisation on online sources of breastfeeding information and support. The relative paucity of research, contrasted with the vast number of websites, suggests that we may have a very limited understanding of the subject. In addition, there appears to be a contrast between informational/learning resources and those that provide non-professional, emotional and social support to women, despite the need for both well-informed, practical information and emotional support (Gray, 2013; Stockdale et al, 2007). There was a lack of information about who was accessing breastfeeding support websites and what their motivation was, in terms of whether they were seeking information for themselves, for others or as part of their professional role (except in those studies that randomised participants to specific internet-based interventions).

The aim of this healthtalk.org user survey was to identify

the users of the resource, their roles and their opinions about breastfeeding. It also sought to explore whether the users perceived a change in personal breastfeeding attitudes and how they planned to utilise the knowledge they gained from the webpages.

Methods

To evaluate the impact of the breastfeeding content on the healthtalk.org website, visitors were invited to participate in the study by way of a pop-up advertisement. In addition, the following methods were utilised to promote the survey and recruit participants:

- An email was sent to professionals (for example, midwifery research mailbase) and user mailbases (such as National Childbirth Trust (NCT))
- Calls to potential survey participants were tweeted using a range of relevant @tags, including: @MidwivesRCM; @NCTcharity; @MumsnetTowers
- A short invitation to complete the survey was placed on the Facebook pages of maternity organisations and breastfeeding support websites, including: MIDIRS Midwifery Information and Resource Service; Breastfeeding; The Australian Breastfeeding Association; La Leche League New Zealand; Dispelling Breastfeeding Myths; Momzelle Breastfeeding Apparel
- Consumer networks (NCT and Birth Trauma Trust) were asked to circulate the information
- Midwives were contacted via clinical networks and through publications, including the RCM's *Midwives* magazine, *The practising midwife* and *MIDIRS*.

All methods provided a link to detailed information about the survey and to the online survey held on the commercial research webpages of SurveyMonkey. Ethical approval for the survey was obtained from Bournemouth University's ethics committee – the research governance review group. Consent from participants was obtained on the landing page. All responses were anonymous. The survey was a short online questionnaire, developed specifically for this research, with 17 questions – most of which were close-ended, multiple-choice for easy completion. The draft questionnaire was pilot tested (van Teijlingen and Hundley, 2001) on three mothers who had breastfed their babies. The study ran from November 2012 until January 2013.

Findings

A total of 178 responses were received, 83.7% of which were from UK users. The majority of respondents were students, but approximately a quarter (26%) of responses came from mothers or pregnant women. Most respondents came to the website to use educational resources (67%). The majority of respondents had positive attitudes towards breastfeeding before approaching the

website. However, the proportion with very positive attitudes increased from 67.4% to 82.3% after viewing the website breastfeeding content (see Figure 1). A large number (56.1%) planned to use or pass on the practical advice. Almost all (98.3%) have recommended or will recommend the webpages to other people. Users preferred the 'stories' (individual stories and groups of related stories) (54%) to the 'resources and information' (42.6%). The majority of respondents found the site helpful (97.7%). Overall users found the website 'very easy' (47.4%) or 'easy' (44.6%) to navigate.

Discussion

Four key areas of interest emerged from the survey data: identifying the users of the webpages, demonstrating change in user perceptions of breastfeeding, recognising how users intend to utilise and/or share the information they acquired, and ascertaining the preferred content and presentation styles within the webpages.

Identifying the users of the healthtalk.org breastfeeding pages, and gaining an understanding of the impact the videos and information might have on them was an important aspect of the survey. Recruiting participants to the survey, however, proved problematic initially because of the location of the survey tab on the website and the short time window available to conduct the research. Promoting the survey through professional lists, as well as on the website itself, proved successful in increasing participant numbers, but might well have resulted in identifying a disproportionate number of health professional and student users. It is also possible that users who accessed the site as a result of information about the survey were more proactive about undertaking the survey than other users who were

Figure 1. Respondents' attitudes to breastfeeding
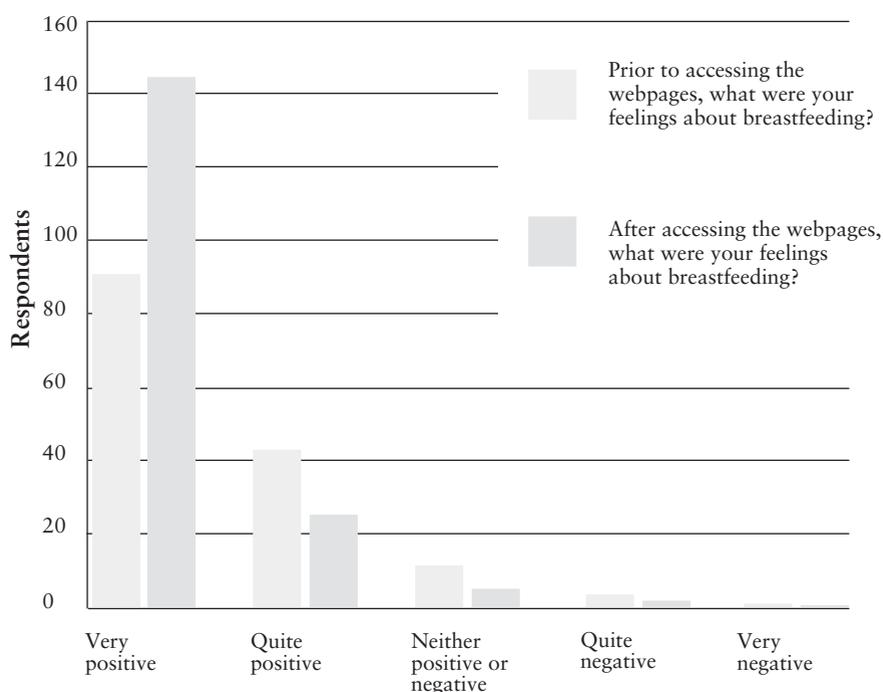
motivated to access the site solely to seek information and support, thus further skewing the result. Some education and NHS institutions, however, use these webpages as an educational tool for student midwives (Angell and Taylor, 2013) and midwives (Taylor and Hutchings, 2012), so high levels of educationally motivated access may not be an entirely unusual pattern.

In some respects, the balance between 'the public' and professional users might be regarded as disappointing, because the aim of the webpages is to support women and impact positively on their experience. It could be argued, however, that the healthtalk.org breastfeeding pages will actually achieve more impact through educating and inspiring positive attitudes in health professionals, because each individual will go on to care for large numbers of women (Angell and Taylor, 2013). Health professionals with inadequate breastfeeding knowledge (Amir and Ingram, 2008) and negative perceptions of the practice among healthcare staff (Dykes, 2006) present a barrier to providing effective support. As such, the learning environment enabled by healthtalk.org may provide an effective learning resource for students and qualified midwives by presenting information and offering an opportunity for attitudinal change (Taylor and Hutchings, 2012).

The second key area of interest was identifying the impact of the webpages on user perceptions of breastfeeding. A large number of survey participants described their attitude to breastfeeding as 'very positive' or 'quite positive' prior to accessing the webpages. The tendency for users to hold a positive attitude rather than a negative attitude towards breastfeeding might be explained by the fact that they are themselves breastfeeding or supporting a friend or family member who is. Positive attitudes might be less relevant among those who access the webpages for educational purposes; research demonstrates that some health professionals, such as midwives, struggle to manage the conflict that they feel between their perceptions and professional requirements (Angell and Taylor, 2013). The nature of the survey, however, meant that participants needed to be self-motivated to access the webpages, so they might have been more positively inclined towards breastfeeding than colleagues who did not take this opportunity. In spite of the potential bias of participants, there was still an increase in 'very positive' attitudes after they had accessed the webpages, which suggests that the content on healthtalk. org is effectively presented and offers information that is accessible and acceptable to users. While this cannot be directly compared with the findings of Stockdale et al. (2007) who found limited 'motivational' content in the websites that they reviewed, it is perhaps relevant to note that websites might provide information about breastfeeding in ways that might elicit a different emotional response from the user.

Identifying what users will do with the information that they have acquired is key to demonstrating the impact of healthtalk.org. Impact was evidenced by reports from participants that they intended to use the new information to enhance personal breastfeeding or improve breastfeeding support, and also recommending the web pages to others.

Research has shown that a proportion of information on health webpages is incomplete (Shaikh and Scott, 2005) or inaccurate (Scullard et al, 2010). Developing user trust is an important aspect of a credible website (Rosenvinge et al, 2003). The fact that users of healthtalk.org reported a high level of personal use of information, or re-use of information to family, friends and clients, would appear to reflect a high level of trust in the webpage content. While information seekers vary in their level of trust when accessing online information, there is a clear preference for 'professional' looking webpages, which do not have commercial connotations (Sillence et al, 2007) and include clinician involvement (Rosenvinge et al, 2003). Healthtalk. org may benefit from its university-based origins, as there is evidence to show that information quality from government and academic websites is higher than average (Scullard et al, 2010), and this may instil trust among users. Confidence also appears to be increased when those accessing webpages identify with 'people like me' who tell their own 'story' online (Sillence et al, 2006). This element constitutes a large proportion of the healthtalk.org pages.

The format of online information has been shown to be an important consideration in website usage. The participants in the survey demonstrated a slight preference for the 'personal story' elements of the webpages over the 'informational' pages. The benefit and impact of using real experiences in learning environments has been recognised elsewhere (Taylor and Hutchings, 2012) and this might be reflected here because of the high proportion of users who were students. The literature suggests that women are more likely to be engaged by health information that is embedded within an individual's story (Sillence et al, 2007; Aldoory, 2001). The power of the personal story is, of course, more than simple getting information from 'people like me'. Other researchers suggest that, for new parents, gaining information is secondary to the social experience of hearing stories, because they want to understand how experiences feel to others, as preparation for having those experiences themselves or a reassurance that their own experience is not unusual (Plantin and Daneback, 2009). Healthtalk.org is perhaps a 'halfway house' to interactive breastfeeding support websites, which focus more on emotional and 'shared experience' peer support rather than information – giving (Gray, 2013; Herron, 2013; Cowie et al, 2011).

Conclusion

The volume of traffic on the breastfeeding pages of healthtalk.org (some 1500 people per month), and evidence demonstrating the number of breastfeeding webpages worldwide, suggests this supply is generated by a desire for easily accessible information among the public (Giglia and Binns, 2014). This research demonstrates that healthtalk. org appeared to be an acceptable way for women and their families/friends to gain information around infant feeding. Indeed, the webpages might also present an opportunity for midwives and other health professionals to make the most effective use of their limited time by encouraging self-efficacy among clients through identifying sources of

accurate online information. In addition, the interest shown by users in hearing personal stories suggests that midwives could recommend online resources as a source of support for breastfeeding women. Midwives, in common with other health professionals, might be reticent about this development because online resources can represent a 'burden or challenge' (Powell et al, 2011). However, recognising and signposting women to high-quality, evidence-based online resources for information and support could be viewed as an increasingly important part of the midwife's role. Therefore, we argue that midwives and others who support mothers in their breastfeeding should be aware of the existence of good-quality breastfeeding web-based information, such as provided by healthtalk.org.

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Midwives' experiences of using a modified early obstetric warning score (MEOWS): a grounded theory study

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Abstract

Background. Computerised early warning systems have become commonplace in UK hospitals, but there is limited understanding of midwives' experiences of using them.
Objective. To gain an understanding of midwives' experiences of using a modified early obstetric warning score (MEOWS) and identify perceived barriers to using it, in order to consider how compliance may be improved.
Methods. A grounded theory study using semi-structured interviews with six midwives working on the labour ward of a large tertiary level teaching hospital in the Midlands.
Findings. Deficiencies in the management of change led to misunderstandings of the rationale for MEOWS affecting midwives' motivation to adopt the change. The frequency of changes in practice, lack of training in how to use the tool and duplication of documentation were perceived as barriers to implementing the MEOWS. Midwives experienced the tool as a threat to autonomy, undermining clinical judgement. The findings also highlight midwives' concerns about delegation of measuring observations to support staff. Delegation was thought to lead to task orientation, which opposed holistic midwifery care.
Conclusion. Proposed changes to maternity care need careful planning. Involvement of clinical midwives in the development of tools which affect practice is necessary. Effective communication and adequate training could increase practitioners' understanding and perceived value of the tool, thereby increasing their motivation to implement it (Upton and Brooks, 2002).

Key words: Modified early obstetric warning scores, barriers, change management, autonomy, evidence-based midwifery

Background

Since recommendations made by the Department of Health (2005) and NICE (2007) critical care reports, the use of early warning scores (EWS) has become commonplace in UK hospitals (Jansen and Cuthbertson, 2010; McGaughey et al, 2007). The EWS is an observation chart where vital signs are recorded and allocated a score from zero to three, depending on the extent to which the measure deviates from the normal range (Goldhill, 2006). The aggregate score of all the parameters is calculated and action directed accordingly by the accompanying algorithm. Such systems are sometimes called 'track and trigger', as a high score should trigger action, such as increased frequency of observations or referral to a doctor (James et al, 2011; Gao et al, 2007). The underlying principle is that clinical deterioration is preceded by changes in physiological markers such as heart rate, respiratory rate, oxygen saturation, blood pressure and temperature (Cuthbertson, 2008). Consequently, monitoring vital signs over time may allow earlier detection of impending deterioration, facilitating timely treatment before a patient's condition becomes critical (McGaughey et al, 2007). It is thought that the use of EWS systems may aid recognition of acute illness and interpretation of clinical findings, expedite escalation of clinical concerns, aid communication, and standardise the response to critical illness (McGlennan and Sherratt, 2013; McGinley and Pearse, 2012; Kyriacos et al, 2011; Cuthbertson, 2008).

There is evidence to suggest that EWS have the potential to improve detection of critical illness and improve clinical outcomes when used in paramedic ambulances, prior to hospital admission (Fullerton et al, 2012). A systematic review by Alam et al (2014) found mixed results in terms of mortality rates, high dependency unit (HDU) or intensive care unit (ICU) admission and incidence of cardiopulmonary arrest; although they report an overall trend towards better outcomes with use of EWS. However, the authors advise against making generalised conclusions regarding the value of EWS, as the findings relate to specific populations of patients, for example, trauma and orthopaedic ward patients or haematology patients (Alam et al, 2014). Similarly, the number of different EWS tools that are found in western healthcare systems has hindered large-scale evaluation of the tool (McGaughey et al, 2007). A Cochrane collaborative systematic review identified 25 different locally-modified track and trigger EWS in use across England and Wales with variable diagnostic ability, sensitivity and predictive values (Gao et al, 2007).

Implementation of EWS in maternity care follows the recommendations from two triennial maternal mortality reports (Lewis, 2011; 2007) that highlighted the delay in recognising and acting upon clinical deterioration as a contributing factor to maternal death. However, it is suggested that a major driving force for the widespread implementation of EWS in the UK is the risk management standards set by the NHS Litigation Authority's (NHSLA) Clinical Negligence Scheme for Trusts (CNST) (McGlennan and Sherratt, 2013), which offers significant financial incentives to NHS trusts for compliance with the standards, which includes the use of EWS (NHSLA, 2013). The 2007 CEMACH report included a modified early obstetric

warning score (MEOWS) tool, which it recommended could be used by maternity services (Lewis, 2007). In an evaluation of this chart, 30% of the 676 patients triggered a response, while only 13% demonstrated true morbidity (Singh et al, 2012). Crucially, the level of intervention required by this false-positive rate adds significantly to the workload of midwives and obstetricians using the tool. It may be due to dissatisfaction with the level of specificity of the CEMACH MEOWS that many trusts have developed their own tools. This has resulted in a multitude of different systems being used across the UK, with substantially different scoring parameters, the ability of which to improve outcomes for women are unknown (Isaacs et al, 2014; Swanton et al, 2009). It is perhaps due to the difficulty in defining and measuring obstetric deterioration that published literature regarding the use of EWS in maternity care settings has tended to focus on describing the implementation of EWS charts, rather than evaluating the ability of the parameters to detect patient deterioration or critical illness (McGlennan and Sherratt, 2013; Swanton et al, 2009). Despite this, the medical EWS has been modified and has become commonplace in all UK maternity units (Isaacs, 2014).

Gao et al (2007: 667) warns that 'the potential benefits of using any track and trigger can only be realised if physiological parameters are accurately measured and recorded'. Disturbingly, published audit data show that just 6% of MEOWS charts were completed fully, and where deviations from the normal warranted escalation, there was a 'worrying lack of documentation indicating whether a doctor was called and what action was taken' (Allman et al, 2010: 15). Furthermore, even when abnormal observations are recorded, appropriate action is not consistently taken to escalate concern (Hillman, 2005). Of 576 deaths reported to the National Patient Safety Agency (NPSA), 2007), 11% resulted from failure to recognise or act upon signs of clinical deterioration. As Kyriacos et al (2011: 326) noted, simply recording vital signs is not sufficient but requires midwives to 'record all vital signs frequently; recognise deterioration and the urgency of a situation and summon assistance... without delay'.

Poor documentation of vital signs in practice is well documented in the literature (Hammond et al, 2012; Ludikhuize et al, 2011; Chen et al, 2009; Hillman, 2005). The reason for this is unknown. McGaughey et al (2007) recommended research to investigate the barriers and facilitators of tools such as the MEOWS to understand how it is used in practice, including the acceptability to clinicians which is a facet of effectiveness (Ovretveit, 1998). Qualitative research is needed to identify midwives' experiences of using a MEOWS and the barriers that they face in practice, in order to improve compliance (Johnstone et al, 2007).

Method

A grounded theory (GT) approach was taken to explore the experiences of midwives within the context of the health service. The research broadly followed the Straussian model of GT, as being known to the participants inevitably resulted

in an active relationship, which is distinctive of Straussian GT (Hunter et al, 2011). Where practicalities necessitated elements of the method to deviate from the traditional Straussian model, this was explicitly justified in the study protocol.

Debate exists as to whether it is appropriate to conduct a literature review prior to undertaking GT research, as preconceived ideas may bias the data analysis (Cutcliffe, 2000). However, a degree of literature review was necessary to justify the research proposal for ethics committee and local research and development department approval. A preliminary literature search found no research related to midwives' experiences of using a MEOWS, justifying the need for the present study. A secondary literature search was undertaken following completion of data analysis, in August 2014. The Cochrane Library, Ovid Medline and CINAHL databases were searched using the search terms and exclusion criteria in Table 1. Three studies were identified that had been published since completion of the data collected for this study (see Table 2) and the findings of these contribute to the discussion and support the findings of this research.

Setting
The study took place at a large, tertiary level maternity hospital in the Midlands. During the planning stages of this study, the unit achieved CNST level three, which was significant in view of the CNST requirement to use a MEOWS tool. All women, irrespective of the model of care, were expected to be monitored with this tool.

Design
The study comprised a single semi-structured interview per midwife. The interviews followed a loose schedule of questions, which evolved over the course of the six interviews to follow up emerging themes. Each interview was digitally recorded with the participant's consent and transcribed soon afterwards. Each transcription was analysed prior to the next interview to guide decisions

Table 1. Search terms and exclusion criteria

Search term	Exclusions
Modified early obstetric warning score/system	Emergency care
Early obstetric warning score/system	Paediatric
Early warning score AND obstetric	Intensive care/high dependency care
EWS OR MEOWS	Surgery
Track and trigger system	Medicine
Midwives OR maternity	–

Table 2. Secondary literature search: included studies

Study	Description
Mackintosh et al (2014) Published since completion of data collection.	Ethnographic study which audited MEOWS documentation, conducted observations, and 45 semi-structured interviews with midwives, obstetricians, anaesthetists, neonatologists and managers. This is a well-constructed study using mixed methods to triangulate findings and a cross-section of clinicians.
Isaacs et al (2014) Published since completion of data collection.	Survey of 205 lead obstetric anaesthetists regarding early warning systems currently used by maternity units in the UK. Although the study does not investigate midwives' experiences, the study does discuss barriers to implementing MEOWS albeit from an anaesthetic perspective, therefore considered to be relevant.
Bick et al (2014) Published since completion of data collection.	Survey of heads of midwifery regarding implementation of MEOWS and barriers to midwives using them. Questionable choice of population to survey given the objective as the views of heads of midwifery may or may not reflect those of midwives who work with the tool in practice. Questionnaires provided closed questions with set responses. This could be said to limit or force set responses. However, correlation with findings of the present study.

regarding subsequent participant selection and modification of the interview schedule. This ensured credibility of the findings as themes were allowed to emerge from the data (Chiovitti and Piran, 2003). Additionally, the findings were discussed and informally member checked with the research participants and peers after completion of data analysis. These mechanisms confirmed 'fit' which is determined by how well the theory is recognisable to the participants' experience (Strauss and Corbin, 1998).

Recruitment
The study was advertised at the study site to all labour ward midwives via the trust's global email system and posters displayed within the clinical area. Those who expressed an interest in the study were given a participant information leaflet, and written consent gained at least 24 hours later, as per protocol. Six midwives were recruited to the study prior to data saturation being achieved.

Participant selection
The first participant was inevitably self-selected. Thereafter, theoretical sampling was implemented, whereby each interview was analysed prior to the next, to determine appropriate participant selection for forthcoming interviews and enable the exploration of emerging themes (Connelly, 2013). The first participant was a newly qualified, Band 5 midwife, who had no experience of any alternatives to a MEOWS on which to base comparisons or judgements. Consequently, subsequent recruitment focused on more senior midwives who had greater experience with and without the MEOWS. The final participant recruited was a Band 7 labour ward coordinator, who had a wealth of clinical experience and provided necessary insight from a leadership perspective.

Data collection
Interviews took place in a private room at the study site where all of the midwives worked. The interviews lasted between eight and 38 minutes, with the average being 17 minutes and concluded when the participants had said all that they wanted to. The researcher was known to the participants as a colleague who also worked clinically as a midwife at the study site. Participants were advised that the study was to be conducted as part of an academic programme and, as such, the researcher was independent from the NHS trust. Interviews were digitally recorded and then transcribed. Transcription of the interview preserved the value of the specific words that participants used, which Seidman (1998: 97) considered to be the manifestation of a deeper 'consciousness'. This method ensured that the analysis was grounded in the data. Each transcript was analysed soon after the interview so that emerging questions or themes could be added to the interview, schedule for exploration with the next participant.

Data analysis
Line-by-line in-vivo coding was performed by hand whereby verbs, adjectives, nouns and phrases were cut from the text to form open codes and then assimilated with similar words or phrases to produce categories, as prescribed by Strauss and Corbin (1998). Larger sections of the texts were examined as a whole to ensure the context informed the interpretation, and aided axial coding. Three basic analytical questions were used, as recommended by Elliott and Jordan (2010: 30): 'What is this a study of? What category does this incident indicate? And what property does this incident indicate?'

Constant comparison of the data was an iterative process of comparing new data with previous data; each interview was analysed before the next to identify and develop emerging theories and ensure that the theory was grounded in the data (Walker and Myrick, 2006; Strauss and Corbin, 1998). Data saturation was achieved when no new codes or categories emerged from the raw data – when similar information was repeated by participants at interview.

Transparency within data analysis requires reflexivity whereby the researcher is aware of their impact upon the interpretation of the data (McBrien, 2008). Complete objectivity was not possible given the researcher's prior experience as a midwife; however, the participants were not aware of the researcher's opinions on the MEOWS. Great care and reflexivity were employed by the researcher to avoid influencing the participants or biasing their responses. This is termed 'theoretical sensitivity' by Connelly (2013). It is required to balance the integral role of the researcher in the process, while being diligent not to influence the emergent theory. A journal was kept in which the researcher reflected upon emerging themes and her own influence

upon the research process, for example, documenting when an avenue of discussion may have been pursued out of the researcher's interest rather than because it was important to the participant. The use of a journal and memos not only augments reflexivity, but also forms documentary evidence of the process that was followed, thus increasing transparency (Koch, 2006).

Ethics
Ethical concerns in relation to informed consent, data protection and confidentiality were addressed in the research protocol. Favourable opinion was granted by the local research ethics committee, as was approval from the NHS research and development department. All data and records were held securely on a password-protected computer, in accordance with regulations at the coordinating centre, while the study was ongoing and then archived in accordance with sponsor regulations and the Data Protection Act (UK Parliament, 1998). Access to records was restricted to the chief and co-investigator.

Findings

In total, six midwives were interviewed prior to data saturation being reached. The midwives ranged from newly qualified, with less than six months' experience, to senior midwives, with over 30-years' experience. Half of the participants had trained at the study site, and worked there ever since. The other half had a broad range of experience, covering community midwifery, private practice, midwifery education, and other NHS trusts. Data analysis identified 348 open codes, which lead to the discovery of 12 axial codes. As the name 'axial' suggests, these concepts are interrelated. However, to address the objectives of this study, the findings are presented under three headings: midwives' experience of the development of the MEOWS; barriers to implementing the MEOWS; and midwives' experiences of using the MEOWS.

Midwives' experience of the development of the MEOWS
At the study site, the MEOWS tool was devised by local stakeholders as a response to clinical incidents and recommendations by national bodies such as CEMACH (Lewis, 2011; 2007) and the Department of Health (2005), in order to reduce maternal mortality and morbidity. However, the midwives who participated in the study felt that the tool was devised by those in positions of authority, without their involvement:

"Management, education, and medics will sit in meetings and say 'we've got to put this in place... We've decided... and that's the way it will work...'" (Sophie).

"They're devised by people who are not involved in the clinical... whatever change is being made is being made by people that are not here doing the everyday job" (Anna).

The rationale for introducing the MEOWS was not well disseminated. Half of those interviewed did not link the introduction of the MEOWS to any benefit to women. Rather, it was seen to be driven by auditable CNST standards:

"I feel sometimes I work for an insurance company and

I am a data collector and all the charts and stickers we use are for one person, to make their job easier, the auditor's job easier" (Mary).

Although Anna also attributed the MEOWS to CNST, she could see value in it for risk-managing purposes:

"It protects us from any more errors because errors will happen, error is bound to happen when you've got human beings doing the chart... in the long term, it's going to be good because that then prevents accidents happening and cases of litigation coming so eventually it will save money" (Anna).

Midwives were reluctant to readily adopt the MEOWS because they did not see any inherent value in it, moreover, it was imposed upon them and mandatory:

"I use it because they use it within the trust and we have no choice" (Isabel).

Barriers to implementing the MEOWS
Frequent changes at the study site had affected morale. In light of this, therefore, the introduction of any new practice compounded the problem, as the midwives were worn down by the workload and frequency of changes. Consequently, a pre-existing resistance to change inevitably presented a barrier to the implementation of the MEOWS:

"I think the biggest problem is that they keep changing things... because people get a bit deflated with constant changes" (Sophie).

"'Oh it will only take you a minute'... None of it only takes a minute..." (Mary).

Training in how to use the tool was said to be inadequate:

"If somebody had shown you at the beginning... rather than it just suddenly appearing and nobody really knowing where it came from" (Sally).

Participants expressed a unanimous desire for someone to come to the labour ward and talk them through the MEOWS chart, explaining how it was to be used:

"I know it's a chart and it does explain itself but... you've got constantly new stickers coming in and new things and CNST requirements... so if somebody had shown you at the beginning... I think it would have been quicker" (Sally).

When observations were already recorded on the partogram and in the notes, the MEOWS was seen as a duplication of documentation. This was a concern for the midwives, who expressed that the increasing workload and volume of paperwork hindered their ability to care for women effectively:

"In labour ward, we are always recording in the notes and on the partogram and it's just another place that you need to put your observations. I think we do it in enough other places. I don't know how important it is" (Heather).

"...another paper-pushing exercise" (Isabel).

"...writing about it takes three times as long as doing it... we are so task-orientated... the woman's at the bottom of the pile really" (Mary).

Midwives' experiences of using the MEOWS
Implementation of the MEOWS places midwives in a precarious position. The tool allows delegation of measuring observations to unregistered support staff, such as maternity

care assistants (MCAs). However, while measuring and recording MEOWS can be delegated, the midwife retains overall accountability for the outcome (RCM, 2013). To the midwives, far from delegation of measuring the MEOWS being seen as easing their workload, they were reluctant to relinquish this responsibility. Firstly, measuring observations was seen as a vital part of the midwife's clinical examination. To delegate part of this was seen as reducing holistic midwifery care to task orientation:

"Traditionally as midwives we did all the observations, made a clinical decision whether someone was well or unwell. It's been taken out of our hands, placed in the hands of unqualified care assistants who may not understand the implications of the MEOWS score or the woman's vital signs" (Isobel).

Secondly, midwives in the study expressed concerns about MCAs undertaking this task, such as questioning their ability to perform the observations and report back the findings. Midwives reported not always being informed of raised MEOWS, and errors in calculating aggregate scores. By design, MEOWS charts negate the need for skilled interpretation of observations and clinical decision-making as appropriate actions follow a colour-coded algorithm (Kyriacos et al, 2011). However, appropriate escalation of raised scores requires recognition that the score is abnormal, and effective communication between the MCA and the midwife. The retained accountability for tasks undertaken by others was a source of concern for the midwives:

"My biggest concern is that because they're filled in by the MCAs quite often it's documented that the midwife has been informed of the result but we haven't" (Isobel).

"We let care assistants do the observations on the presumption that should they find something abnormal, they came to tell the person in charge. I was that person in charge and nobody told me... several hours has passed by... and nobody treated her" (Sally).

The requirement to inform the doctors when a high score was triggered was a source of conflict, if the midwife did not believe the woman to be unwell. Clinical judgement was seen to be superior to the MEOWS:

"I am an experienced midwife. If my woman is ill, I'll know and I am going to react..." (Sally).

"I find it's a bit rigid and it doesn't look at differences as to why she might have a raised pulse... or she is in pain... the MEOWS won't allow me to do that" (Mary).

"A woman doesn't score a one on the MEOWS until she's got a temperature of 38 degrees but if there is a trend there then you should be acting on that before she scores a one" (Anna).

"I am perfectly capable of assessing a woman's clinical state without using a MEOWS..." (Mary).

However, MEOWS provides 'gravitas' to summon an urgent review for a woman who is becoming unwell:

"If I am concerned about her, I would make it into a box higher to get a bigger response from the doctors. I think that's what most people do" (Isobel).

Trust in the tool itself appears to depend upon the experience level of the midwife:

"I think it depends on experience doesn't it, but a lot of people who have been nurses before will understand that and you can tell if a woman's breathing is laboured and you just measure it a bit more accurately" (Anna).

"It highlights to you when things are abnormal... it's useful how it's all set out and its quite clear what you need to do and who you need to refer to" (Heather).

On the other hand, there was concern expressed that reliance upon the tool might lead to deskilling:

"Basically, I think people are going to lose experience and skill if the stickers are not there or a box isn't there to tick. So sorry I don't really think they're fantastic" (Isobel).

Discussion

The 2007 CEMACH report (Lewis, 2007) recommended the use of a MEOWS tool due to delays in escalating clinical concerns regarding deteriorating patients, poor communication and inconsistent response to critical illness. However, evidence has shown that compliance with using MEOWS charts in maternity care settings is poor and escalation protocols are not adhered to (Allman et al, 2010). The focus of this GT study was midwives' experiences of using the MEOWS, to gain an understanding of how the tool is used in practice and identify perceived barriers to using it.

The primary barrier to the MEOWS was the way in which it was devised and implemented. It is theorised that lack of involvement in the change process affected the midwives' motivation to adopt the change. 'If people cannot see the benefit to themselves, their working practices or to patient care, then they will continue to be resistant' (Stoneshouse, 2012: 457). Furthermore, involvement in change may lead to a greater sense of being valued and able to instigate changes in relation to issues that are important to midwives 'on the ground', which may in turn improve job satisfaction (Upton and Brooks, 2002). Research by Mackintosh et al (2014), published since completion of the present study, highlighted tensions between managers who have driven the implementation of the MEOWS for the financial rewards of CNST, and clinical midwives who lacked faith in the tool.

Tensions also existed in the present study where midwives felt obliged to inform a doctor of raised MEOWS, even though they themselves deemed that there was nothing wrong. The findings are indicative of what Colvin et al (2013) described as turf-battles between midwives and obstetricians. Literature suggests that clinical judgement is shaped by perceptions of birth and risk (Pollard, 2011; Jefford et al, 2010; Lavender and Chappel, 2004). Midwives, who inherently view birth as a normal physiological event, may seek to explain and rationalise unexpected observations and, therefore, deem it unnecessary to refer for a raised MEOWS. While the midwife is the lead professional in low-risk maternity care (Chief nursing offices of England, Northern Ireland, Scotland and Wales, 2010), NMC *Midwives rules and standards* (NMC, 2012) state referral to an appropriately trained professional should be made where deviations from normal occur. It could be argued that the scope for autonomous practice has been removed altogether if all raised MEOWS must be referred to a doctor without leeway for the midwife to

interpret the observations in context. However, it should be recognised that, while autonomous midwifery practice is entirely appropriate for low-risk women, for those requiring complex care, autonomy without obstetric input is outside the midwife's scope.

Similar tensions were noted by Mackintosh et al (2014: 29), arising as a result of the midwifery commitment to the promotion of normality, while the MEOWS was seen to 'inappropriately medicalise childbirth' and compromise the midwife's autonomy. These factors led to what the authors term 'discretionary' use of the MEOWS, whereby midwives used professional judgement to decide when or when not to use it. In view of this finding, it is questionable whether the use of a MEOWS is necessary for all women, as it can be perceived as medicalisation of normal childbirth, or whether it should be used specifically for those women who are high risk and therefore under the jurisdiction of an obstetrician (Bick et al, 2014). As one midwife so neatly phrased it:

"Women are individuals, it's not one-size-fits-all, it doesn't fit all... they need different types of care" (Sophie).

A national service evaluation of the implementation of a MEOWS tool by Bick et al (2014), also published since completion of this study, found that duplication of paperwork was among the most common barriers to implementing the tool, as was difficulties in obtaining medical review for raised MEOWS due to workload issues. The RCM *State of maternity services report* (RCM, 2013) makes apparent the complexity of challenges that UK maternity services continue to be faced with; these include the nationally rising birth rate, the increasing medical acuity of childbearing women, and rising obstetric intervention rates. 'Care becomes reductive and fragmented' (Hunter, 2010: 257). This shakes the very essence of what it means to be a midwife: being 'with woman' (Colvin et al, 2013). When they interviewed midwives about their changing role, Prowse and Prowse (2008) found decreased job satisfaction, as midwives increasingly took on technical and administrative tasks, while their key function of being 'with woman' was unwillingly delegated to support staff. This finding resonates with the midwives in the present study, who were reluctant to delegate observations to MCAs because it represented a task orientation which threatened holistic midwifery care.

Limitations

The small participant size could be seen as a limitation. However, the findings resonate with existing literature which infers credibility. The author cannot claim transferability to other settings, however, recently published research supports the findings (Bick et al, 2014; Isaacs et al, 2014; Mackintosh et al, 2014).

Implications and recommendations

A key finding of the study is that implementation of the MEOWS was poorly managed. It is recommended that local stakeholders should consider involving clinical staff in the development of tools that affect their practice, as this may improve compliance with them. Furthermore, effective communication and training at the introduction of tools such as the MEOWS could increase understanding and perceived value of the tool, thereby increasing motivation to implement it (Upton and Brooks, 2002). The study raises important issues in relation to midwives' concerns over the delegation of observations to MCAs while retaining accountability for outcomes. Consultation with midwives and MCAs is recommended to mediate the most appropriate delegation of workload to maximise the employment of support staff without diminishing the unique role of the midwife in being 'with woman'. Research is required to evaluate whether widespread implementation of the MEOWS for all women, rather than targeted use for those with risk factors, is superior for detecting early signs of maternal morbidity. The MEOWS is currently used for all women at the study site, regardless of the model of care. The appropriateness for low-risk women under midwife-led care warrants further consideration.

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An evaluation of direct-entry student midwives' perceptions of normal birth

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Abstract

Background. 'Normal birth' as a term is used widely within midwifery and obstetric practice, in addition to midwifery education programmes. It is also a term which is complex, subjective and culturally experienced.

Objective. This evaluation aimed to explore the perception of 'normal birth' as experienced by final-year direct-entry student midwives with a purpose of informing curriculum planning.

Design. An explorative evaluation using a qualitative approach to gather student midwives' experiences of normal birth within the clinical setting. Data were collected via routine evaluation questionnaires and an online discussion forum; in addition, two tape-recorded focus group interviews were held and analysed using thematic content analysis. The use of routine curriculum evaluation procedures obviated the requirement for formal ethical approval, but on the advice of the School research ethics committee, voluntary written informed consent was requested from all potential participants, who were assured of confidentiality and that non-participation would have no deleterious consequences.

Participants. All final-year student midwives (n=35) were invited to complete routine evaluation questionnaires and participate within the online discussion forum and 14 student midwives participated in the focus group interviews.

Findings. The students identified a number of barriers perceived to hinder the promotion of normality in clinical practice. These perceived barriers included a lack of consensus on a definition of normal birth; medicalisation of childbirth; the influence of midwives and policies or protocols leading to defensive practice. The interactive themes of environment, education and empowerment emerged as necessary components to promote normality in childbirth.

Implications. There is a need to move beyond the debate of what normal birth is and gain an acceptable universal definition on which midwifery and obstetric practice can be measured.

Key words: Student midwives, normal birth, inter-professional, education and birth environment, evidence-based midwifery

Introduction

Curriculum review is an essential component of ensuring that any education programme is up to date and fit for purpose. The role of the qualified midwife is diverse and the *Standards for midwifery education* (NMC, 2009) aim to ensure that all student midwives, on the point of registration, are fit for purpose. Midwives as lead carers in normal pregnancy must demonstrate competency in understanding, promoting and facilitating normal childbirth (International Confederation of Midwives (ICM), 2013; NMC, 2010). This paper reports on the findings of two focus group interviews, which were part of a curriculum evaluation designed to elicit direct-entry student midwives' understanding and perceptions of 'normal birth' and the promotion of normality with clinical practice.

'Normal birth' as a term is used widely within midwifery and obstetric practice, in addition to midwifery education programmes. It is also a term which is complex, subjective and culturally experienced and thus defined depending on whether one is an obstetrician, midwife or a mother (Lawrence-Beech and Phipps, 2008; Anderson, 2003).

The WHO (1997) describes normal or natural birth as a spontaneous labour and delivery, where an infant is born without medical or technological help. This definition is the foundation on which the UK and Canada base their working definitions of normality, although with the additional inclusion of some forms of intervention (Society of Obstetricians and Gynaecologists of Canada, 2008; Maternity Care Working Party, 2007).

From an historical and feminist point of view, normal birth has been placed within the medical approach which views the female body as a fundamentally flawed machine that requires control (Davis-Floyd, 2003). In contrast, from a midwifery point of view, birth is viewed as a normal event in a woman's life cycle, where there is need for some care in the form of minimal monitoring, advice and support (Lawrence-Beech and Phipps, 2008). van Teijlingen (2005) describes these working practices in childbirth care as a dichotomy, a contrast between the pathology of obstetrical practice and the social meaning of midwifery practice.

When exploring normality in childbirth, it is logical to look at the impact that models of care can have on the student midwife's perspective of normal birth; although to date, there has been limited published literature on the issue. Gilkison et al (2005) illustrated that, although student midwives held the belief that the ideal definition of normal birth was one in which labour and birth are seen as a completely physiological process with no intervention, what they see in practice can include a wide variation and range of interventions.

The students' experiences of clinical practice tended to shift their view from the ideal to the pragmatic and they found that both midwives and women still defined birth as normal, irrespective of various levels of intervention.

Downe (2001) indicated that quite often it is midwives who carry out unnecessary interventions (such as non-clinically-indicated artificial rupture of membranes) which interfere with the normal birth process.

Students perceive the confidence and assertiveness of the individual midwife as being a leading factor in whether or not normal birth is promoted and recommended. They state mentor midwives should be good role models, enabling the next generation of midwives to have the confidence to support normal birth and to be assertive with other midwives and medical staff (Fraser, 2007).

Mentor midwives in the UK are required to demonstrate that they are proficient to verify that student midwives have achieved the standards of education (NMC, 2008) and achieve the NMC standards of proficiency (NMC, 2009). While the aim of the standards is to ensure a high level of education, they should also cause midwives to reflect on their practice, both in the interests of women, and in the preparation of student midwives to become autonomous and reflective practitioners.

Method

This evaluation aimed to explore the perception of 'normal birth' as experienced by final-year direct-entry student midwives with a purpose of informing curriculum planning. In addition, the evaluation provides an insight into understanding the influence of the clinical environment on student midwives' perceptions of 'normal birth'. A qualitative approach was adopted in order to gather data from the student midwives' perspectives and to develop understanding of their views and experiences.

All final-year student midwives (n=35) were invited to participate in the evaluation using routine evaluation questionnaires and an online discussion forum. The routine evaluation questionnaires (n=32) and the discussion forum revealed a suggested gap between theory and practice, which was predominantly perceived to be in relation to normal birth. The student midwives were invited to participate in focus group interviews with the aim of gaining further insight into their perception and understanding of 'normal birth'; 14 students voluntarily consented to participate and two focus group interviews were held with seven students in each. These were held within the university setting and facilitated by a lecturer from the School of Nursing and Midwifery. Each focus group interview was tape-recorded and notes were made by the facilitator.

The use of routine curriculum evaluation procedures obviated the requirement for formal ethical approval but, on the advice of the school research ethics committee, voluntary written informed consent was requested from all potential participants, who were assured that non-participation would have no deleterious consequences. While formal ethical approval was not required, the evaluation study adhered to ethical principles throughout the process. The students were considered valuable to achieving the aim of the evaluation, but it was also recognised that their status as students could make them more vulnerable, therefore careful consideration was given to ensure they would not perceive themselves as

coerced, disadvantaged or harmed in any way (Anderson, 2011). Informed consent was fundamental; each student was provided with detailed information about the evaluation, in addition to explicit written assurance that their refusal or consent to participate would neither affect them positively nor negatively. The students were informed that participation should be voluntary and they could withdraw from the study at any time without fear of discrimination. Confidentiality was guaranteed.

Thematic content analysis was used to analyse the data from the focus group interviews. Green and Thorogood (2014) describe thematic content analysis as the most basic and common approach to analysing qualitative data with the aim of reporting the key elements. It is essentially a comparative process by which the various accounts gathered are compared to classify the common and recurring themes within the given set of data.

Findings

Analysis of the two focus group interviews revealed how the student midwives perceived the concept of normal birth and how their perceptions had been influenced by other factors. The student midwives discussed the ideal of normal birth:

"*Spontaneous, vaginal, no medical interventions whatsoever and letting a woman do whatever her body wants… but (student emphasis) that isn't necessarily what is happening out there*" (FG1std/m1).

"*… but... things that you would look on as normal are the things that happen on a regular basis*" (FG1std/m3).

The rising CS rate might be classified as normal by women as it is becoming such a common outcome of pregnancy:

"*Caesarean section… is becoming common practice… women don't view it as serious because of how common it is*" (FG1std/m4).

The topic of CS led the discussion to the issue of medical intervention. The students found this to have an effect on the process, not only of normality, but also informed choice and women-centredness:

"*If obstetricians are going to bring someone in with their first baby and induce them early you can't expect a normal birth… it is not going to happen…*" (FG2std/m1).

Induction of labour was considered by the students to be an intervention that would not be associated with the process of normal birth and, therefore, was a barrier to normality. This is in keeping with definitions of normal birth proposed Beech (1997) and WHO (1997), which describe normal birth as having a spontaneous onset. The issue of induction of labour as a barrier to normality is illustrated by one student quite clearly:

"*…the only time I saw normality was at night when the women would come, in spontaneous labour, and it wasn't a case of them being induced…*" (FG2std/m5).

However, there was debate as to what should be considered an intervention, apart from induction of labour. The student midwives considered intervention to be anything that interfered with the physiological process, so augmentation of labour was perceived to be an intervention. The issue that created the most debate on intervention was epidural

analgesia. This was considered to be complex and focused on two specific areas: the purpose of labour pain and sense of achievement.

The students were of a clear opinion that there is a purpose for pain in labour – it encourages movement, which assists the physiology of labour. These comments support Gould's (2000) concept analysis of normal labour in which Gould indicated that labour is hard work and the role of movement is crucial, and as one student indicated:

"There is a purpose for the pain… pain helps you to know what to do with your body" (FG2std/m5).

Leap and Anderson (2008) described the pain of labour as central to women's experience of birth, and it is the attitudes of those supporting women in labour that will have the biggest impact on how women deal with pain. This has been reflected by the students who feel that epidural analgesia can cause women to 'miss out' on an experience. One student reflected on her own experience of childbirth:

"…having the experience is completely normal without pain relief. I have had an epidural myself and know the difference… that there is a purpose for the pain… there is purpose and satisfaction, actually more a sense of achievement that you have gone through that… that your body would allow you to do that" (FG1std/m6).

The students considered epidural analgesia to interfere with the physiological process of birth. They viewed use of epidurals by some staff as a means to control the birthing process, and that some midwives lacked the necessary skills to truly support women in labour:

"It is, in a sense, giving up control, and letting someone else take over… I have seen midwives with the epidural trolley before they have even asked the woman what she wants…" (FG2std/m5).

Supporting Leap and Anderson (2008) and Leap et al (2010), the students also indicated that the attitude of the midwife was vitally important in understanding how women coped with pain. The students presented two scenarios, which demonstrate the potential difference the attitude of the midwife can make for the woman's experience:

"The midwife was really good and supportive and talked me through it, assuring me that it would be ok… it makes you feel that you can do this, you can get through this without an epidural… and I did" (FG2std/m6).

"It was very easy for the midwife to say that she could get an epidural and you could see her talking women into getting an epidural… the epidural trolley having been set up and waiting at the door since the woman had arrived in delivery suite" (FG2std/m1).

The attitude of the midwife had an impact on the care that women received and also on the experience of the student midwives. The students demonstrated that the influence of the midwife may be either positive or negative. The students spoke passionately of the positive influence of individual midwives, and the positive impact this had:

"The midwife was brilliant and basically said: 'I am here and I am going to help you'… she just closed the curtains, closed the door and got the husband involved' (FG1std/m 1).

"She knew what she was doing… she had a belief…

never did she say: 'You have to do this', she just encouraged them… and the confidence came back…" (FG2std/m2).

The students also had experience of midwives whose attitudes were of a negative nature, and more in keeping with a medical model of care. It was evident within the discussion that students were very aware of which midwives they would prefer to practise with who would promote more 'normality' into the experience of birth:

"I think that some midwives can make a difference… if you go in with them, you have probably more chance of seeing a normal birth than with others" (FG2std/m5).

However, the students felt that midwives were restricted in their practice and that this was a deciding factor on why some midwives were less likely to promote normality and these restrictions were also perceived as a barrier to promoting normality.

The students described fear of litigation as a factor inhibiting midwives from promoting normality, and that fear is compounded by the number of policies/protocols dictating midwifery practice, a view supported by Nolan (2010):

"The policies are barriers within themselves… So, until they change the policies, there is a huge fear to go into the clinical area and work how you feel is right…I think a lot of midwives won't change their practice for fear of what will come back on them…" (FG1std/m 4).

This is an issue which was discussed by Downe (2001) and more recently by Clewes (2013), who indicate that the culture and hierarchy within the clinical environment may impact on normal midwifery practice. Some midwives have been described as employing subtlety to avoid unnecessary intervention and promote the normal birthing process; a tactic students observed:

"My midwife… delayed contacting people and things did fall into place and it did take an extra 15 or 20 minutes but it was a much better result…"(FG2std/m1).

The students felt that the subtlety demonstrated showed the positive effect of the midwife's influence. However, it is assumed that this level of confidence and experience also ensure safe practice and appropriate referral, if required (NMC, 2012). Fraser (2007) indicated that students perceive the confidence and assertiveness of the individual midwife as being a leading factor in whether or not normal birth is promoted:

"When you see some midwives working, you know why they have the monitor on all of the time… they just don't have the confidence in themselves to be able to read the situation without that [the monitor]… they don't trust their skills…" (FG2std/m1).

Implicit within the students' discussion was the suggestion of how they would like to practise as registered midwives. The students felt that although they may not necessarily be observing the ideal of normal birth on a regular basis they did, however, value the teaching provided to them. The students did not percieve this as a negative aspect of their education, rather they viewed themselves as instigators of change for future practice and, therefore, the ideal of normal birth was a necessary component of their education:

"All I can say is that in the future we can influence them.

Therefore, we have to have the ideals that we can strive for... we could make a change... we could promote normal birth..." (FG1std/m3).

Discussion

The findings illustrate the complex nature of the phenomena of 'normal birth'. The issue for the students is not just about defining 'normal birth', but the experience of women, and the concern that women should have a fulfilling childbirth experience irrespective of mode of delivery. To do so, require midwives and obstetricians to work together in a women-centred model promoting choice, continuity and control.

The environment in which women give birth has been recognised by the students as important in facilitating normality. However, it is not just the physical environment, but also the level of support available that enables women to achieve a fulfilling experience of childbirth (Page, 2006).

The literature demonstrates that home-like environments are associated with less intervention and greater satisfaction for women (Hodnett et al, 2012; RCM, 2012; National Childbirth Trust (NCT), 2005; Saunders et al, 2000) and are more conducive to enabling the physiological processes of birth (Erwin and Hughes, 2013; NCT, 2005).

The students witnessed how some midwives enabled a clinical birth environment conducive to promoting normality simply by moving and rearranging furniture within the room, and with the addition of birthing aids such as birthing balls and floor mats. Therefore, even within a medicalised setting, 'normality' can be promoted provided midwives have the confidence and belief in birth as a normal physiological process. Practicing with this philosophy and working in partnership with women promotes midwives as advocates of women rather than mediators running between policies and women's choices (Walsh and Newburn, 2002). However, promoting normality within a medicalised setting requires more than merely moving furniture. It equally depends on the midwives' attitudes and belief in normality. As demonstrated within the preceding discussion, those midwives who demonstrated a belief in normality were also those who provided both physical and emotional support for women.

The role of education was viewed as important by student midwives. During the focus group discussions, the students indicated that their current education provision was beneficial both for current and for future practice. However, there was the suggestion that there is a gap between theory and practice. One explanation for this supposed gap is, as Meakin (2003) suggested, the socialisation of midwives into the labour ward culture and the indoctrinisation of a medical model. Midwives who have been indoctrinated in a medicalised model may not be able to demonstrate the necessary and relevant skills that are required to become lead professionals in normal childbirth (Meakin, 2003).

The students suggested that midwives were failing women by not providing information to enable them to make fully informed choices and have realistic expectations of their childbirth experience, a view similarly shared by Hollins-Martin (2012). Certainly women have access to information,

but it may not be accurate nor based on evidence, or may have been negatively portrayed by family and friends (Edwards and Conduit, 2011).

Interprofessional education (IPE) has been described as a means to break down boundaries between professionals (Murray-Davis et al, 2012; Begley, 2008; Department of Health (DH) 2007; 2004), and could lead to more cohesive practice (Pollard and Miers, 2008). This, if effective, may reduce the patriarchal influence and hierarchal systems within obstetric-led maternity units.

However, Cullen et al (2003) add that their ultimate goal will only be realised if all those who have learned together as students continue to work and learn together as professionals. This compliments recommendations from the joint report of the RCOGs and RCM (2008) in emphasising the need for early introduction of interprofessional learning strategies within both midwifery and medical education curricula. The achievement of better collaboration would ultimately improve care provision and enhance the concept of empowerment for women.

Conclusion

The concept of normal birth within the literature is recognised as complex and subjectively experienced (Anderson, 2003). It is also a concept at the very heart of midwifery practice because midwives have been identified as the lead professionals for normal childbirth (Department of Health Social Services and Public Safety Northern Ireland, 2012; NMC, 2012; Chief nursing officers of England, Northern Ireland, Scotland and Wales, 2010).

Attempting to tackle the issue of patriarchy, which has been so long in the making, will be a major challenge for midwifery. It is necessary for midwives and obstetricians to find a common ground and to work together to provide the ultimate of woman-centred care. Further development of IPE will be a necessary step in reducing the barriers and redefining the roles of midwifery and obstetrics (McMurray et al, 2004). Thus enabling recognition of respective roles and improving collaboration for the best interests of childbearing women. Collaboration is an approach that would take the debate of normality beyond the issue of birth and into areas of culture, political economy and community wellbeing. It is also an approach that fosters the principles of public health and with it the potential to bring in new players such as psychologists, sociologists and others (Sandall, 2004).

This evaluation study has revealed the complex nature of the concept of normal birth. It has also served to illuminate a purpose of defining normal birth from the perspective of this group of student midwives, and for the midwifery profession in general. Through debate and reflection of the concept of normal birth, the student midwives aim to improve the childbirth experience for all women, and not just those for whom a normal birth is achievable. The purpose of defining normal birth has to be for the benefit of childbearing women otherwise midwives run the risk of becoming patriarchal themselves and creating a hierarchy that places women firmly at the bottom.

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Information for authors

Evidence Based Midwifery is published quarterly and aims to promote the dissemination, implementation and evaluation of midwifery evidence at local, national and international levels. Papers on qualitative research, quantitative research, philosophical research, action research, systematic reviews and meta-analyses of qualitative or quantitative data are welcome. Papers of no longer than 5000 words in length, including references, should be sent to: rob@midwives.co.uk in MS Word, and receipt will be acknowledged. Suitable papers are subject to double-blinded peer review of academic rigour, quality and relevance. Subject area and/or methodology experts provide structured critical reviews that are forwarded to authors with editorial comments. Expert opinion on matters such as statistical accuracy, professional relevance or legal ramifications may also be sought. Major changes are agreed with authors, but editors reserve the right to make modifications in accordance with house style and demands for space and layout. Authors should refer to further guidance (RCM, 2007; Sinclair and Ratnaike, 2007). Authorship must be attributed fully and fairly, along with funding sources, commercial affiliations and due acknowledgements. Papers that are not original or that have been submitted elsewhere cannot be considered. Authors transfer copyright of their paper to the RCM, effective on acceptance for publication and covering exclusive and unlimited rights to reproduce and distribute it in any form. Papers should be preceded by a structured abstract and key words. Figures and tables must be cited in the text, and authors must obtain approval for and credit reproduction or modification of others' material. Artwork on paper is submitted at the owner's risk and the publisher accepts no liability for loss or damage while in possession of the material. All work referred to in the manuscript should be fully cited using the Harvard system of referencing. All sources must be published or publicly accessible.

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News and resources

RCM annual conference programme announced
Booking has now opened for the RCM conference 2015, which returns to the International Centre Telford on 10 to 11 November. This year's speakers include Karen Guilliland, the New Zealand College of Midwives chief executive, and Dr Bill Kirkup, chairman of the Morecambe Bay investigation. The programme offers a range of research seminars and management masterclasses, plenary sessions and hands-on workshops. Early bird rates are available until 17 July for RCM members who book to attend for both days. Alongside the main event are the workplace representatives conference and the student conference. For more information, visit **rcmconference.org.uk**

Emerging leaders' programme
Senior midwives with existing experience of a frontline leadership programme have been invited to apply to an emerging leaders' programme run by the Florence Nightingale Foundation and the Burdett Trust. The scheme is aimed at midwives at Bands 7 and 8, who have already completed a frontline leadership development programme. This would include those who have been on RCM leadership programmes. It also aims to ensure scholars deliver an improvement project in their clinical area. Applications for 2015-16 scholarships close on 23 September. For more information, visit **florence-nightingale-foundation.org.uk**

New report joins up maternity data
The Health & Social Care Information Centre (HSCIC) has published a one-off report that examines sources of maternity data. The *Compendium of maternity statistics, England, April 2015* report has been produced to identify the current sources of maternity data and consider difficulties faced in the reporting of these statistics. The report brings together data from numerous sources, including HSCIC, Eurostat, Office for National Statistics and Public Health England, among others. The data feature mothers' details, including demographic information and maternity care plan, outcome details as well as babies' details. To read the report, visit **hscic.gov.uk**

CONTENTS