A POSTGRADUATE OPTIMUM BIRTH MODULE TO INCREASE MIDWIVES’ READINESS TO WORK IN MIDWIFERY-LED SETTINGS: A MIXED-METHODS EVALUATION.

**Abstract**

**Background:** Midwifery-led birth settings have been recommended as the most cost-effective birth places for healthy women experiencing uncomplicated pregnancies. However, midwives complete most of their training in obstetric units where birth interventions are common. To prepare for working in a midwifery-led setting training is a key priority. This study evaluated a postgraduate level midwifery module on Optimum Birth (defined as birth which supports physiology and empowerment, avoiding unnecessary intervention) designed to prepare midwives for supporting women in midwifery-led settings.

**Methods: A** mixed methods design was employed. Pre- and post- module questionnaires measured attitudes, knowledge, confidence and learning outcomes.Qualitative data collection included a final-day focus group and 8-10 week follow up interviews. The target for recruitment was 15 postgraduate midwives. Fifteen midwives practising in three London boroughs enrolled of whom 14 completed the module. Pre- and post- total scores were analysed with paired samples t-tests. Qualitative data was analysed using thematic analysis.

**Results:** Quantitative and qualitative data indicated that the module increased participants’ self-reported skills, knowledge and confidence in practicing Optimum Birth. Qualitative data indicated ways in which midwives were implementing changes to promote Optimum Birth in their place of work. Attitudes were highly positive pre- and post-module.

**Conclusions:** The Optimum Birth module provided appropriate training for preparing midwives for the shift towards working in midwifery-led settings. Midwifery leaders and managers should implement strategies to develop midwives’ philosophy, knowledge and skills to increase their readiness to work in midwifery-led birth settings.

**Keywords:** Midwifery; Education, professional; Birthing Centers; Qualitative Evaluation; Quantitative Evaluation.

INTRODUCTION

The concept of *Optimum Birth* is concerned with maximizing the potential for health and wellbeing of mother and baby.1 It is underpinned by the understanding that the physiological processes of labor and birth are beneficial for most women and babies, and interventions (medical or operative procedures during labor or birth) should only be introduced when the benefits of intervening outweigh the risks of not doing so.2 Unnecessary interventions are associated with iatrogenic risks, increased care costs and poorer service users’ experiences.2-4

In recent decades, the boundaries of what is considered ‘normal’ have changed and childbirth interventions have become common.5 In the UK, the increase in interventions has been associated with the centralization of most births to hospital settings (obstetric units) where a medicalized approach to birth is associated with overuse of childbirth interventions and related increased maternal and perinatal morbidity.6 On a global level, improved care and living conditions have resulted in lowered levels of maternal and neonatal mortality; however concerns have been raised about the excessive use of interventions in many high-income countries.2 Unnecessary interventions are linked with avoidable harms to women and newborns, and escalate costs.2

Robust evidence has led the National Institute for Health and Care Excellence (NICE) to recommend midwifery-led settings, as the safest birth place for healthy women experiencing uncomplicated pregnancies in the UK.7 Such settings include midwifery units (also called birth centers), which can be freestanding, or located alongside obstetric units. Furthermore, the National Maternity Review (2016) advocates for safer, personalized care.8 At a time of unprecedented plans to shift away from obstetric units towards midwifery-led settings, additional training is required to ensure that all staff are prepared for this shift.9 Training is also important to ensure this transition is safe, and training was included in the top five priorities for improvement to enhance safety of maternity services.10

Midwives’ exposure to physiological birth and midwifery-led settings accounts for a small proportion of their training and many midwives do not feel ready to work outside an obstetric unit.9, 11, 12 Previous research highlights the need for specific training to enhance staff readiness to work in midwifery-led settings as well as to improve outcomes and experiences when transfer to an obstetric unit is needed. 11, 13

To meet this need, a staff development strategy was created as part of a National Institute for Health Research funded case study on how to implement NICE birthplace recommendations.4 The strategic staff development plan comprised foundation level training for all maternity staff, including maternity care assistants, obstetricians and midwives; advanced level training for midwives comprising two half-day workshops on advanced skills for Optimum Birth and skills and drills for midwifery-led settings; and a postgraduate level module for midwives held at the academic partner institution. This paper focuses on the mixed-methods evaluation of the postgraduate module ‘Philosophy, knowledge and skills for Optimum Birth’ which aims to increase midwives’ readiness to work in midwifery-led settings supporting physiological birth.

Aim

The aim of this study was to evaluate the impact of completing the module on practising midwives’ attitudes towards, knowledge of, and skills in providing Optimum Birth and implementing changes to services to encourage Optimum Birth.

METHODS

Design and participants

This mixed-method evaluation used a pre-and-post design with participants completing questionnaires on the first and last days of training. A focus group was held with participants on the final day of module teaching, and follow-up assessment via telephone or email took place 8-10 weeks after the training.

Participants were postgraduate midwives who were practising in three London boroughs in the UK. Recruitment took place through advertising and through liaising with consultant midwives, practice development midwives and heads of midwifery. The recruitment target of 15 participants was met.

Participation in the evaluation was voluntary. Anonymity and confidentiality were made clear to participants, as well as the independence of the evaluating team from the module delivery team. Written consent was obtained from all participants who completed paper copies of questionnaires on the first and last days of training.

Optimum Birth Module

A 36 contact hour postgraduate midwifery module was designed to develop midwives’ philosophy, knowledge and skills in Optimum Birth and their understanding of the broader social and cultural determinants that shape outcomes for both mothers and their babies. The module was delivered across six full days of training in November and December 2016 at the host university. The module could be taken as a freestanding module for continuous professional development, or as part of a Masters in Midwifery in Advanced Practice.

The content of the module included background theory and introduction to innovation in midwifery, as well as sessions on: philosophical underpinning for Optimum Birth; evidence on physiological birth; epigenetics; effective communication; organizational culture – why it is important for safe and effective practice; women’s autonomy legislation; partnership in decision making; birth stories from service users; how to develop personalized care plans; aromatherapy theory and practice; active birth practice positions; intermittent auscultation theory and practice; breech birth theory and practice; hypnobirthing theory and practice; facilitating transfers from home / midwifery units safely focusing on women’s experiences; practice assessment; and preparation for assignment.

Teaching methods included a combination of facilitated online discussions relevant to the module’s aims; hands-on workshops with core lecturing staff and guest lectures. Both lecturing staff and guest lecturers were midwives with extensive experience of working in midwifery-led units. The training sessions focused on enhancing the participants’ skills and increasing participants’ motivation towards continuous improvement. Sessions were designed to be interactive, with facilitators introducing each segment and providing topics of discussion. The end of module assignment comprised an ‘innovation proposal’, whereby students identified an area relevant to Optimum Birth practice to improve in their own service, and developed a plan to implement change in partnership with their service leaders.

Data collection and analysis

Attitudes were measured by eight statements about normal birth used in previous published research .7, 14 Items were measured on a Likert scale of 1-5, with 1 indicating ‘strongly disagree’ and 5 indicating ‘strongly agree’. Total scores could range from 8 to 40, with higher scores indicating more positive attitude towards Optimum Birth. Example statements included ‘Women should be given all the information needed about their birth’ and ‘Breastfeeding should be established as soon as possible’.

Current knowledge of Optimum Birth practices was measured with the Keeping Birth Normal (KBN) tool15 which includes 36 statements about philosophy, the birth environment, support in labour, and barriers to Optimum Birth. Statements were measured on a Likert scale of 1-5, where 1 indicated ‘poor’ knowledge, 2 ‘fair’ knowledge, 3 ‘satisfactory’ knowledge, 4 ‘good’ knowledge and 5 indicated ‘excellent’ knowledge. Total scores could range from 36 to 180 with higher scores representing better self-reported knowledge. Example statements include asking about knowledge concerning ‘Protecting the woman’s space from unnecessary intrusion’ and ‘Birthing the woman in a position of the woman’s choice’.

Eight items concerned awareness, confidence and competence in Optimum Birth skills. Responses of 1 indicated ‘poor’, 2 ‘fair’, 3 ‘satisfactory’, 4 ‘good’ and 5 indicated ‘excellent’. Scores could range from 8 to 40 with higher scores indicating a higher level of skill, awareness, confidence or competence. An example statement concerned participants’ ‘Ability to manage women you support regarding Optimum Birth’. Items were based on health care training evaluation by the International Training and Education Centre for Health , a collaboration of University of Washington and University of California.16

Participants rated confidence in learning outcomes, including ‘Introducing salutogenic interventions promoting well-being’ and ‘Critically examine practices which may introduce iatrogenic risks’, on a Likert scale of 1-5 where 1 indicates ‘no confidence’, 2 indicates ‘slight confidence’, 3 indicates ‘moderate confidence’, 4 indicates ‘high confidence’ and 5 indicates ‘very high confidence’. Total scores could range from 8 to 40 with higher scores indicating higher confidence. All 15 participants enrolled on the module completed the pre-measure.

The post-measure comprised the above sections plus a satisfaction survey. Twelve participants who were present at the end of the final day of training completed the post-measure.

On the final day of training participants took part in a 40 minute focus group with two researchers (RC and EO, both independent of the teaching team). The intention was to facilitate a reflective discussion on participants’ experiences of taking part in the module, their ideas for improving it and their views on facilitators and barriers to implementation and effectiveness in practice. The same 12 participants in attendance at the end of the final day of training took part in the focus group.

Between 8-10 weeks after teaching had ended all participants were contacted by telephone to explore any changes to their practice since teaching had finished. As the module was assessed by participants’ completion of an innovation plan, a further aim was to discuss the topic chosen by the participant and progress with the assessment. One researcher (RC) attempted to contact participants up to three times, leaving a message each time with the researcher’s return contact details if unable to make contact. Due to low response rate by telephone, participants were sent an email asking the questions on the interview schedule. A total of seven participants (50% of completers) took part in the 1-month follow-up interviews; five by telephone (range 6-38 minutes), and two by email.

All data (questionnaires, focus group, and interviews) were collected and analysed by RC who was not known to the module development and delivery team. Quantitative data were analysed using SPSS Version 22.0. Total scores were calculated for attitudes, knowledge, confidence and learning outcomes. Pre- and post- total scores were analysed with paired samples t-tests. Sample sizes varied due to missing data. Focus group and follow up interview data were recorded, transcribed verbatim by independent professional transcribers, and analysed using thematic analysis.17 This evaluation received ethical approval from the City, University of London, School of Health Sciences Research Ethics Committee.

RESULTS

Fifteen participants enrolled on the module, all female. Twelve described themselves as midwives, two as managers and one as supervisor of midwives. Time since qualification ranged from 1.5 to 21 years. One participant left due to personal circumstances; the remaining 14 participants completed the module.

Participants’ attitudes towards Optimum Birth did not change significantly from the pretraining to the posttraining questionnaires. However, participants’ self-reported knowledge, skills, and confidence in learning outcomes increased significantly during the course of the module (see Table 1). At the item level, five participants (33.3%) considered their pre-training ability to manage women they support in regard of Optimum Birth as satisfactory. After training, all participants reported their ability to manage women as good or excellent. Overall assessment of the training was considered good by 23.1% (3 participants) and excellent by 76.9% (10 participants).

[insert Table 1 about here]

Discussion during the focus groups revealed a broad consensus concerning participants’ high level of confidence in implementing what they had learned. Three key areas arose in relation to how the module would enable the participants to make changes in their daily practice or in their service: engagement, enabling change, and impact on knowledge. These are discussed in more detail below.

Engagement

 Participants were vocal about how the variety of teaching methods kept them engaged. There was a perception that education might be boring or not engaging, but they were pleasantly surprised that this was not the case. The lectures supported by written teaching materials, role play, video and simulation were mentioned as specific positive aspects of the module, as well as the teaching methods in general being good. It was considered beneficial that the students were able to get involved in practical sessions, for example with hypnobirthing and aromatherapy:

“It was so hands on, we actually used it, so it’s not only about the theory but the practical, so it’s like it was interlinked.”

Enabling change

The evidence based approach was acknowledged as important in providing an impetus to challenge decisions made in practice:

“It just reminds you to …challenge people that are practicing without any rationale behind what they’re doing.”

Participants also valued covering topics where less formal evidence was currently available to widen their perspectives:

“Hypnobirthing for example…there isn’t as much scientific evidence but I felt it was empowerment…to stay longer at home with a woman…It broadens you in terms of the options available so you don’t think to become medicalised too early on.”

There was a sense that the module had motivated participants to try and effect change in their service, through a sense of making change seem possible.

“Because it makes an impact on your practice - you can actually change things.”

It was important to the participants that the convenors were practising midwives. There was a sense that the students were learning from people who:

“…know what we are experiencing and…because they are hands on they know, they are not just saying it but they know what the experience [is].”

This made participants feel that their questions about real-life situations could be answered with confidence, enabling them to make changes in their daily practice. Furthermore, participants felt the convenors recognised their role as busy midwives. This was exemplified by the students being given access to relevant journal articles and learning resources via an online sharing system:

“I think I would now be struggling to go to the library and get all those articles but we’ve got a reading list, we have got the presentations.”

It was felt that change based on what they had learned on the module would be implemented through the process of carrying out their module assignment:

“I think the course will result in a lot of change in a clinical area because [the assignment] is about implementing something.”

Nevertheless, participants identified a number of potential barriers to implementing change based on what they had learned during the module, including resource issues such as shortage of staff and organisational culture. A climate of fear was also discussed, in which worry about being blamed for adverse events in childbirth was raised:

“We midwives we have the fear of practicing, sometimes we know some of the things that need to be done…but there are fears in us whereby we don’t…want to have that culture of blame.”

Participants suggested a number of solutions to these barriers, including working with the module convenors to facilitate in-house sessions in their services:

“[The convenor] did say that she is willing to come and … arrange something in practice if you want it to happen and I think that’s something I’m going to take her up on.”

Impact on knowledge

Impact on knowledge was largely discussed in terms of the breadth of experts who taught sessions on the module. Multiple participants expressed how sessions on: breech birth; legal aspects of birth and human rights; and service user perspectives were of particular interest. Providing links to evidence, for example to journal articles that had been discussed in the sessions also helped increase knowledge and refreshed academic skills:

“You get the skill of actually searching for information, which is something that in practice I think people could get out of because you are so busy doing stuff.”

Themes established in the focus group were corroborated in the follow up interviews. Changes to practice that had taken place since the end of module teaching were discussed in the context of carrying out the module assignment (participants were approaching the assignment deadline). Projects being carried out included: implementing continuity of care in the community; improving the environment at a local birth centre to be more family friendly and welcoming; engaging the community in the improvement of maternity services at a new alongside birth centre; increasing support to mobilise in labour for women in an obstetric unit; integrating community and birth centre midwifery services; improving continuity of care at a local birth centre; and promoting immersion in water during labour and birth. Some students reported difficulties with completing work and attending the module as they had to attend in their free time.

DISCUSSION

Education for midwives in Optimum Birth practice is a key component in building a workforce of practitioners competent in supporting physiological labour and birth but also proficient in transferring cases when required. 4, 18 This study used quantitative and qualitative methods to evaluate a postgraduate-level Optimum Birth module for practising midwives.

Midwives’ self-reported skills, knowledge and confidence in practicing Optimum Birth, all increased after attending the module. Concerning the implementation of what they had learned, students were implementing a practice innovation in their own services, which acted as the module assessment.

The results indicated that self-confidence in Optimum Birth skills was limited before the module, in line with previous research. 1, 9, 12 Confidence improved after the module as all except one participant reported good or excellent self-confidence. These skills are likely to be important in increasing rates of physiological birth, and to support women in making decisions about whether obstetric intervention is necessary.19

Midwives’ ability to talk to women and facilitate women’s choices also improved after the training. This is crucial to ensuring women’s autonomy is respected and that midwives practice within the required parameters dictated by Human Rights’ Legislation.20 Qualitative comments alluded to increased self-confidence in challenging staff that were not perceived as working in an evidence-based manner. Confidence in stepping “away from the technology and towards the woman” was also mentioned as midwives increased in confidence to support women with non-technological means.1, 21

Barriers identified by midwives in this study are in line with previous research. For example it has been found that the strongest predictor of implementing evidence-based change in midwifery services was resistance to change of colleagues.22 Of particular interest is the culture of fear and blame relating to adverse events in childbirth that was raised in the focus group. Labour and birth involve decision-making involving multiple players, in the context of uncertain and shifting high stakes situations with organizational goals and stresses involved.1 In this study, midwives spoke of the desire to practice Optimum Birth, and perceived associated confidence in stepping back from intervention as conflicting with the medical model of controlling birth. 1, 9 It may be that confidence needs to be built in the area of acceptance of accountability for decisions made during labour and birth in the Optimum Birth context.23, 24

The mixed-methods approach is a strength of this evaluation, but a number of limitations need to be considered. All funded places on the module (n=15) were filled but this took time making recruitment challenging. Previous research shows that training for qualified midwives tends to focus on high-risk high-tech skills and active management which are seen as more ‘skilful’ and important than skills in physiological birth such as coping with pain and support skills.12 Such beliefs, combined with the context of staff shortages, suggest that ways will need to be found to release midwives for training in Optimum Birth.

Additionally, attitudes towards Optimum Birth were high both before and after training and did not change. This may be due to midwives having highly positive attitudes before training started or may mean the module does not affect attitudes towards Optimum Birth. Considering the difficulties with releasing staff for training, and the dedication required to study for a postgraduate level module, it is likely that the midwives that took part were already highly motivated so the former explanation may be more likely. Finally, the small number of funded places available to study the module meant that the sample size was limited. Furthermore, although we attempted to contact participants multiple times for the follow up interview, the response rate was low at 50%. The evaluation relied on self-reported outcomes, and further research will be needed to assess outcomes related to mothers and children. Future research should also consider interdisciplinary training on Optimum Birth as it has been recommended that staff who work together should train together.10

CONCLUSIONS

Maternal and child health is likely to be enhanced by providing care underpinned by a philosophy of Optimum Birth, where the physiological processes of labour and birth are supported and interventions introduced only when the benefits outweigh the risks.2 Evidence suggests midwifery-led birth settings can reduce intervention such as instrumental and caesarean births, whilst offering safe care for the mother and her baby.25 These settings require appropriately educated, skilled and knowledgeable midwives, confident in how to facilitate physiological labour and birth as well as escalating and transferring care to the obstetric unit when needed. The module evaluated in this study supported midwives in improving their skills, confidence and knowledge in Optimum Birth and resulted in small changes starting to take place in the maternity services where these midwives practice. Further research needs to evaluate outcomes of Optimum Birth practices for mothers and infants.

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Table 1. Pre and post module assessment scores.

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| --- | --- | --- | --- | --- |
| Measure (*n*) | Pre-assessment Mean+-SD | Post-assessment Mean+-SD post | Mean change | P-value |
| Attitudes (15) | 35.9 ± 9.50 | 33.0 ± 12.52 | -2.9 | .342 |
| Knowledge (7) | 148.9 ± 9.62 | 171.7 ± 6.29 | 22.8 | .005 |
| Skills (11) | 29.1 ± 5.34 | 36.6 ± 3.75 | 7.5 | .002 |
| Learning outcomes (12) | 23.8 ± 6.10 | 31.4 ± 5.07 | 7.6 | < .001 |

Note: N varies due to missing data. The questionnaire was presented as four stapled pages, however the knowledge section was not completed by eight participants. Due to small sample sizes P values should be interpreted with caution.