Midwifery 30 (2014) e96–e101

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/midw

Effecting change in midwives' waterbirth practice behaviours on labour ward: An action research study

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ARTICLE INFO

Article history:
Received 13 March 2013
Received in revised form
30 October 2013
Accepted 4 November 2013

Keywords:
Waterbirth
Midwives
Action research

ABSTRACT

Introduction: the use of water immersion for labour and birth has been shown to be beneficial for women in normal labour (Cluett et al, 2009). It was decided to use problem solving coordinator workshops to change in the way waterbirth practice was promoted and organised on labour ward. Findings from the first Action Research phase (Russell, 2011) led to the development of a waterbirth questionnaire to measure midwives' personal knowledge of waterbirth practice, waterbirth self-efficacy, social support and frequency of hydrotherapy and waterbirth practice. The aim of this paper is to share the questionnaire findings from an on-going action research study.

Method: prior to the first workshop 62 questionnaires were distributed to midwives (Bands 5, 6 and 7) working on labour ward. Subsequent questionnaires ($n=53$) were sent to Bands 5/6 midwives not involved in the workshops, at four (Group 2) and eight months (Group 3). N.B only Bands 5/6 midwives completed post workshop questionnaires. In total 169 questionnaires were distributed. One-way ANOVA with Tukey post-hoc test and the χ^2 test were used to determine statistical significance.

Findings: 96 questionnaires were returned (57%). Midwives' personal knowledge of waterbirth practice differed significantly between groups, ($F_{2,\ 85}=3.67$, $p<0.05$) with midwives in Group 1 giving significantly higher scores ($\overline{X}=45.6$, 95% CI [43.0, 48.2]), than those in Group 3, ($\overline{X}=41.7$, 95% CI [40.0, 43.3]), $p<0.05$. Midwives' waterbirth self-efficacy did not differ significantly between groups ($F_{2,\ 88}=3.15$, $p>0.05$). However scores for social support did differ ($F_{2,\ 75}=4.011$, $p=0.022$), with midwives in Group 1 giving significantly lower scores ($\overline{X}=8.0$, 95% CI [6.4, 9.5]) than those in Group 3 ($\overline{X}=10.5$, 95% CI [9.4, 11.6]), $p=0.016$. Fifty-five per cent of Group 1 midwives facilitated a waterbirth in the previous three months compared with 87% in Group 3. Changes in the frequency of waterbirth for these groups were statistically significant ($x^2=4.369$, $p<0.05$, df=1).

Conclusions: it appears that the co-ordinators were able to influence waterbirth practice because of changes in social support and frequency of waterbirth practice. Given the widespread and continued impact of the intervention, on midwives who attended workshops and those that did not, we feel it likely that a significant proportion of this change could be attributed to the introduction of problem solving waterbirth workshop. The findings from this study suggest that problem solving waterbirth workshops based on an action research format have the potential to normalise midwifery care within medically dominated hospital birthing environments.

Introduction

The use of water immersion for labour and birth was popularised following the Changing Childbirth report (Department of Health, 1993) which recommended that all maternity units in the United Kingdom (UK) provide women with access to a birthing pool. This move led to professional organisations (RCM, 1994; UKCC, 1994) accepting water immersion as part of UK Midwifery Practice. Over the ensuing decades research has established that

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http://dx.doi.org/10.1016/j.midw.2013.11.001

water immersion enhances the physiology of childbirth (Otigbah et al., 2000; De Sylva et al., 2009), reduces the need for pharmacological analgesia (Geissbuehler and Eberhard, 2000; Eberhard et al., 2005) and supports the use of midwifery normal birth skills (Garland, 2011). Cluett et al. (2009) conclude that water immersion for low risk women is as safe as land birth. A review of maternity services in England (Healthcare Commission Report, 2008) identified that 11% of labouring women used hydrotherapy or gave birth in water and an average of seven waterbirths occurred each month, approximately 80 per year. The national birth place study (Birthplace in England Collaborative Group, 2011) found that women who gave birth in free standing midwifery units were four times more likely to achieve a waterbirth than those giving birth in an obstetric led unit. The differences in waterbirth rates by place of birth, suggest that access to obstetric led birthing pools may be limited by the number of labour ward midwives who advocate this type of care (Russell, 2011).

The aim of this paper is to share the questionnaire findings from an on-going Action Research study, which focused on improving the availability of hydrotherapy and waterbirth on one UK labour ward. Key findings from the first research phase suggested that labour ward midwives lacked confidence (self-efficacy) in waterbirth practice and identified co-ordinators as authority figures who regulated access to the poolroom and controlled less powerful midwives' clinical practice behaviours (Russell, 2011). Following dissemination of these findings to senior midwifery managers it was decided to use problem solving waterbirth co-ordinator workshops to initiate changes in the way waterbirth practice was promoted and organised. A questionnaire was developed to measure labour ward midwives' waterbirth practice (frequency), personal knowledge of waterbirth practice, waterbirth self-efficacy and levels of social support over the three research phases during a 12 month period.

Background

The research enquiry focused on a group of clinical midwives and labour ward co-ordinators working in an English obstetric led hospital. The maternity unit had one labour ward catering for 3800 births a year and was situated within a busy district General Hospital. There was no birth centre or midwife led unit in the locality. The labour ward had one poolroom, three portable pools and a waterbirth rate of 45 per year, prior to the introduction of the workshops. This rate represents half the average number of waterbirths found by the Healthcare Commission Report (2008). The Head of Midwifery and senior managers (Band 8) were aware of the low rate and were keen to improve access to the birthing pools for women during normal labour and birth. Fifty-three clinical (Bands 5/6) and nine co-ordinating midwives (Band 7) worked on labour ward. The majority of clinical midwives rotated onto labour ward every three, six or 12 months. A small number of clinical midwives and all co-ordinators were permanently based on the labour ward.

Findings from the first research phase prompted the development of problem solving workshops with co-ordinators in an effort to influence labour ward midwives' waterbirth practice.

Methods

Problem solving waterbirth workshops

The main author and a waterbirth co-ordinator from a comparable unit (3900 births per year with no midwife led unit) where the waterbirth rate was 280 per annum facilitated the workshops. The waterbirth co-ordinator agreed to act as an *Opinion Leader* during the workshops. *Opinion Leaders* are part of the network of influences, which can convince individuals to adopt proposed changes in their own practice (Doumit et al., 2007). In this instance the *Opinion Leader* was from outside the organisation and therefore unable to influence practitioners through role modelling or actions in the work place. It was hoped she would be able to help co-ordinators see the potential possibilities of increasing waterbirth practice in their own unit.

All nine labour ward co-ordinators were invited to take part in the problem solving waterbirth workshops which focus on the promotion of critical praxis. Critical praxis involves problem solving and deliberate action by a particular social group to change or improve their situation (Freire, 1972). According to Reason and Bradbury (2006), the promotion of critical reflection helps people focus on what ought to be, what is right and what is wrong with their current situation. The intention was to develop participants' knowledge and awareness of waterbirth and to find ways of influencing other midwives' practice behaviours.

Three two-hour workshops took place during September 2010, January and May 2011. At the beginning of each workshop, waterbirth rates and clinical midwives' perceived barriers to waterbirth practice were discussed. The co-ordinators were encouraged to develop interventions to address the identified barriers to care and find ways of supporting waterbirth practice. An average of five co-ordinators, one of whom was the labour manager, attended the workshops.

Interventions developed by the co-ordinators were:

(1) Improve the recording and of hydrotherapy and waterbirth rates.
(2) Publish waterbirth statistics to midwives on a monthly basis.
(3) Include discussion of waterbirth practice in all departmental meetings.
(4) Appoint a waterbirth champion.
(5) Keep portable birthing pools partially inflated.
(6) Set a target of 100 waterbirths in 12 months.

Design

A survey tool based on a questionnaire by Davies and Hodnett (2002) to measure Canadian obstetric nurses' labour support self-efficacy was developed. Bandura (1986) defines self-efficacy as beliefs individuals hold about their capabilities, which help determine knowledge, skills and actions. Self-efficacy beliefs are thought to help determine how much effort people will expend on an activity; how long they will persevere when confronting obstacles; and how resilient they are when faced with adverse situations (Schunk et al., 1987). In his guide to constructing self-efficacy scales Bandura (1997) advises that questions be designed in relation to the particular social behaviours or practices of the research participants. In this way a judgement about how efficacious people are in undertaking a particular behaviour in a given social context is made. Following a review of the literature the following areas were identified as being key to midwifery waterbirth practice: personal knowledge of waterbirth practice, waterbirth self-efficacy and social support. Social support is defined as the presence of social networks (belonging and homogeneity), social relationships (emotional care) in a particular social group (House and Khan, 1985). These contextual domains were used to divide the newly developed survey tool into three distinct sections.

In Section A (personal knowledge), midwives were asked to indicate if they had ever used hydrotherapy, conducted a birth, or delivered a placenta in water. If the answer was 'Yes' to any of