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Theoretical Study

Technologies of birth and models of midwifery care

TECNOLOGIAS NO PARTO E MODELOS DE CUIDADO OBSTÉTRICO

TECNOLOGÍAS EN EL PARTO Y MODELOS DE CUIDADO OBSTÉTRICO

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ABSTRACT
This article is based on a study of a reform in the organisation of maternity services in the United Kingdom, which aimed towards developing a more woman-centred model of care. After decades of fragmentation and depersonalisation of care, associated with the shift of birth to a hospital setting, pressure by midwives and mothers prompted government review and a relatively radical turnaround in policy. However, the emergent model of care has been profoundly influenced by concepts and technologies of monitoring. The use of such technologies as ultrasound scans, electronic foetal monitoring and oxytocic augmentation of labour, generally supported by epidural anaesthesia for pain relief, have accompanied the development of a particular ecological model of birth – often called active management –, which is oriented towards the idea of an obstetric norm. Drawing on analysis of women's narrative accounts of labour and birth, this article discusses the impact on women's embodiment in birth, and the sources of information they use about the status of their own bodies, their labour and that of the child. It also illustrates how the impact on women's experiences of birth may be mediated by a relational model of support, through the provision of caseload midwifery care.

DESCRIPTORS
Obstetric nursing
Parturition
Patient-centered care

RESUMO
Este artigo baseia-se em um estudo sobre a reforma na organização dos serviços de maternidade no Reino Unido, que teve como objetivo desenvolver um modelo mais centrado na mulher. Após décadas de fragmentação e despersonalização da assistência, associadas à ascensão do hospital como lugar de parir, a pressão de parteiras e mães obrigou o governo a uma revisão e mudança relativamente radical desta política. No entanto, o modelo emergente de cuidados tem sido profundamente influenciado pelos conceitos e tecnologias de monitoramento. O uso de tecnologias como ultra-sonografia, monitoramento eletrônico fetal e aceleração do parto com ocitocina, geralmente acompanhada de anestesia peridural para alívio da dor, tem promovido o desenvolvimento de um modelo ecológico específico de nascimento – muitas vezes chamado de manejo ativo –, orientado pela idéia de uma norma obstétrica. Com base na análise da narrativa das mulheres, este artigo discute o impacto do modelo assistencial no posicionamento das mulheres frente ao parto e as fontes de informação sobre seus corpos, seus partos e o nascimento da criança que elas utilizam. Ilustra, também, como o impacto nas experiências de parto das mulheres pode ser mediado por um modelo relacional de apoio, mediante a prestação de cuidados de obstetrícia no modelo *caseload*.

DESCRITORES
Enfermagem obstétrica
Parto
Assistência centrada no paciente

RESUMEN
Este artículo se basa en un estudio sobre la reforma de la organización de los servicios de maternidad en el Reino Unido, que tubo como objetivo desarrollar un modelo más centrado en la mujer. Después de décadas de fragmentación y despersonalización de la atención, asociada con la ascensión del hospital como el lugar de parir, la presión de parteras y madres obligó al gobierno a revisar y hacer un cambio relativamente radical de esta política. Sin embargo, el modelo emergente de atención es profundamente influenciado por los conceptos y las tecnologías de monitoreo. El uso de tecnologías como ecografía, monitorización electrónica fetal y aceleración del parto con oxitocina, por lo general acompañada de anestesia epidural para el alivio del dolor, ha promovido el desarrollo de un modelo ecológico específico de nacimiento – a menudo llamado la manejo de activo –, orientado la idea de una norma obstétrica. Con base en los relatos de las mujeres, este artículo analiza el impacto del modelo de atención en el posicionamiento de las mujeres frente al parto y las fuentes de información acerca de sus cuerpos, sus partos y el nacimiento del niño que ellas utilizan. También ilustra cómo el impacto de las experiencias de parto de las mujeres puede ser mediado por un modelo relacional de apoyo, a través de la prestación de cuidados de partería en el modelo *caseload*.

DESCRIPTORES
Enfermería obstétrica
Parto
Atención dirigida al paciente

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A BRIEF HISTORY OF UK MATERNITY SERVICES

The twentieth century, in the United Kingdom (UK) and other countries with developed biomedical health systems, saw a steady trend in the way women are cared for in pregnancy and childbirth towards hospitalisation and reliance on increasingly elaborated technology. In the late 19th century, although the majority of women gave birth at home, attended by midwives or *handywomen*[1], obstetrics established itself as a profession within medicine and made steps towards becoming the dominant profession in maternity care[2-3]. In response to these and wider social changes, midwifery was brought under and formal legislation and education, within the sphere of nursing[4] and a professional division of power was struck by means of a division of labour between obstetrics and midwifery, representing the abnormal and the normal in birth. Although the numbers of women giving birth in hospital remained low in the early part of the 20th century, they increased gradually and provided a platform for developing obstetric technology[5]. As hospital birth rates increased steadily throughout the century, improvements in maternal and child health and declining mortality rates which have largely been linked to changing social conditions were assumed to be associated with these developments: the accepted wisdom became that the only safe place to give birth is in hospital with full access to obstetric technology and expertise[6-7].

By the 1980s in Britain hospital was regarded as the normal place of birth and obstetric interventions were being used routinely rather than confined to the care of women with particular medical risks. The view of intervention as responsible for health was reflected in public policy and a 1980 government report (the *Short Report*) advocated that home birth and small, general practioner run maternity units, which were mainly in rural areas, should be phased out completely. This policy was subsequently challenged from two main directions: the development of women's and consumer movements and midwifery campaign groups encouraged questioning of accepted practice and argued that women were being processed by a fragmented and impersonal system in maternity units, which cast them in passive roles, subject to routine use of largely unevaluated technology[8-11]. At the same time, epidemiological and clinical researchers began to challenge empirically the view that hospitalisation and obstetric intervention *produced* or assured safety in childbirth[7,12].

Such challenges, alongside a growing recognition of the impact of broader social conditions on health, brought about a review of UK childbirth policy[13]. The new approach, expressed in the Changing Childbirth report[14] and later reiterated in the Maternity Matters guidance[15] also reflected the establishment of consumerism as a model for public services in this period. It advocated greater choice and control for women in where and how they should give birth and set out indicators to achieve woman-centred care which included re-establishing midwifery roles and skills, and increasing women's access to information and to continuity rather than fragmentation of care. However, the new policies were enacted at a superficial level, which did not address wider shifts in cultural perceptions of childbirth towards a biomedical model. The authoritative status of obstetric knowledge continued to be reflected in the organisation and structure of maternity care in which pregnancy and childbirth was treated as a purely physiological transition rather than as a bio-psycho-social transition[16]. The Maternity Matters document, published after the study discussed here, also advocated women's choice of birth setting, as emerging evidence began to challenge the view that hospital was always the safest place for birth[17]. However, the extent of choice of birthplace for women in the UK remains very limited[18].

THE CONTEXT OF MATERNITY CARE IN THE UK

Most maternity care in the UK is provided by midwives, who continue to hold independent professional status. How far their autonomy is supported in practice, however, depends on the local context and culture of care. In the urban teaching hospital where the study discussed here took place, maternity care was highly obstetrically oriented, most midwives were hospital – rather than community-based and obstetric policies and protocols limited the roles of midwives considerably.

In such maternity units, staffing is ward-based and operates on a shift system so that care provision responds to institutional rather than physiological time and space[19]. Teams of community midwives provide mainly antenatal and postnatal care to low-risk women outside the hospital, but have little involvement with birth, except for the small number of home births still taking place (less than 1% in the UK in 1993 and still only around 3% following the 2007 Department of Health policy of choice of birth setting). In effect, the definition of normal (that which had been defined in the UK 1902 Midwives' Act as the sphere of midwifery and traditionally understood as a physiological labour and birth, without complications or need for medical intervention) had become increasingly narrow. The concept of normality is, however, culturally situated, so that what is assumed to be normal in one context may be quite different from another. As monitoring and other procedures such as epidural anaesthesia have become increasingly routine, births may come to be regarded as normal when the woman has been monitored electronically and with insertion of oxytocin drips and epidural catheters. The women interviewed for our study experienced such high rates of these procedures in childbirth that the concept of normality in this context could easily have implied all the above.

THE EVALUATION OF CASELOAD MIDWIFERY: ORIGINS, FOCUS AND METHODS

This article draws on the evaluation of a pilot scheme for caseload midwifery, which was implemented in response to UK government policy recommendations on woman-centred care in 1993. In this scheme, a volunteer group of midwives were given their own caseload, each taking responsibility for the care for 40 women giving birth a year, working in partnerships and group practices for support and in collaboration with other health professionals as needed. This meant that their patterns of work were centred on the women on their caseload rather than on the routines of the ward to which they might otherwise be attached[20]. The scheme was modelled on the practice of the small number of independent midwives in the UK, incorporated for the first time within the framework of the National Health Service (NHS). In many ways it represented a return to the *traditional* practice of midwives before the advent of the NHS in 1948. Caseload midwives are employed by NHS hospitals but have greater autonomy than most models of care in the UK. They have a defined caseload of women, with mixed levels of risk, and they provide midwife-led care for low risk women, and work with obstetricians in caring for women of higher medical risk. They can follow women across boundaries of hospital or community-based care and provide birth care in the woman's chosen setting. They work in group practices, usually of 6-8 midwives for support[21]. The twenty midwives recruited to the pilot scheme were transferred from existing positions within this NHS Trust, 17 having worked within the hospital and three as community midwives. The study was inter-disciplinary, aimed to integrate qualitative and quantitative methods and combined clinical audit, economic audit, a psychosocial study of women's responses to care and an ethnographic case study of professionals' responses to the change. It used a comparative observational design, looking at the experience of women receiving the new model of care against the experience of women receiving conventional shared care in a neighbouring area[22]. The original study was approved by the ethical committee of the hospitals concerned.

The survey of women's responses to care was large-scale (n=1403) and so was based on a detailed structured postal questionnaire, for practicality and ease of analysis. But it was about essentially qualitative issues – how women experience their care and whether the pattern of care affects their wellbeing. Therefore, we also interviewed two groups of women, chosen as sub-samples from the survey. The first group were 20 women who had responded to the survey by completing questionnaires. We wrote to all women returning questionnaires in a particular time period and included all those who were contactable. The second group were women who had not returned the questionnaires but had not declined consent to take part. Because we were concerned about possible skews in response patterns, we targeted these at women who were less likely to respond to a written questionnaire – women in minority ethnic groups and young mothers. Twenty-four interviews were conducted for this group, including one with the use of an interpreter. Focus groups and a case study of the experiences of non-English speaking refugee women were also conducted, but will not be drawn on directly here. The interviews used a narrative approach. Women were asked to tell their story, from first contact with maternity services and asked to sum up what they found most helpful or would like to change about each stage of care.

OVERVIEW OF THE ANALYSIS

This article is mainly based on analysis of the interviews but is also informed by our analysis of women's questionnaire responses, which provided less depth but covered a broader scope of women. It focuses mainly on women's experiences of birth and the differences in the ways in which women recounted these experiences according to whether they were attended by a caseload midwife and whether they received a high or low level of technological intervention. The overall findings have been published previously[23] but this article focuses on the relatively unexplored theme of birth technology. All forms of birth are accompanied by some form of technology and all may be used in a symbolic as well as utilitarian function[16] but the focus here is on modern technologies of obstetrics, including those for monitoring, active management, pain relief and operative birth, as opposed to those other technologies, such as intermittent auscultation and non-pharmacological pain management, which are generally used by midwives and require lower levels of technical elaboration.

The women receiving caseload care were more positive overall about their experiences during pregnancy and birth. They focused on their relationship with the named midwife as something which gave them confidence, knowledge of what was happening to them and facilitated a calmer atmosphere[23]. Doctors were only involved if complications arose, and in these cases, the midwife appeared to take on a complementary or mediatory role working with the obstetrician – pointing the doctor to different issues, explaining things to the women and sometimes negotiating over issues of risk and safety. Women who received caseload care experienced a lower level of obstetric interventions and were less reliant on epidural pain relief, a finding later echoed in a Cochrane review of continuity models of midwifery-led care[22,24-25]. Women in the *standard care* group, who did not have a *named* midwife but received care from a number of different midwives and doctors gave more mixed views. Some commented positively in a very general way such as *everyone was wonderful* or *can't thank the hospital enough* or were critical about more specific issues – for example, writing about lack of attention or some doctors'

poor communication skills. The women in standard care appeared to feel more vulnerable and subject to medical decision making, largely without consultation or explanation, in situations of possible risks. A number felt they had been subject to unnecessary interventions or had been upset by the way what they accepted as necessary interventions were handled[23].

BIRTH TECHNOLOGIES

The key study themes, which have been published previously centred on the relational aspects of continuity of care and the ways in which these underpinned core themes of: feeling cared for, control, coping with pain, and management of interventions. The caseload model of practice appeared to facilitate a more woman- and community centred approach to care and a bio-psycho-social model of birth, rather than a more narrowly defined medical model[23,26]. However, the analysis also illuminated differences in the ways in which women were supported in pregnancy and birth, indicating a less dominant relationship with medical technologies. The key themes that emerged in relation to birth technologies and the women's embodiment – measurement, control and the role of medical interventions – will be discussed below.

MEASUREMENT

The theme of measurement related to how birth events are defined and managed, the importance of measurement in this and its contextual nature. Measurement is central to the management of pregnancy and birth in UK maternity care, as it is in much of the world[19]. Much of antenatal care is concerned with measuring the gestation and rate of growth of the foetus. The *estimated date of delivery* is assessed by ultrasound and clear limits are placed on the duration of pregnancy, after which induction of labour will be advised[27].

An obstetric unit such as the one in our study typically follows a policy of active management of labour, which depends on measuring the progress of events in relation to defined obstetric norms, such as a standard rate of cervical dilatation. In the active management approach, the time allowed for labour to progress is fairly tightly controlled in relation to the defined norms and women are allowed certain time periods, or rates of progress before an intervention is indicated[19,27].

Hospital control over timing and progress of labour involved the power to determine the state of a woman's labour, regardless of her own embodied experience. Diagnosis and progress were assessed by clinical examination but often also depended on situational factors such as where the woman was. One woman found that doctors tried to send her home twice and she was kept on the antenatal ward throughout the first stage, without any support or pain relief, until after protesting for a long period, she was examined and rushed up to the delivery suite:

> They found out only thirty or forty minutes before he was born. When one of the midwives came to see me I am crying with pain, she found out the baby was being born… she took me to the labour ward, she said quickly, the baby is being born (Standard care 319).

Women also found that although their own bodily sensations and subjective feelings were regarded as irrelevant, clinical examination could be subjective, inconsistent and subject to non-clinical considerations. For example one woman was eventually moved to the *delivery suite* after repeatedly requesting a vaginal examination due to her own feelings of discomfort, and being diagnosed as in active labour was examined again on admission by another midwife who gave a different assessment. This apparently objective but contradictory information caused her some distress and she remained anxious for the rest of her labour.

Midwives in the unit talked about the ability of older, experienced midwives to assess a woman's labour by other empirical means, using observation of the woman's movements, vocalisations, and other outward bodily signs, but this knowledge has never been encoded in a form which makes it accessible as scientific evidence and is regarded instead as intuitive. It is not accorded the status of authoritative knowledge[28]. Similarly, while evidence-based guidelines advocate the use of intermittent monitoring with a Pinard stethoscope, many midwives felt that they had to justify not using electronic continuous monitoring, rather than to justify its use on clinical grounds and continuous use of the cardiotocograph (CTG) as the norm in standard care.

CONTROL

Different dimensions of control included whether the woman felt she was in control of what was happening to her, as well as her own embodied sense of control in labour. Women's feelings about control were influenced by relational issues and the nature of support in childbirth, with women's sense of control being limited by active management approaches used in standard care compared with the approach of caseload midwives, which was more individualised and selective in use of technology.

Women in the caseload midwifery group exercised more control over when to enter the hospital or whether to give birth in hospital at all, but the numbers of home births, although they rose considerably, remained very small. Questionnaire responses indicated that they had greater confidence about their ability to give birth and to be a good mother[22]. They described care as being more centred on them, plus a greater sense of control over the care they received[23].

THE ROLE OF MEDICAL INTERVENTIONS

Experience of induction of labour

In standard care, the women whose labour was induced received only limited and seemingly rather off-pat explanations of the process. They were assured, for example, that *nothing would happen* until the next morning, after insertion of a prostaglandin pessary. The pain they experienced, which some described as harder to cope with than normal labour contractions and very frightening, was not acknowledged and they were denied pain relief or personal support, simply because they were not formally categorised as in labour. The women's accounts suggested that professionals were failing to recognise the labour unless it fitted with the system of medical management: defined partly by clinical examination but also partly by place of care – a woman is treated as in labour if she is admitted to the labour ward. The response to each defined state is strikingly different in conventional care, even though for the woman, her experience of pain, fear and need for support were no less than if she had been in active labour.

Experience of augmentation

Although most women wished to avoid the tiredness of a very prolonged labour, they often preferred a slow labour to one which had been stimulated, whether by low-tech means (such as cervical sweeps and breaking of membranes, used by midwives) or by oxytocin drip. Those with augmented labours tended to find them more painful, more *out-of-control* and more frightening. What appeared to matter in this context was that the women themselves lacked control over the timing and progress of labour, which was taken up by the hospital, under active management policy. One woman, for example, compared her nine hour augmented labour very negatively compared to a previous 19-hour *slow but happy* labour and birth as *nine hours of hell*. Another woman recounted:

> If I'd known it was that painful I would have waited, even if it meant going home and coming back. I wouldn't do it again. I don't think it is natural and I don't think it is supposed to happen. I can't describe the pain. I think I thought I was going to die. Because I am a Christian so I was praying because I thought this is it, I'm dying (Standard care, 388).

Not all women, however, felt this loss of control, and it was noticeable that women with a known midwife expressed less dissatisfaction with augmented labours, perhaps because better support and communication meant they were less frightened by the experience and they felt they had more say in the decision. In contrast, as for women admitted for induction or to the antenatal ward in early labour, many women found that their own *embodiment*: their abilities to sense and understand the way in which they were labouring were not accorded validity and were at times directly contradicted. Such problems were the most acute for women who did not speak fluent English and therefore experienced the greatest communication barriers with professionals. In most cases, their preferences or requests for pain relief were disregarded, in a context where many other women had complained of being zealously encouraged to use epidural anaesthesia.

Pharmacological pain relief

Two of the interviewed women described feeling fear and loss of control, more as a result of pain relief than the pain itself. One had an epidural in preparation for a possible caesarean, which was then felt to be unnecessary. She was very appreciative of staff concern for her baby, but still described feeling cheated of the chance of a normal birth due to loss of feeling and the fear caused by briefly losing full consciousness after the injection:

> I remember feeling myself going back and I felt like I was going off, off the table. I remember my husband sort of grabbing me to get me up because I couldn't control myself, I remember myself sort of sinking back and I remember at one stage I remember lying down and they were saying to me Arlene, are you ok, but I couldn't answer. I remember saying' mm mm' and once I thought to myself, Oh my God, something has happened badly and they don't know what has happened to me because it shouldn't have happened and I am going to die now and nobody will ever know (Standard care, 600).

The other described feelings of shock: shaking and being unable to speak after an epidural top-up for an emergency caesarean. Side effects, which she described as like being on a surfboard, lasted for about four hours after the operation. She was, nonetheless, appreciative of the pain relief since she felt nothing could have prepared her for the labour pains.

In general, despite the use of *mobile* epidurals, women experienced a loss of embodied sense of their labour and sometimes feelings of remoteness and detachment. Their descriptions often indicate that sensing contractions had been transferred to a visual experience, at a distance. The aim and expectation of mobile epidural was that the woman would feel no pain but would not be completely numb, so that she could move around and feel her contractions. This woman described trying to push the baby out without any sensation of what was happening to her:

> I could see on the monitor when they were coming and I could feel them but I didn't actually, you know, you knew you were pushing but, you were gritting your teeth and making a lot of noise but actually you couldn't feel the sensation of pushing, um, so that made it sort of impossible (Standard care, 403).

This woman felt completely numb by the end and, as in assessing progress of labour, staff ignored her bodily perceptions in the belief that she should not be unable to move:

(Following birth) S*he said to me, oh you should try and go off and have a wash and I said 'I don't, well I can't feel my legs' and she didn't, she just ignored me. She went off and didn't take any notice and then came back and said 'oh you haven't been' and I said 'well, I can't feel my legs'... (Standard care, 403).*

Women who had caseload midwife care talked relatively little about the pain of labour. They were more likely to be encouraged by their midwife to wait a little longer and to remain active to *bring on their contractions*, to encourage the baby to turn or progress downwards, before having an epidural sited. The rate of use of epidurals was lower in this group, although no women felt they had been denied pain relief. Several women who requested an epidural late in the first stage, were encouraged by positive support through the last few contractions:

> [I had] nothing except gas and air because I said to her I don't want to take an injection if I can help it. And the first time I didn't have anything as well. So I said to myself I will try, if I can't I will tell you. When it got to the stage at the end when I said to her, she said you don't need to take it now, it is about time now, any minute (and laughs) it is going to, and that was it (Caseload care, 116).

Like those women who talked about the importance of relaxation, she also suggested that the midwife helped her to cope with the pain:

> It is like, the first time when you get this pain, you don't know and people from everywhere say 'do that' and you get… if so many people tell you different things. But the second time, when I started with the pain she was guiding me as she goes along, take a deep breath, breathe out, its coming now, things like that. If you follow what she says it makes it easy (Caseload care, 116).

In contrast, a woman in the standard care group, who had laboured until a similar point, was instantly given an epidural on request rather than supported in continuing to cope with her pain, even though she had expressed a wish to manage with more natural methods if she could:

> I got to nine centimetres and I was coping OK, I didn't take anything, but I got a stitch in my side… coping quite well throughout the labour but in the back of your mind I think, well how bad does this get… and this stitch I thought, oh god I'm not going to be able to cope with this and I shocked everybody and said oh, can I have an epidural?… yes and um I wasn't panicking but they thought I was losing control… was really good I mean they did all they can to get this epidural attached to me and then that was OK and but then I had to have a hormone drip they give you cause I couldn't get that last centimetre (Standard care, 418).

This woman, like many others, subsequently experienced a series of interventions: at this late stage requiring a drip, followed by attempted ventouse and forceps delivery – what is often called a cascade of interventions. She experienced a traumatic birth in which, in the end, she could do nothing to push the baby out herself. She expressed gratefulness that at least the epidural had spared her from the pain of this traumatic birth, but women in the study were not given information about the side effects of different pain relieving methods or interventions, and so most were unaware of the associations between epidural analgaesia and operative birth. Few women in conventional care were offered alternative ways of coping with pain, and the level of active support from midwives in managing pain varied, with most simply offering epidural.

It was apparent from women's accounts that although epidurals were very effective in relieving pain, they were not necessarily effective in relieving distress or anxiety. In general it seemed that a large measure of anxiety reduction from interventions such as this and electronic monitoring was for the professionals themselves, more than for the women. Obstetricians tended to feel an imperative to action and midwives in this environment often appeared uncomfortable with women in pain, except where caseload practice meant they had been able to get to know the woman. The presence of obstetric equipment was often cited by women as a reason for giving birth in hospital, *just in case*, and feeling safe there, but these views were often given before birth. Retrospectively, some women described their experience, with a lack of control over technological interventions and the routine use of an active management approach, as feeling frightened and out of control.

Continuous electronic monitoring

The use of electronic monitoring was generally justified, despite the greater physical discomfort and restriction for the labouring woman, in terms of both safety and reassurance. However, as with epidurals, the professional perception of greater safety has not been matched in clinical research, which suggests they trigger higher levels of interventions, without any safety benefits. It can be argued that, despite appearances of reassurance for staff – being able to visualise the *trace* of the heartbeat for example – it raises levels of anxiety. Women's responses to CTG monitoring were ambiguous: in questionnaire responses they were least likely to be critical of receiving monitoring since they regarded it as important for the safety of their baby. Additionally, many women and partners, like the medical staff, turned their attention to the monitor screen to try to understand their labour. This tendency was increased for women with epidurals who could not feel their contractions and so had to detect them by watching the monitor and also for women in standard care, who were less satisfied with the information and support they received than those who had a caseload midwife. Although rarely articulated by the women, the impression I formed from listening to their narratives, and from observation of medical staff, was that the baby and the labour were perceived to some extent as being in the monitor, not as part of the woman's body; for example:

I could tell he was OK by the monitor I think (Standard care, 418).

I kept asking questions though… but otherwise it was just through my husband… he was in the delivery suite and in the operating theatre… he had had quite a good idea, he had been able to look at the graphs, baby's heartbeat and my contractions, and even though maybe not knowing exactly what to read into the graphs (Standard care, 424).

Operative births

The ways in which women experienced operative births and whether they were psychologically traumatic appeared to be linked to the degree of support a woman experienced, the quality of communication with professionals and whether the woman felt satisfied that the intervention was justified and necessary. Several women described caesarean sections as very traumatic experiences, and their accounts suggest they felt dissociated from their bodies through this: their role was passive, but the effects of heavy pain relief and of fear also appeared to play a part. This woman for example, had been critical of the support she received throughout her care and found her labour and birth very traumatic:

(Has just had epidural on her request due to slow painful labour) Then they broke my waters, then that didn't work, so they induced me and that's when I got distressed, his heartbeat… He was totally distressed but he was distressed for hours and all the doctors started coming in and then I went into shock… um, but what they were actually saying, they had me on one of these blood pressure things and they kept saying talk to me, talk to me and I must just have been in so much shock that I just didn't speak… then they were cutting, they were cutting my tummy and I could feel the cut, I could feel the cut and um his head got stuck in my pelvis and I could feel them trying to pull him out… (Standard care, 370).

In this and several other accounts of emergency and planned caesareans the woman's narrative suggests a sense of detachment, almost dissociation from what is happening to them. In contrast to those women who doubted that intervention was justified, one North-African woman, with female genital mutilation found her requests for intervention – an anterior episiotomy – ignored. She attributed her subsequent birth difficulties and third degree tear to this and complained that doctors used a ventouse to deliver the baby without consulting her. Again, it appeared that a woman's knowledge of her own body – subjectively or objectively – was not accorded any validity.

A number of women had assisted deliveries by forceps or ventouse, many of whom had also had both epidural anaesthesia and augmented labours. Generally women were accepting of such deliveries because they felt they were important for the safety of a baby, particularly if there were signs of distress. Many had also experienced labour and attempts to push in which they didn't feel fully aware or in control of their bodily sensations or movements, so that an assisted delivery didn't feel very different from what had gone before. Despite this, some women described great disappointment and even self-criticism at not being able to push the baby out themselves. This woman described the sensation of a ventouse birth:

The doctor came and said he wanted me to start pushing but I didn't feel the urge or felt that I could… and he talked as if I wasn't there. After about fifty minutes of pushing he came back in and said he would start to get everything ready for the ventouse and if I managed to get the baby out by then alright, but if not lots of women need assistance with their first baby. As it happened he couldn't get the machine to work at first and while they were trying to get it to work I was lying on my back pushing. I'm not sure I could have pushed the baby out but I didn't feel comfortable on my back… having the baby with the ventouse was like having my insides pulled out (Caseload care, 471).

In this hospital, just as labour is actively managed and timing of progress carefully monitored and limited, women described a *rule* in operation by which they were given one hour to push in the second stage[19]. This policy was based on obstetricians' concerns about possible perineal problems following birth, although there is no clinical evidence to indicate limits on length of this stage of labour. Interestingly, women in the caseload care group, where midwives tended not to apply this policy of routinely limiting the time, had shorter average duration of second stage labour. Women's accounts suggested that although being galvanised into pushing by the waving of forceps could be perceived as helpful, many women were very anxious about the need to push the baby out within a fixed time span, and few received alternative means of support, such as trying different birth positions.

Women who had not experienced birth interventions, especially when compared to a previous birth, were much more positive about their births. They were often women who described very supportive and relaxing care:

This time there was no-one prodding and pushing, it was like nature taking its course and it was a different experience altogether (Caseload care, 537).

The whole birth compared to the others was by far the best. My midwife was very relaxing and I was more relaxed because I was with someone I knew. I felt it was very clinical before (Caseload care, 391).

Women who had planned caesarean sections, due to problems identified antenatally, generally experienced a calmer, less traumatic birth, but it could still be characterised by feelings of detachment and several women also described feelings of fear and panic. For example:

They had great difficulty putting in the epidural. I had to change position for them to have a third attempt and all this made me panic during the caesarean I could feel lots

> of pain and started to cry, so they said they would stop! I didn't want them to stop, I was frightened! They reassured me that the baby was not in any danger and I would be all right. There had been so many people in the room and I felt so vulnerable. They gave me something to knock me out. It was like 2 or 3 glasses of wine… I only realised that he had been born when I thought I heard a baby crying. It seems strange but I was not sure and I had to ask my husband, is that a baby crying?… overall it felt unreal (Caseload care, 546).

THE IMPACTS OF THE BIRTH MODEL ON WOMEN'S EMBODIMENT AND EXPERIENCES

This analysis of women's accounts of their pregnancy and birth experiences suggest there are different modes in which they can find themselves, which can perhaps be summed up as *active management of birth* or *active birth*. It might also be characterised in terms of agency or control on the woman's part. Those women with greater agency in labour and birth described themselves as less detached or alienated from their embodied knowledge or experience than those who were less able to maintain this agency. The role of professionals was important in making a difference to whether the women were able to maintain their agency and control, even when complications arose, and likewise in women's psychological evaluation of their experience. Those women who had a caseload midwife – where they could develop a relationship of understanding and support – were more likely to feel they had such agency and expressed more positive views about their experiences overall.

For other women, the words used and the stories they recounted gave a strong sense of being out of touch and of the sort of body/self separation described by study[29] for many United States of America hospital births. This was most apparent for women with epidural anaesthesia, electronic monitoring and those who had caesarean sections. In cases where women felt able to exercise more personal, psychological control over events, they felt less detached or dissociated, despite lack of physically embodied sense of their labouring. Although women's sense of detachment has a physical base such as numbness or projection of contractions and heartbeats as images on a screen, outside of themselves, psychologists might approach this issue by arguing that dissociation is a protective mechanism which people used when their sense of self is threatened.

The use of terms by the hospital in this study – and indeed most UK obstetric units – is also interesting in this respect, as the more traditional term *labour ward* had given way to the term *delivery suite*. The term *labour ward* does conjure up images of the production line model of care which still operates in many British hospital maternity units[26,29] and invites an old-fashioned Marxist analysis of alienation of labour, at least in this model the woman is the worker. The term *delivery suite* denotes a more passive imagery, of women who are delivered of their babies, by midwives and doctors, monitored and assisted by obstetric technologies. In this later model, the professionals operate more squarely as the workers, responsible for producing a good quality product, through the manipulation of technology. In this system, the workforce is perhaps also being controlled and alienated from their work and from the woman in important ways[30].

Measurement and the defining and controlling of time and progress was also an important and linked feature of the women's experiences, since the *active management* approach seemed to contribute to a professional tendency to split women's subjective physiological experiences from the *objective* assessments of labour progress. These objective measures were partly internal, but not accessible to the woman – such as vaginal examination – but primarily external – watching the monitor, rather than the woman's body directly, or even situational as in the cases where women were defined as not in labour simply because they had not been admitted to the delivery suite. In defining the length of labour and of the allowable labour, women felt confined, even though few would have wished for a long drawn out labour. Such dichotomies in concepts of time have been characterised as subjective versus objective time or physiological versus functional time[19,31]. It is curious that, despite the tendency to shift labour and birth into the passive mode described above, it is the woman's time which reflects physiological time and the hospital's which reflect functional time, on the whole.

Furthermore, the use of epidural anaesthesia typically requires other technologies – in particular the electronic monitor, which is strapped round the woman's waist to record the pattern of her contractions and the baby's heartbeat. This technology also allows professionals to be more detached from what is happening to the woman in labour. Busy staff can feel safe in leaving a woman alone, since she is *on the monitor* and *pain free*. The monitor becomes a focus for what is happening to the baby, rather than the mother's body.

The professional focus also splits the more traditional mother-baby dyad, with increasing orientation towards the foetus, rather than the mother. The changes in the role of the birthing mother, from active to passive mode, are reminiscent of the social and cultural changes underway during the nineteenth century, when obstetrics first became established and rivalled the older practice of midwifery. Donnison noted as a paradox that in Victorian England, middle and upper-class women were characterised as both invalid – having very little embodied power and unsuited to production, yet also ruled by the reproductive functions of their bodies[2]. She argued that with the development of anaesthesia, traditional midwifery skills of psychological support in coping with pain were lost – and much of early pain relief meant the

woman was unconscious or only partly conscious. In this development period, obstetricians ignored and objected to early evidence of association between hospital birth and higher maternal deaths, arguing that records must be at fault, as they couldn't accept that poor women giving birth in slum conditions were faring better than affluent women giving birth in hospital; the aetiology of puerperal fever was not then known[5]. In a similar fashion, modern professionals are inclined to ignore evidence that doesn't make intuitive sense to them, and in a technocratic society tend to intervene or to use technology rather than not use it.

Ironically, it appears that while professional attendants' roles become more active, or the role of obstetric monitoring technologies becomes more dominant, those of women become less so. It is at this point that the individual body is not readily separable from the social body or the body politic[32]. Davis-Floyd has argued that birth is a socially transformative ritual – in the case of modern hospital birth designed to teach and perpetuate the technocratic core values of society[26]. She noted, for example, how the symbolic role of objects encourages a woman's feeling of dependence on the hospital for her life rather than a sense of being the person giving life. We have seen in this analysis, how women in conventional care did not feel that they were special, or the focus of care, except insofar as mind and body, or even the individual and social, were split in a dualistic fashion. The ritual of hospital birth did not seem to respond to the social or psychological *rite of passage* they were undergoing – a transformation which was at once broader and in a longer time perspective: the transition to motherhood and new life.

This was not, however, a stable system, as the background information in this paper has indicated. Midwives and women using the services had challenged the prevailing order and even though they have been described as *oppressed* and *muted* groups, change has been enshrined in Government policy. The context of health services in the UK is also a state of constant flux and uncertainty, driven only superficially by consumerism or by evidence-based medicine. Although we were evaluating a new model of care, and we did find significant differences in the experiences of the women in the two systems, we also found a great deal of stability, institutional and professional resistance within change.

REFERENCES

1. Leap N, Hunter B. The midwife's tale: an oral history from handy women to professional midwife. London: Pen and Sword Books; 2013.
2. Donnison J. Midwives and medical men: a history of the struggle for the control of childbirth. Barnet, Herts: Historical Publications; 1988.
3. Towler J, Bramall J. Midwives in history and society. Beckenham: Croom Helm; 1986.
4. Heagerty B. Willing handmaidens of science? The struggle over the new midwife in early twentieth century England. In: Kirkham M, Perkins E, editors. Reflections on midwifery. London: Balliere Tindall; 1997.
5. Loudon I. Death in childbirth: an international study of maternal care and maternal mortality 1800-1950. Oxford: Clarendon Press; 1992.
6. London. Ministry of Health. Domiciliary midwifery and maternity bed needs: the report of the Standing Maternity and Midwifery Advisory Committee. The Peel Report. London: HMSO; 1970.
7. Tew M. Safer childbirth? A critical history of maternity care. London: Chapman and Hall; 1990.
8. Oakley A. The captured womb: a history of the medical care of pregnant women. Oxford: Basil Blackwell; 1984.
9. Cartwright A. The dignity of labour? A study of childbearing and induction. London: Tavistock; 1979.
10. Jacoby A. Women's preferences for and satisfaction with current procedures in childbirth. Midwifery. 1987;3(3):117-24.
11. Simkin P. Just another day in a woman's life? Women's long-term perceptions of their first birth experience. Birth. 1991;18(4):203-10.
12. Campbell R, MacFarlane A. Where to be born: the debate and the evidence. Oxford: National Perinatal Epidemiology Unit; 1996.
13. House of Commons Health Committee. Second Report on the Maternity Services (Winterton report). London: HMSO; 1992.
14. Department of Health. Changing childbirth: Report of the Expert Maternity Group. London: HMSO; 1993.
15. Department of Health. Maternity matters: choice, access and continuity of care in a safe service. London: Office National Statistics; 2007.
16. Jordan B. Birth in four cultures: a crosscultural investigation of childbirth in Yucatan, Holland, Sweden and the United States. Illinois: Waveland Press; 1993.
17. Birthplace in England Collaborative Group. Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study. BMJ. 2011;343:d7400.

18. Redshaw M. Mapping maternity care facilities in England. Evid Based Midwifery. 2011;9(2):46-52.

19. McCourt C, editor. Childbirth, midwifery and concepts of time. Oxford: Berghahn; 2009.

20. Stevens T. Time and midwifery practice. In: McCourt C, editor. Childbirth, midwifery and concepts of time. Oxford: Berghahn; 2009.

21. McCourt C, Stevens T, Sandall J, Brodie P. Working with women: developing continuity of care in practice. In: Page L, McCandish R, editors. The new midwifery: science and sensitivity in practice. 2nd ed. Edinburgh: Churchill Livingstone; 2006. p. 141-65.

22. McCourt C, Page L, Hewison J, Vail A. Evaluation of One-to-One midwifery: women's responses to care. Birth. 1998;25(2):73-80.

23. McCourt C, Stevens T. Continuity of carer – what does it mean and does it matter to midwives and birthing women? Can J Midwifery Res Pract. 2006;4(3):10-20.

24. Page L, MacCourt C, Beake S, Vail A, Hewison J. Clinical interventions and outcomes of One-to-One midwifery practice. J Public Health Med.1999;21(3):243-8.

25. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. Cochrane Database Syst Rev. 2013;(8):CD004667.

26. Davis-Floyd R. The ritual of hospital birth in America. In: Spradley JP, McCurdey DW, editors. Conformity and conflict: readings in cultural anthropology. 8th ed. New York: Harper Collins; 1994.

27. Downe S, Dykes F. Counting time in pregnancy and labour. In: McCourt C, editor. Childbirth, midwifery and concepts of time. Oxford: Berghahn; 2009.

28. Winter C, Duff M. The progress of labour: orderly chaos. In: McCourt C, editor. Childbirth, midwifery and concepts of time. Oxford: Berghahn; 2009.

29. Martin E. The woman in the body. Milton Keynes: Open University Press; 1989.

30. Arney W. Power and the profession of obstetrics. Chicago: University Chicago Press; 1982.

31. Pizzini F. Women's time, institutional time. In: Frankenberg R, editor. Time, health and medicine. London: Sage; 1992.

32. Scheper-Hughes N, Lock MM. The mindful body: a prolegomenon to future work in medical anthropology. Med Anthropol Q. 1987;1(1):6-41.

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